University of the Philippines Manila
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Missing Persons and Wanted Fugitives Information and Reporting System Using Face Recognition for Cross-Matching

A special problem in partial fulfillment
of the requirements for the degree of
Bachelor of Science in Computer Science
Submitted by:

Alee Ciaral P. Policarpio

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ACCEPTANCE SHEET

The Special Problem entitled "Missing Persons and Wanted Fugitives Information and Reporting System Using Face Recognition for Cross-Matching" prepared and submitted by Alee Ciaral P. Policarpio in partial fulfillment of the requirements for the degree of Bachelor of Science in Computer Science has been examined and is recommended for acceptance.

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Abstract

The Philippine National Police does not have a system of organizing missing persons report and also still relies on primitive ways of publicizing identities of missing persons and wanted fugitives. This study proposes an information system which would serve as a centralized database for cases of missing persons. The system would serve as online publicization of cases of missing persons and wanted fugitves and would also allow the public to send tips about said cases. The system includes a face recognition module implemented using Local Binary Patterns for case cross-matching which is also as a method of information retrieval using image.

Keywords: information system, computer vision, PNP, mass surveillance, face recognition, OpenCV

Contents

List of Figures

List of Tables

I. Introduction

A. Background of the Study

Someone who has disappeared, whose status as alive or dead cannot be identified, whose location and fate are unknown results to uncertainties and lack of closure to their family and friends. Accidents, crimes, abductions, natural calamities and many other reasons can cause a person to be missing including voluntary disappearance. It may be extremely painful with permanent effects especially when the personal security of the person is endangered and is suspected to be a victim of crime.

Local police stations receive different reports that concern a person's whereabouts or personal security. Reports can be categorized into two – crime related reports and non-crime related reports. Crime related incidents include organized crimes, petty crimes, violent crimes, prostitution, human trafficking, corruption, police misconduct, etc.. Non-crime incidents can be reports of missing persons, lost wallet, insurance claim, conflagration, etc. [1].

A report for a missing person must be filed directly to the police station or designated barangay. The Desk Officer entertains and receives the reports from the complainant and is responsible for recording the complaint and initially determining if the incident is a crime related or not. If the the incident involves a crime, the complainant will be endorsed to a Duty Investigator or Officer who will address his concern [1]. The women's desk is usually assigned to address the concerns of complainants about missing persons and assigns Duty Investigator for every case but this system usually differs in every precinct because there is no organized protocol for the upkeep and publicization of such kind of reports [2].

A suspected criminal can be considered 'wanted' if he/she hides from jurisdiction to escape prosecution, 'captured' if he/she is currently in the custody of the police or 'released' if he/she was initially in the custody of police but was released after his/her case has been solved or dismissed. Usually, local police prioritize the publicization of descriptions of top criminals in their designated areas through photographs or face sketches posted on posters, newspapers and radio or television broadcasts. Reports of missing persons are only acted upon after 24 hours since the incident and the police do not publicize information about missing persons. This usually depends on the persistence of the family and friends of the missing person. Since police offices do not have a systematic way of organizing cases of missing persons, a person reported as missing can either just be 'missing' or 'found' [2].

Local office hold every information about every case filed in their office. Higher offices also have rights to access information about cases filed in lower police offices within their designated areas. Higher offices can conduct different and independent investigations but only the office from where the report was first reported can update the information about a given case [2].

In cases when the criminal is found in a place out of the jurisdiction of the office from where the incident has been reported, the police in the place from where the subject has been found can only act upon if a copy of a warrant has been secured. They will be responsible in informing the office from where the incident has been reported if the wanted criminal has already been captured or other incidents happen[2].

If there was a report of sighting of a missing person in a place out of the jurisdiction of the office from where the incident has been reported, the local police will ask the police office in the area where the missing person has been seen to verify if the missing person is indeed in the place reported. If the report of sighting has been verified to be true, the police can either get the custody of the person or just inform the family of the whereabouts of the subject [2].

The Philippine National Police has an electronic Crime Incident Reporting System (CIRS) launched in September 2011 and deployed to all PNP Regional Offices and Police stations in the Philippines. CIRS is an integrated database system that enhances solution of criminal cases through timely, fast and reliable storage and retrieval of information about crimes[3]. For every police station, there is a designated CIRS officer who should be a non-uniform personnel with training in information and communication technology. The CIRS officer is called Crime Registrar and is responsible for encoding the data into the CIRS and for the submission of crime statistics to higher office. He shall also be responsible in the upkeep and maintenance of all crime data. Investigators-on-Case are responsible for closely monitoring the cases assigned to them and for submititng to the Crime Registrar any progress and updates on these cases so that it can be reflected in the CIRS [1]. Every record in the CIRS can be accessed and retrieved by users as long as they registered in system but only the non-uniform personnel, the Crime Registrar, is allowed to update and modify the contents of every record. [3].

Systems like the CIRS use information retrieval using text-based information alone. While it stores images such as photographs of evidences and mug shots of suspects in the database, it is only used as supporting information to the primary record (i.e. crime incident). In the present, CBIR(content-based image retrieval) has been gaining interest in the computer science research and application. CBIR is a field in computer vision that uses the content of the image itself to seach through a database rather than metadata such as keywords, filename, etc[4]. It is useful for systems that heavily rely in image based information to employ a method of information retrieval that utilizes its image content. Examples of which are social networking sites such as facebook which use face recognition system to automatically associate images to a user.

B. Statement of the Problem

The CIRS is only designed to house information for crime related incidents. The Philippine National Police does not currently have a database for non-crime incidents such as reports of missing persons and unidentified persons. There is no centralized and uniform system of storing information of missing. There are local online repositories for missing person operated by non-government organizations such as the Philippine Missing Persons[1] and the GMA's Missing Persons Database[2] which is only accessible through a spreadsheet. There are no official police operated databases for missing in existence in the Philippines.

The present ways for publicizing descriptions of missing and unidentified persons and wanted fugitives still rely on primitive ways such as posters, fliers and newspaper articles. The Philippine National Police only publicize the description of the most wanted criminal in the Philippines in their website[3] while families also use the social media to help publicize the information of their lost loved one.

There is a need for improved cross-matching technique between every case other than using text-based information. There are new and improved ways of creating facial composites of wanted fugitives but there are no current retrieval systems that help the investigators identify the facial composites as described by an eyewitness that utilizes these facial composites. Some of the criminals also use different names and alias. Failure to recognize a facial composite or a person's face causes duplication of records and can bring about confusion in investigations. There are also occasions when a person who is found cannot be identified by his or her name or age which might be due to speech or mental ability or falsifying of information therefore there is a need to for a method of identification which does not require text-based information such as facial recognition.

[1] https://sites.google.com/site/missingpersonsphilippines/home

[2] http://spreadsheets.google.com/ccc?key=0AvtfUtPdJ93tdHZqenJ4Y0pGMHByU0dSVDREU2JzYmc&hl=en

[3] pnp.gov.ph/portal/index.php/public-relations/most-wanted-person

C. Objectives of the Study

The study aims to create a Missing Persons and Wanted Fugitives Information and Report System with the following functionalities:

1. An anonymous user can:

    (a) view and search through the list of missing persons with 'missing' status and wanted fugitives with 'wanted' status by filling up text fields.

    (b) submit a tip about sighting of missing person with 'missing' status or wanted fugitive with 'wanted' status by filling up information and providing pictures for evidence and additional information.

    (c) perform face recognition on the database of missing persons with 'wanted' status and/or wanted fugitives with 'wanted' status by providing a query image.

    (d) sign-up for an account.

2. A Crime Registrar can:

    (a) log in to the system.

    (b) create, update, or delete wanted fugitives and missing persons cases recorded on his/her designated office.

    (c) view and search through the list of missing persons with and wanted fugitives with by filling up text fields.

    (d) perform face recognition on the database of missing persons and/or wanted fugitives by providing a query image.

    (e) receive notifications about submitted tips.

    (f) view and delete submitted tips about cases recorded on his/her designated office.

   (g) update his/her profile picture.

   (h) change his/her password.

3. A Police Officer can:

   (a) log in to the system.

   (b) view and search through the list of missing persons with and wanted fugitives with by filling up text fields.

   (c) perform face recognition on the database of missing persons and/or wanted fugitives by providing a query image.

   (d) receive notifications about submitted tips

   (e) view and delete submitted tips about cases recorded on his/her designated office.

   (f) update his/her profile picture.

   (g) change his/her password.

4. A System Administrator can:

   (a) create other system administrator accounts.

   (b) change the status of a user's account.

   (c) delete user accounts.

   (d) reset passwords of a user's account.

   (e) send email to users regarding any change made by the System Administrator in their accounts.

   (f) update his/her profile picture.

   (g) change his/her password.

5. Perform facial recognition using Local Binary Patterns (LBP) upon submission of a query image.

    (a) Perform face detection using LBP method on the query image

    (b) Verify if the image is valid for face recognition. (If the image has been detected to contain 1 face, it is valid.)

    (c) Perform the LBP operator for every pixel in the face image

    (d) Construct the spatially enhanced histogram

    (e) Compare the query images spatially enhanced histogram to the histogram of every picture in the database

    (f) List the profiles according to their photos' similarity to the query image

    (g) Display the percentage of similarity between the subjects pictures and the test picture.

D. Significance of the Project

The proposed system solves the problem of the absence of database for missing persons. Through the MWIRS, the police can facilitate better organization, management and processing of information through the digitization of records of reports. The MWIRS provides a centralized database for all the police stations that use the system and allows each logged-in user to access all the records in the database. This eases the retrieval and sharing of information for every police stations needed for investigations of reports.

The MWIRS does not only store text-based information of reports about missing persons and wanted criminals but visual information as well. The Crime Registrar can upload pictures of the subject in the report with facial image. The system has a facial recognition module which enables cross-matching between cases that does not need text-based information. This is particularly useful in cases when a subject cannot be identified by his/her name.

The facial recognition for cross-matching capability of the system also comes in handy when identifying an eye witness description of a suspected criminal through facial composites and artist's sketches. The system can detect the face in the sketch and find records in the database with the most significant similarities from the query image. The Crime Registrar can still include records of released and captured criminals in the system but these won't be accessible to anonymous users any more. Such records can still be used as future reference and can be included in the cross-matching using facial recognition. This can help in the process of identifying suspects of crimes. When a criminal uses different alias,facial recognition prior to recording of incidents can expedite investigations and prevent record duplication.

The MWIRS also provides a way for better and faster publicization of descriptions of missing persons and wanted fugitives. Updates in the database can be automatically reflected in the online website that can be accessed by anonymous users. The system lets the general public to search through records of missing persons and wanted fugitives through text-based information and also by performing cross-matching through facial recognition. MWIRS allows user to send tips about a case electronically through the system and the tip would be directed instantly to an officer from the office where the case was reported. Tips include text-information such as a narrative of incident and contact information of the informant and also allows user to uload pictures to help verify the validity and truthfulness of the tip.

The MWIRS is an information system which can be accessed by the general public and allows them to send tips and and is equipped with cross-matching functionality through text information and facial recognition thus facilitating an organized processing of information while helping investigators resolve and get to bottom of crimes and other incidents.

E. Scope and Limitations

1. Records of missing and unidentified persons and wanted fugitives can only be created, updated and deleted by a logged-in Crime Registrar designated at the office where it was reported.

2. The system is not responsible for transfer of cases from an office to another because this process requires security of arrest or search warrants.

3. Registered users can only log in once the System Administrator has approved the account registration.

4. The system does not allow the public to directly access the contact information of those who filed reports and does not allow direct contact to a case' contact person directly.

5. The system's face recognition does not guarantee a hundred percent confidence in finding a match and does not guarantee the identification of a subject.

6. Image for face recognition and images in a missing person's or wanted fugitive's case can only be a frontal view of the face.

7. Uploaded images can only be of the following file formats:

   (a) JPEG files - *.jpeg, *.jpg

   (b) Portable Network Graphics - *.png

   (c) Graphics Interchange Format - *.gif

8. Immediate response of police officers is not guaranteed upon submission of a tip.

F. Assumptions

1. Every precinct has a designated Crime Registrar.

2. The System Administrator is notified if a Crime Registrar has been terminated or suspended from duty so that he/she can no longer log in to the system.

II. Review of Related Literature

Fugitives continue to commit additional crimes while they roam undetected. News about fugitives committing more crimes while on the run can be read from newspapers almost everyday. In the United States, a study showed that in April 2011, there were approximately two million warrants active on a given day and there were more than 115,00 cases of long-term fugitives. These fugitives have avoided capture for at least a decade [5]. With these numbers, automated surveillance is one of the important real-life application that is recently gaining interest where the objective is to recognize and track people who are on a watch list [6] or a list of missing persons and found persons that cannot be identified. Face recognition is the ability to establish a subjects identity based on his facial characteristics. Automatic face recognition has been studied extensively over the past two decades and has played important roles in applications including access control, surveillance and duplication of government issued identity documents [7]. Given a test image, a face recognition system has to find the closest match of the test in the database. This is usually done by scanning all the face in the database and selecting the highest rank of facial images based on the test image's and the face's from the database similarity measures as a match. Humans, on the other hand, have different strategy in face recognition. A human will discontinue the search as soon as he/she finds a match. Humans do not rank faces but rather either recognize the face or reject it [6]. Real-world scenarios exhibit large intrinsic variations due to facial aging, expression and makeup and this further degrade the recognition performance of systems [6]. Thus, public security call for robust face recognition that can identify individuals in uncontrolled systems [8]. Face recognition in a controlled setting has been extensively and relatively mature. Earlier methods include the direct application of pattern recognition and machine learning techniques and more recently, many works have started to consider geometric, shape, lighting and reflectance models of faces to achieve higher recognition performance [8]. A successful face recognition system must attain high accuracy with minimum features and resistance to noise [9]. In forensics, together with fingerprint and DNA identification, face recognition technology is necessary for continued progress to improve the set of tools available to determine a person's identity. Face recognition plays an important role in surveillance imagery which is one of the goals of the FBI's Next Generation Identification Program [7]. Standard automatic face recognition fully performs identification on a subject whereas forensic face recognition only help investigators narrow the identity of a subject. Face recognition systems return a match score between face images which indicates their level of similarity. Because of the problem with developing an individuality model, automated face recognitions have limited use in forensics. Instead, investigators use face recognition systems to identify set of candidates and from there, additional clues and information can be used to fully identify a case [7]. An issue in face analysis involves finding descriptors for face appearance. Techniques for face description can be classified into two main categories: holistic-based ones and local-based ones [10]. Holistic methods such as Principal Component Analysis (PCA), Linear Discriminant Analysis and 2D PCA have been widely studied [11]. These approaches use the whole facial region to construct a subspace to be used for the analysis. Local-based approaches locate a number of features or components from a face and then classify them by combining and comparing with corresponding local statistics [10]. Eigenfaces is a face recognition method based on PCA. Eigenfaces and PCA have been used by Sirovich and Kirby to represent the face efficiently then Turk and Pentland applied the Eigenfaces to face recognition problem. The PCA, a method of projection to subspaces, is widely used for pattern recognition. Its main advantages are its low sensitivity to noise and its efficiency in computation [12]. Eigenfaces' strategy consists of extracting of characteristic features on the face and representing the probe face as a linear combination of the 'eigenfaces' obtained from the feature extraction process. Recognition is achieved by projecting the face into the space formed by the eigenfaces. Euclidean distance of the eigenvectors of the eigenfaces and the probe eigenface is the basis of comparison. The person is identified is the distance is small enough. If the distance is too large, the probe image is considered as a face image of an individual for which the system will be trained [12]. Another method for dimensionality reduction is linear discriminant analysis (LDA) which aims to find the optimal set of projection vectors that maximize the determinant of the between-class scatter matrix and minimize the determinant of the within-class scatter matrix. Zhang [13] proposed the fuzzy linear discriminant analysis (FLDA) in which the fuzzy k-nearest neighbor is used to achieve the local distribution information of the original samples. The proposed algorithm reduces LDA's sensitivity to variations between a single person's face brought about by changes in illumination, viewing conditions and facial expression. Hough Transform (HT) was invented by Hough in 1959 for machine analysis of bubble chamber photography. It is widely used as a feature extractor for various pattern recognition systems. Varun et al. [14] proposed a new feature extraction technique built on HT to be used for face recognition called Block-wise Hough Transform Peaks (BHTP) method. BHTP method starts with enhancing the image to emphasize the facial part of the image and background removal is used to remove the unwanted regions. The enhanced image will be subjected to edge detection and is dilated to mark out regions with high intensity. The binary image obtained is partitioned into blocks in which Hough Transform is applied to convert the image space to accumulator space. Prominent peaks and their positioned are determined and Hugh value of feature points is extracted. The experiments of Varun et al showed that the proposed method has an average recognition rate of 99.95Zappa et al. [15] proposed a purely three-dimensional approach for face recognition claiming to be less time consuming than other 3D approaches. The proposed system is a stereoscopic system that shoots two pictures of an individual. The system uses the Active Appearance Model (AAM) method, an algorithm for feature recognition in two-dimensional images based on statistical deformable model, for each of the cameras to extract the coordinates of 58 corresponding points. Triangulation of these points allows the reconstruction of simplified 3D geometry of the face to be used for face recognition. Lately, local-based descriptors have gained attention because of their robustness to pose and illumination changes [11]. In 2002, Ojala first proposed local binary pattern which was initially designed for texture classification. It has been used for texture description for more than ten years and is recently successfully applied to facial expression analysis and face recognition because of its low dimensionality and high efficiency [9]. It works by assigning a label to every pixel of an image by thresholding a 3 adjacent pixels with the center pixel value and considering the result as a binary number. A histogram of the labels is used a texture descriptor [11]. The Local Binary Pattern Operator is one of the best performing descriptors for textures and has been widely used in different applications. It has been proven to be highly discriminative. It is also invariant to monotonic gray-level changes and is computationally efficient which makes it suitable for image analysis tasks [11]. Mug shots comprise majority of the face images used in the forensics, however, there are also occurrences when a photograph is not available thus a forensic sketch is generated. Therefore, the ability to match artist sketches to face photograph is important. This ability can be automated using facial recognition using local binary patterns as first developed by Klare et al. [7]. Heisele et al. proved that local-based face recognition methods such as the LBP outperform the holistic-based approaches. This is because holistic approaches require accurate normalization of face images with regard to pose, illumination and scale. Holistic approach is also sensitive to variations in facial expression and occlusions. Faces can be seen as a composition of micropatterns, and these patterns can be well described by using LBP. Therefore, LBP has been successfully used in different image analysis tasks [10]. The LBP operator was then extended to use neighborhoods (number of points, radius) of different to be able to deal with textures at different scales.

The local neighborhood becomes a set of sampling points evenly spaced on a circle centered at the pixel to be labeled. Bilinear interpolation is used when a sampling point does not fall in the center of a pixel [11]. The LBP method is further extended through uniform patterns. An LBP is uniform if the binary contains at most two bitwise transitions. It was observed that uniform patterns account for the majority of patterns in texture images; 90% for (8,1) neighborhood and around 70% for (16,2) neighborhood [10]. In the computation of histogram, uniform patters are used so that the histogram has a separate bin for every uniform pattern and all nonuniform patterns [11]. Ahonen et al. found that LBP achieves noticeable results when applied to face images. They first detected and aligned the face image then divided the whole face into small non-overlapping grids. An LBP histogram is computed from each grid and these histograms are concatenated together into a feature vector that represent the face image. They used chi-square statistic to compute the distance between face images [16]. The concatenated histograms in the LBP approach of Ahonen et al. is called spatially enhanced LPB histogram (eLBPH) which is different to holistic Local Binary Pattern histogram (hLBPH) which is histogram formed by the LBP values of the whole image. The eLBPH is used over hLBPH because standard texture analysis is not suitable for face recognition and eLBPH is more approppriate even if it is relatively complex and sentitive [17]. Their experimental results showed that this approach performs better than the PCA, the elastic bunch graph matching (EBGM) and the Bayesian intra-/extrapersonal classifier on all four probe sets of the FERET database [10]. It is highly critical to have a library with programming functions with optimized and portable code to be used for computer vision. This problem is solved by Intel in 1999 when they first launched OpenCV (Open Source Computer Vision Library) for free. Since then, many programmers contributed to its development and OpenCV took a major change in 2009 which includes main changes in its C++ APIs. OpenCV library has several modules where each module being dedicated to one group of computer vision problems [18]. These modules include libraries dedicated for face detection on still images and videos and face recognition through several methods. The OpenCV library offers face recognition implemention using Eigenfaces (PCA), Fisherfaces (LDA) and LBPH. There exists several studies implementing, evaluating and comparing OpenCV different libraries.Kadir et al [19] used OpenCV on their comparative study between LBP and Haar-Like features for face detection and LBP method outperformed the other in terms of accuracy and detection speed. Qasim el al [20] used OpenCV together with MATLAB to compare PCA and LBP methods for face recognition and their study showed that LBP outperformed PCA in terms of accuracy but LBP took a longer to in recognizing a face.

III. Theoretical Framework

A. Philippine National Police

subsectionPhilippine National Police The Philippine National Police (PNP) us the national police force of the Philippines which is both a national and a local police force that provides all law enforcement services throughout the country. The PNP resulted from the merger of the Philippine Constabulary and the Integrated National Police and was activated on January 29, 1991 [21].

The PNP with the Philosophy "Service, Honor and Justice" has the following functions [22]:

1. Enforce the law.
2. Maintain peace and order.
3. Prevent and investigate crimes and bring offenders to justice
4. Exercise the vested powers from the Philippine Constitution and pertinent laws.
5. Detain an arrester person for a period not beyond what is prescribed by law.
6. Implement pertinent laws and regulations on firearms and explosives control.
7. Supervise and control the training and operations of security agencies.

The PNP has several operational support units including the following [22]:

1. Maritime Group
2. Intelligence Group
3. Police Security and Protection Group
4. Criminal Investigation and Detection Group

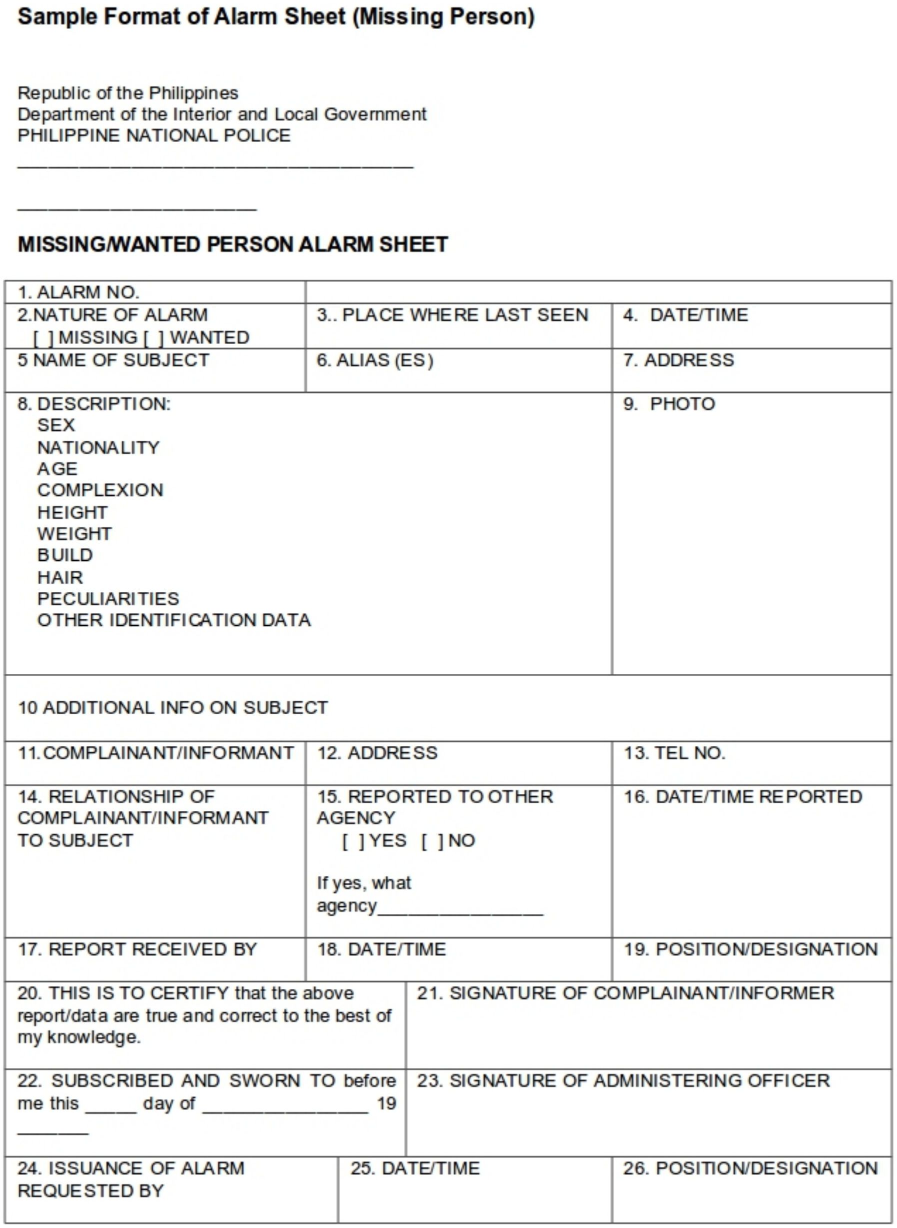
5. Special Action Force
6. Anti Cybercrime Group
7. Aviation Security Group
8. Highway Patrol Group
9. Police-Community Relations Group
10. Civil Security Group
11. Crime Laboratory
12. Anti Kidnapping Group

B. Missing Person

A missing person is a person who has disappeared and whose status cannot be confirmed as his/her location and fate are unknown. Accidents, crime or death in a location where they cannot be found can be cause a person to be missing.

If someone is missing and there is a strong reason to believe of possible fears for their safety and welfare, filing a missing person report mist be done at a local police office or designated barangay. A person reported as missing is considered by the police as 'missing' if the subject has not yet been found within 24 hours since he/she was last seen [2]. A sample format for an alarm sheet where cases of missing or wanted person is written is shown in figure 1 which was retrieved from the PNP's Directive for Investigation and Detective Management website [4].

[4] http://didm.pnp.gov.ph/



Sample Format of Alarm Sheet (Missing Person)

Republic of the Philippines
Department of the Interior and Local Government
PHILIPPINE NATIONAL POLICE
____

____

MISSING/WANTED PERSON ALARM SHEET

1. ALARM NO.		
2.NATURE OF ALARM [ ] MISSING [ ] WANTED	3.. PLACE WHERE LAST SEEN	4. DATE/TIME
5 NAME OF SUBJECT	6. ALIAS (ES)	7. ADDRESS
8. DESCRIPTION: SEX NATIONALITY AGE COMPLEXION HEIGHT WEIGHT BUILD HAIR PECULIARITIES OTHER IDENTIFICATION DATA		9. PHOTO
10 ADDITIONAL INFO ON SUBJECT		
11.COMPLAINANT/INFORMANT	12. ADDRESS	13. TEL NO.
14. RELATIONSHIP OF COMPLAINANT/INFORMANT TO SUBJECT	15. REPORTED TO OTHER AGENCY [ ] YES [ ] NO If yes, what agency_______________	16. DATE/TIME REPORTED
17. REPORT RECEIVED BY	18. DATE/TIME	19. POSITION/DESIGNATION
20. THIS IS TO CERTIFY that the above report/data are true and correct to the best of my knowledge.	21. SIGNATURE OF COMPLAINANT/INFORMER	
22. SUBSCRIBED AND SWORN TO before me this _____ day of _______________ 19 _______	23. SIGNATURE OF ADMINISTERING OFFICER	
24. ISSUANCE OF ALARM REQUESTED BY	25. DATE/TIME	26. POSITION/DESIGNATION

Figure 1: Sample Alarm Sheet

C. Wanted Fugitive

A wanted fugitive is an individual who is either convicted or accused of a criminal offense and leaves the jurisdiction of the court where such crime has takes place or hides jurisdiction to escape prosecution [23].

In the Federal Bureau of Investigations' website[5], the following information are provided and displayed for each wanted fugitive:

1. Summary
   (a) Primary Photo
   (b) Name
   (c) Crime(s) Committed
   (d) Reward
   (e) Synopsis of Criminal Offense
2. Scars and Marks
3. Aliases
4. Description
   (a) Date(s) of Birth Used
   (b) Place of Birth
   (c) Height
   (d) Weight
   (e) Race
   (f) Occupation(s)
   (g) Hair Color

[5] https://www.fbi.gov/

(h) Eye Color

(i) Sex

(j) Nationality

5. Other Photos

The FBI categorizes a wanted fugitive base on the crime(s) he/she is accused or convicted of. The categories are:

- Terrorism
- Cyber Crime
- Murder/Violent Crime
- Bank Robbery
- Kidnapping/Missing Persons
- Crime Against Children
- Parental Kidnappings
- Fraud/White-Collar Crime
- Criminal Enterprise/Drugs

D. Tip

A tip is a piece of information given by an individual who has access to special or inside sources [24]. A tip can be a report of sighting if a missing person, report of recognition of an unidentified person or tip on the whereabouts of a wanted fugitive.

The FBI requires the following information when submitting a tip through their website:

1. Complete Name

2. Phone Number

3. Email Address

4. Address

5. Brief information about the tip

E. Artist's Sketch

An artist's sketch or facial composite is a visual representation of an eyewitness' memory of a face as illustrated by an artist or rendered through a software. This is mainly used by police to help in their investigation of crimes.

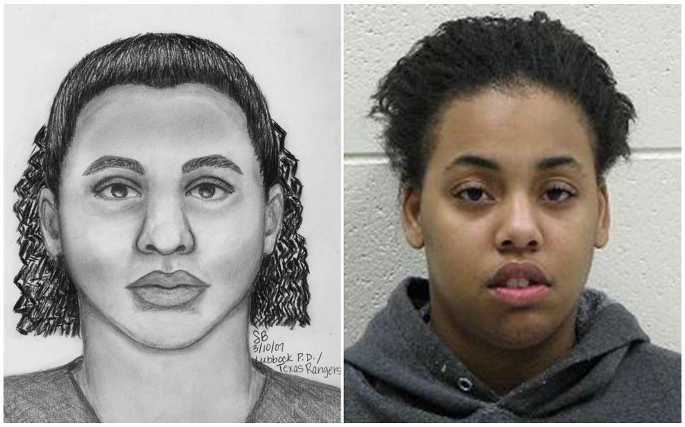


Figure 2: Rayshaun Parson and her accompanying composite sketch

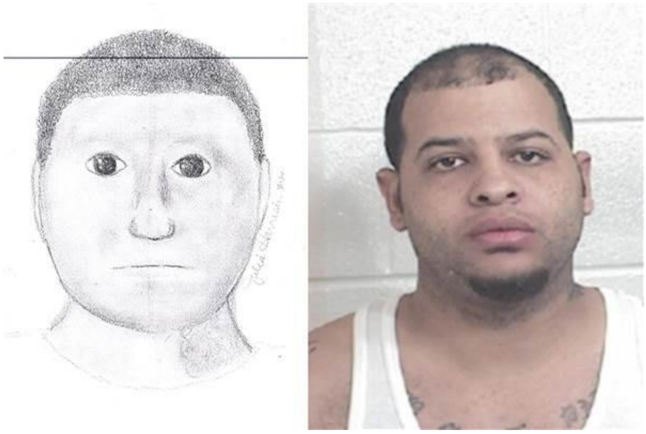


Figure 3: Glenn Edwin Rundles and his accompanying composite sketch

F. Mass Surveillance

Mass surveillance is the subjection of a population to indiscriminate monitoring. It involves interference with people's right to privacy. It involves generation, collection and processing of information about large number of peoples without any regard to whether they are legally suspected of a crime. National databases are one of the oldest forms of mass surveillance [25].

Today, mass surveillance is ubiquitous through the deployment of closed-circuit television cameras, monitoring of communication which includes phone and computer activities and monitoring of movement using GPS [26].

G. Information System

An information system is an itegrated set of components that collect, store and process data It is useful in delivering information, projects and digital products [27]. An information system can be manual or computerized [28].

A computer-based information system is a single set of hardware, software, databases, telecommunications, people and procedures that collectively function to collect, manipulate, store and process data into information. Physical components of a computer that perform input, processing, storage and output tasks of a computer consist the hardware. Software are computer programs that control the operation of the computer. It has two types system software and applications software. A database is an organized collection of information which is typically consisting of related data files. Telecommunications allows the electronic transmission of information for communication which enables information systems to carry out their processes and tasks through computer networks [28].

The four most common type of information systems are transaction processing systems, management information systems, decision support systems and executive support systems. Transaction Processing System functions as a simple data processing system. Management Information Systems are built based on the data that the TPS outputs. Decision Support Systems manipulate and use the information from the MIS and/or TPS to generate insights and new information. Executive Support Systems organizes data and information from both MIS or TPS and external data sources [29].

Information system is used in almost every imaginable profession. Computer-based information systems provide companies with internal and external benefit. IS helps to streamline, focus and coordinate activities inside the organization. In turn, organizations benefit from having a more efficient workforce and this allows them to focus on external affairs such as marketing, sales or service.

H. Artificial Intelligence

Artificial intelligence is an area of study in computer science concerned with the development of computers to be able to engage in human-like processes such as learning, reasoning and self- correction. It is the extension of human intelligence through computers to be able to perform more effectively by improved programming techniques [30].

Systems that imitate intelligent human behavior can be classified into four categories systems that think like humans, systems that act like humans, systems that think rationally and systems that act rationally [30]. Some applications of artificial intelligence are natural language processing, intelligent retrieval from databases, expert consulting systems, theorem proving, robotics, automatic programming, 18combinatorial and scheduling problems and perception problems [31].

I. Face Detection

Face detection applications aim to determine number of faces in an image and return its location in the image. There are four categories for face detection methods knowledge-based, feature invariant approaches, template matching and appearance-based. Knowledge-based methods uses the relationship between facial features and are mainly designed for face localization. Feature-invariant approaches aim to find structural features that exist even when pose or lighting conditions vary and is also used for face localization. Template matching methods uses standard pattern of a face to describe the face as a whole or facial features separately. It is used for both face localization and detection. Appearance-based methods use a model from a set of training images which captures the representative variability of facial appearance and are designed for face detection [32].

J. Face Recognition

A facial recognition system is a software capable of identifying or verifying a person from a digital image. It is typically used in security systems and can be compared to other biometrics such as fingerprint or eye iris recognitions systems. Facial recognition is also widely used in social networking sites such as Facebook. Facial recognition application depends on a database of photos that will be used to compare to a test's face. Facial recognition works like license place readers but it uses facial measurements

[33]. Facial recognition technology aims to automate the process of connecting faces to identity [34].

Faces posses certain measurements and features which cannot be disguised [33]. These measurements and features are the descriptors of the face. Finding these descriptors is an issue in face analysis. There are two main categories of face description: holistic-based approaches which use the whole facial region to construct a subspace to be used for the analysis and local-based approaches which locate and classify features and component of the face [10].

K. Local Binary Pattern

1. Definition

   Local Binary Pattern (LBP) is an operator which labels every pixel of an image by thresholding its neighborhood and considers the result as a binary number. Its basic idea was that two-dimensional surface textures can be described by local spatial patterns and gray scale contrast [35]. The LBP operator compares the central pixel with its neighbors. It assigns 1 to a pixel with gray-level value greater or equal to the center pixel and 0 otherwise. These 1s and 0s are concatenated and its corresponding decimal value is used for labeling a given pixel [10].

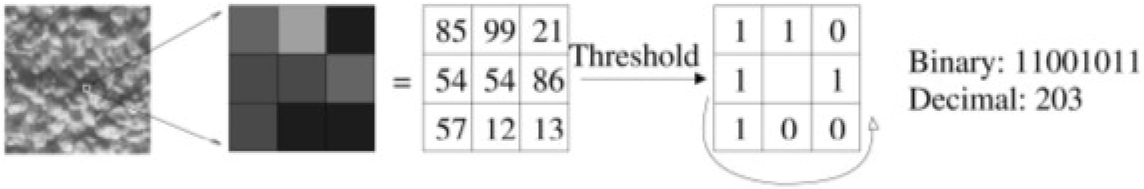


Figure 4: The Basic LBP Operator

The LBP was extended to use neighborhoods of different sizes to be able to capture dominant features with large-scale structures. The notation (P, R) denotes a neighbor hood of P sampling points and a radius R. Given a pixel (Xc, Yc), its LBP value is:

$$LBP_{P,R(Xc,Yc)} = \sum_{P=0}^{P-1} s(i_p - i_c)2^P \tag{1}$$

where i_c and i_p are grey level pixel values of the central pixel ad the level pixel values of the central pixel ad the surrounding pixels. The function *s(x)* is defined as:

$$s(x) = \begin{cases} 1 & \text{if } x \geq 0 \\ 0 & \text{if } x < 0 \end{cases} \tag{2}$$

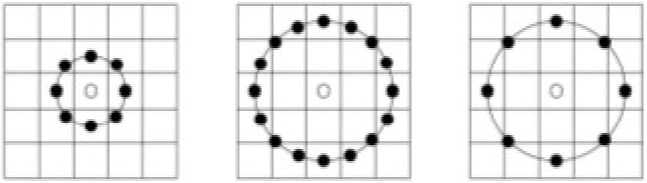


Figure 5: The circular (8,1), (16,2) and (8,2) neighborhoods.

The pixel values are interpolated using bilinear interpolation when a sampling point does not fall in the center of a pixel.

2. Uniform Patterns

   A local binary pattern in called a uniform pattern if it contains at most two bitwise transitions from 0 to 1 or 1 to 0 [9]. For example, the patterns 00000000 and 01110000 are uniform whereas the patterns 11001001 and 01010010 are not. Uniform patterns are used so that there is a separate label for each uniform pattern and all the non-uniform patterns are labeled with a single label. In a (8,1) neighborhood, there are a total of 256 possible patterns, 58 of which are uniform which yield in 59 difference labels [35].

3. Histogram

   A histogram displays the shape of a distribution graphically. It is particularly useful when there is a large number of observations [35]. In LBP analysis, a histogram of pixel labels is used for the facial description.

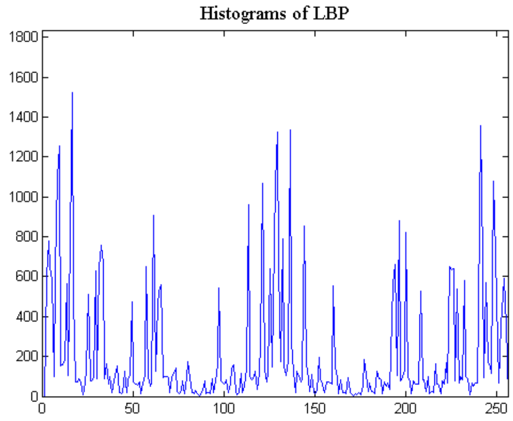


Figure 6: A histogram.

4. LBP for face recognition

   Ahonen et al. [11] used the LBP operator for facial analysis used a method which first divides a face image into non-overlapping regions and with each region having a separate histogram. These histograms from all the regions are not summed but are rather concatenated to form spatially enhanced histogram. The resulting histogram becomes a descriptor for both local texture and global face shape [10].

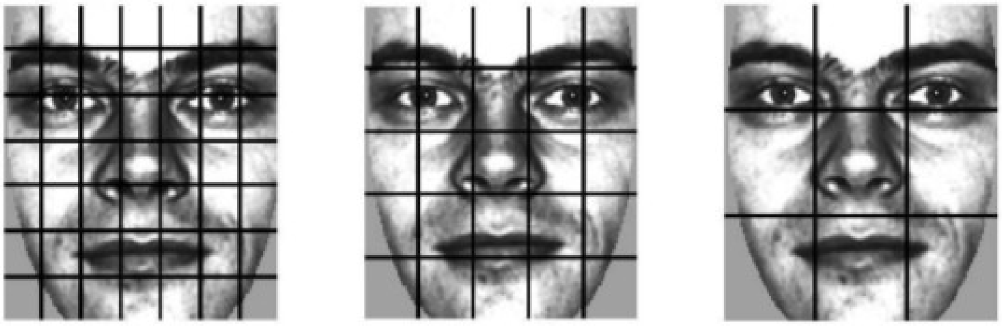


Figure 7: A face image divided into 7x7, 5x5 and 3x3 rectagular regions.

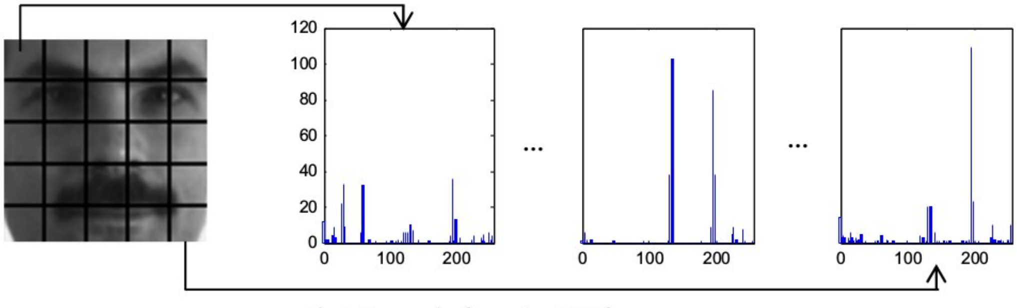


Figure 8: An example of spatially enhanced histogram construction.

5. Chi-square

   The Chi-square method is a histogram matching technique the LBP for face analysis most commonly uses. This computes the distance of the spatially enhanced histogram of the image from the database (M) and the probe image (S).

$$d_{x^2}(M,S) = \sum_{i=1}^{B} \frac{(M_i - S_i)^2}{M_i + S_i} \tag{3}$$

L. OpenCV

1. Description

   OpenCV (Open Source Computer Vision Library) is an open source software library for computer vision and machine learning built to provide a common infrastructure for computer vision applications. The library has more than 2500 optimized algorithms. The algorithms include face detection and recognition, object identification, human action classification, tracking of camera movements and objects, extraction of 3D models of objects, etc. The library is used extensively in companies, research groups and by governmental bodies. OpenCV has C+ +, C Python, Java and MATLAB interfaces and supports Windows, Linux and Mac Operating Systems [36].

2. OpenCV for face detection

   OpenCV's class for face detection is called CascadeClassifier. OpenCV implements two algorithms for face detection. The class CascadeClassifier can either be a Haar or an LBP classifier [37].

3. OpenCV for face recognition

   OpenCV's class for face recognition is called FaceRecognizer. FaceRecognizer currently implements 3 algorithms for face recognition Eigenfaces, Fisherfaces and Local Binary Pattern Histograms. Eigenfaces method is a holistic face recognition method which uses Principal Component Analysis to find linear combinations to maximize the variance in the data. Fisherfaces method is also a holistic approach which uses Linear Discriminant Analysis to minimize the variance within a class(person) and maximize the variance between the classes. OpenCV's local-based approach for face recognition is implemented through LBP. OpenCV adapted the approach Ahonen et al. [11] for face recognition [38].

IV. Design and Implementation

A. Context Diagram

The context diagram for the MWIRS has 4 external entities -anonymous user, Crime Registrar, Police Officer and Sytem Administrator. An anonymous user can send account information to the system and register an account and view existing cases of missing persons with 'missing' status and wanted fugitives with 'wanted' status. A Crime Registrar can log in to the system by providing login details, create and update records of missing person and wanted fugitives, manage his/her own account and view all cases of missing persons and wanted fugitives. A Police Officer can log in to the system by providing login details, manage his/her own account and view all cases of missing persons and wanted fugitives. A System Administrator can login to the system by providing login details, create other system admistrator and manage all user accounts.

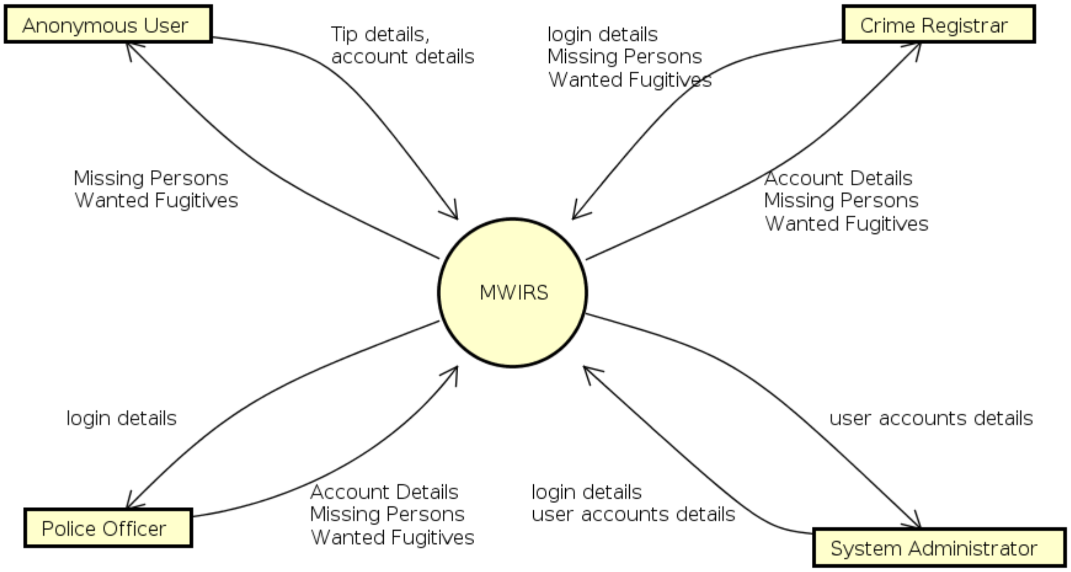


Figure 9: Context Diagram

B. Use Cases

The use case diagram for the MWIRS has 4 actors and 9 use cases. The actors are - anonymous user, police officer, crime registrar and system administrator. The uses cases are - query for a case using face recognition, submit a tip, query for a case of missing or wanted person, view tips, manages cases of missing and wanted persons, login, manage own account, manage user accounts, create system admin account.

In the 'query for a case using face recognition' use case, the system allows an anonymous user, logged in police officer or crime registrar to search through the database using face recognition. In the 'submit a tip' use case, an anonymous user can send a tip about a missing person and wanted fugitive in the database. In the 'query for a case of missing or wanted person', an anonymous user, logged in police officer or crime registrar can search through all the cases in the database through a list or through advanced searching. The 'view tips' use cases shows that a logged in police officer or crime registrar can view the tips submitted about cases recorded on their designated offices. The 'manage cases of missing and wanted persons' use case shows that a logged in crime registrar can manage (create, update or delete) cases recoded or his/her designated office. The 'login' use allows a crime registrar, police officer or system admistrator to log in to the MWIRS. In the 'manage own account' use case, it shows that any logged in user (system admin, police officer, crime registrar) can manage his/her own account. The system administrator is allowed to manage all the user accounts through the 'manage user accounts' use and is also allowed to create other system administrator accounts through the 'create system admin account' use.

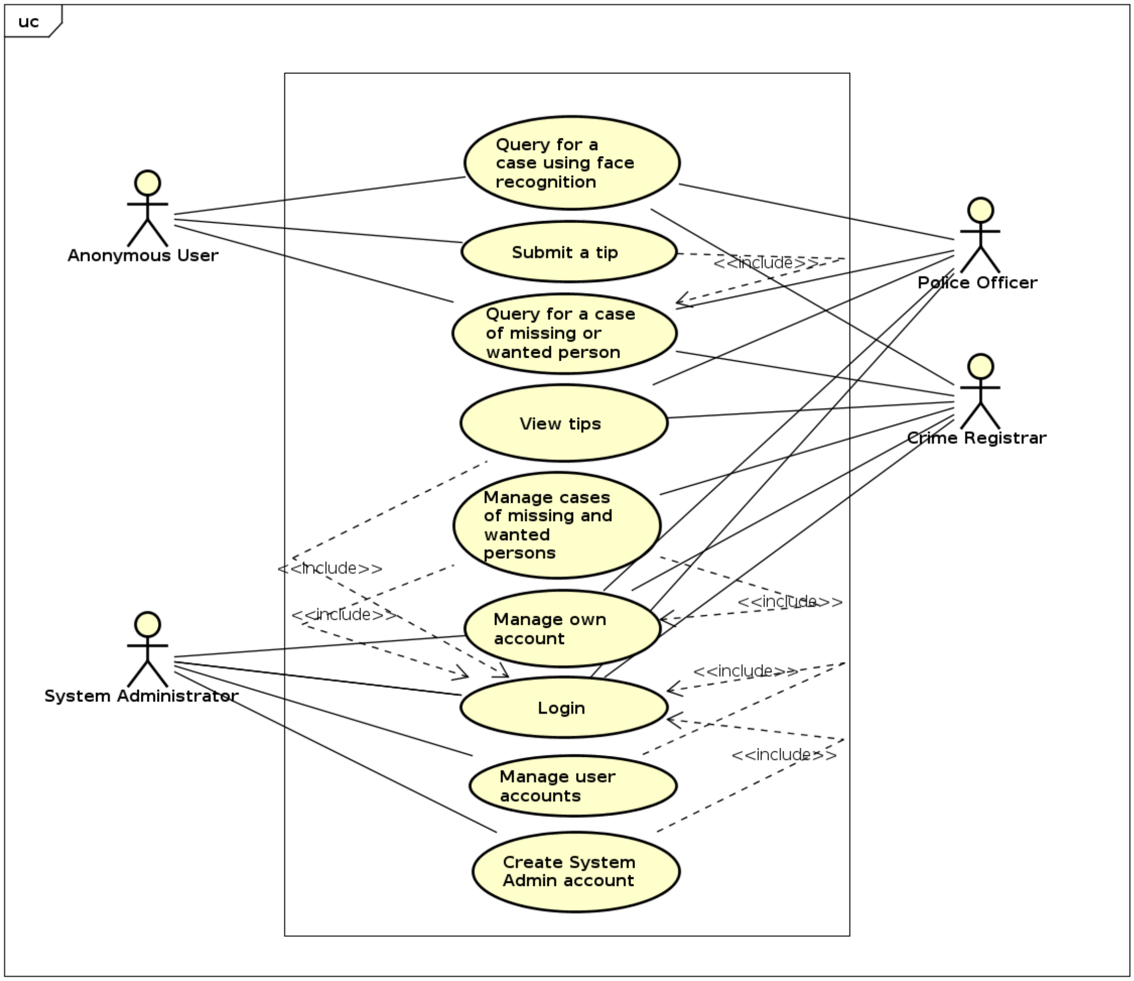


Figure 10: Use Case Diagram

C. Entity-Relationship Model

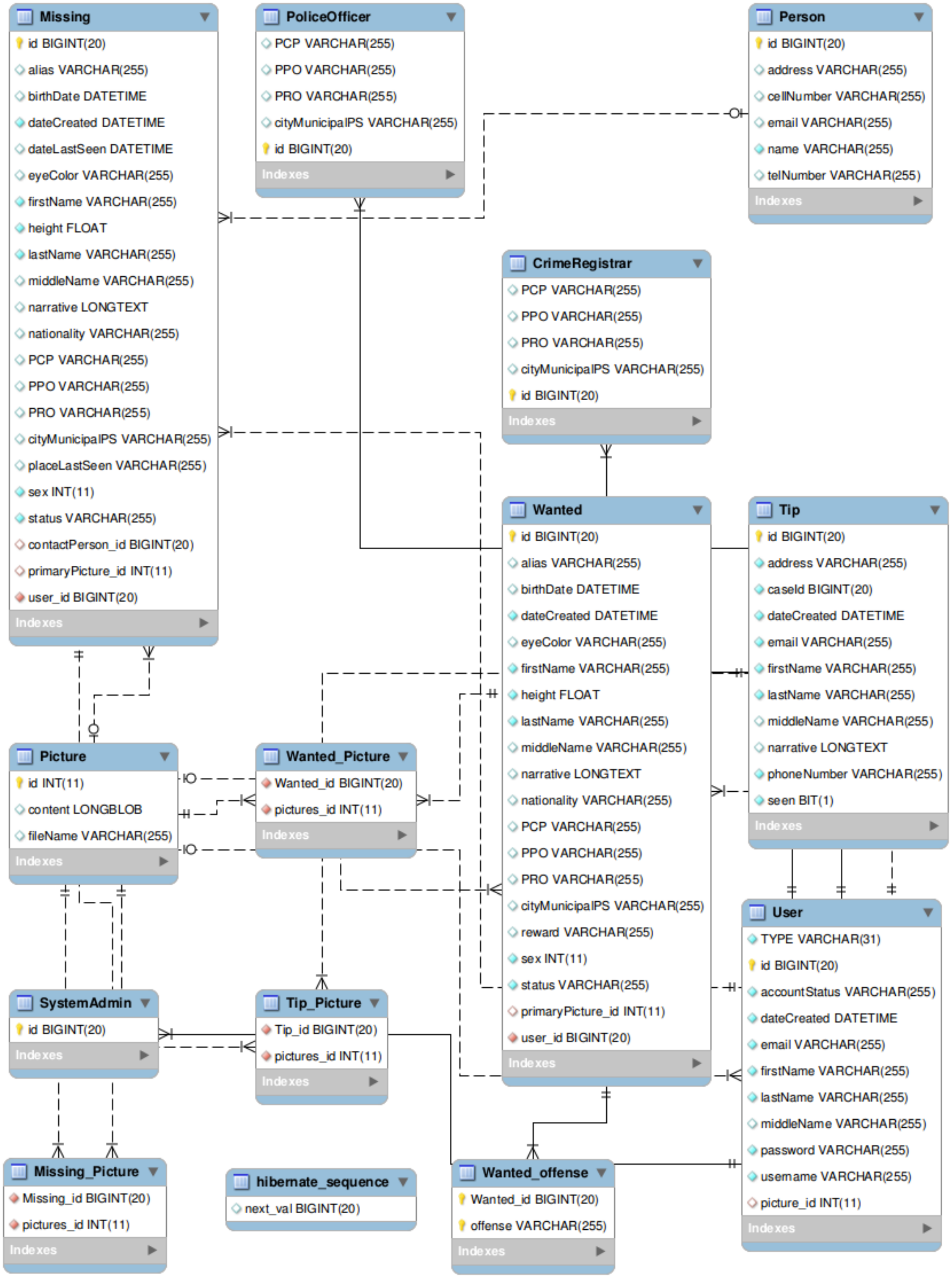


Figure 11: ERD

D. Data Dictionary

The following tables are the tables used for the database of MWIRS.

Column	Type	Description
TYPE	varchar(31)	Discriminator of user types.
id	bigint(20)	Unique identifier of user.
accountStatus	varchar(255)	Status of the account.
dateCreated	datetime	Date the account was created.
email	varchar(255)	Email address of the user.
firstName	varchar(255)	First name of the user.
lastName	varchar(255)	Last name of the user.
middleName	varchar(255)	Middle name of the user.
password	varchar(255)	Pasword of the account.
username	varchar(255)	Username of the user.
picture_id	int(11)	Id of the account's profile picture.

Table 1: User Table

Column	Type	Description
PCP	varchar(255)	Police Community precinct of the user.
PPO	varchar(255)	Police Provincial Office of the user.
PRO	varchar(255)	Police Regional Office of the user.
cityMunicipalPS	varchar(255)	City or Municipal Police Station of the user.
id	bigint(20)	Unique identifier of a user.

Table 2: CrimeRegistrar Table

Column	**Type**	**Description**
`PCP`	`varchar(255)`	Police Community precinct of the user.
`PPO`	`varchar(255)`	Police Provincial Office of the user.
`PRO`	`varchar(255)`	Police Regional Office of the user.
`cityMunicipalPS`	`varchar(255)`	City or Municipal Police Station of the user.
`id`	`bigint(20)`	Unique identifier of a user.

Table 3: PoliceOfficer Table

Column	**Type**	**Description**
`id`	`bigint(20)`	Unique identifier of a user.

Table 4: SystemAdmin Table

Column	Type	Description
id	bigint(20)	Unique identifier of the missing person.
alias	varchar(255)	Alias of the missing person.
birthDate	datetime	Birth date of the missing person.
dateCreated	datetime	Date the case was created.
dateLastSeen	datettime	Date the missing person was last seen.
eyeColor	varchar(255)	Eye color of the missing person.
firstName	varchar(255)	First name of the missing person.
height	float	Heigh of the missing person in centimeters.
investigator	varchar(255)	Investigator on case.
middleName	varchar(255)	Middle name of the missing person.
lastName	varchar(255)	Last name of the missing person.
narrative	longtext	Short narrative of the case.
nationality	varchar(255)	Nationality of the missing person.
PCP	varchar(255)	Police Community precinct where the case was reported.
PPO	varchar(255)	Police Provincial Office where the case was reported.
PRO	varchar(255)	Police Regional Office where the case was reported.
cityMunicipalPS	varchar(255)	City or Municipal Police Station where the case was reported.
placeLastSeen	varchar(255)	Place where the person was last seen.
sex	int(11)	Sex of the missing person.
status	varchar(255)	Status of the missing person.
contactPerson_id	bigint(20)	Id of the missing person's contact person.
primaryPicture_id	int(11)	Id of the missing person's primary picture.
user_id	bigint(20)	Id of the user who created the case.

Column	Type	Description
id	bigint(20)	Unique identifier of the wanted person.
alias	varchar(255)	Alias of the wanted person.
birthDate	datetime	Birth date of the wanted person.
dateCreated	datetime	Date the case was created.
eyeColor	varchar(255)	Eye color of the wanted person.
firstName	varchar(255)	First name of the wanted person.
height	float	Heigh of the wanted person in centimeters.
investigator	varchar(255)	Investigator on case.
middleName	varchar(255)	Middle name of the wanted person.
lastName	varchar(255)	Last name of the wanted person.
narrative	longtext	Short narrative of the case.
nationality	varchar(255)	Nationality of the wanted person.
PCP	varchar(255)	Police Community precinct where the case was reported.
PPO	varchar(255)	Police Provincial Office where the case was reported.
PRO	varchar(255)	Police Regional Office where the case was reported.
cityMunicipalPS	varchar(255)	City or Municipal Police Station where the case was reported.
sex	int(11)	Sex of the wanted person.
reward	varchar(255)	Reward for the wanted person.
status	varchar(255)	Status of the wanted person.
primaryPicture_id	int(11)	Id of the wanted person's primary picture.
user_id	bigint(20)	Id of the user who created the case.

Table 6: Wanted Table

Column	**Type**	**Description**
`Wanted_id`	`bigint(20)`	Unique identifier of the wanted person.
`offense`	`varchar(255)`	Offense of the wanted person.

Table 7: Wanted_offense Table

Column	**Type**	**Description**
`id`	`bigint(20)`	Unique identifier of the tip.
`address`	`varchar(255)`	Address of the sender.
`caseId`	`bigInt(20)`	Id of the tip's subject.
`dateCreated`	`datetime`	Date the tip was submitted.
`email`	`varchar(255)`	Email address of the sender.
`firstName`	`varchar(255)`	First name of the sender.
`lastName`	`varchar(255)`	Last name of the sender.
`middleName`	`varchar(255)`	Middle name of the sender.
`narrative`	`longtext`	Narrative of the tip.
`phoneNumber`	`varchar(255)`	Phone number of the sender.
`seen`	`bit(1)`	Indicator bit if the tip has already been seen.

Table 8: Tip Table

Column	**Type**	**Description**
`id`	`bigint(20)`	Unique identifier of the person.
`address`	`varchar(255)`	Address of the person.
`cellNumber`	`varchar(255)`	Cellphone number of the person.
`email`	`varchar(255)`	Email address of the person.
`name`	`varchar(255)`	Name name of the person.
`telNumber`	`varchar(255)`	Phone number of the person.

Table 9: Person Table

Column	Type	Description
id	bigint(20)	Unique identifier of the picture.
fileName	varchar(255)	File name of the pictue.
content	longblob	Content of the picture.

Table 10: Picture Table

Column	Type	Description
missing_id	bigint(20)	Unique identifier of the missing person.
pictures_id	varchar(255)	Unique identifier of the picture person.

Table 11: Missing_picture Table

Column	Type	Description
wanted_id	bigint(20)	Unique identifier of the wanted person.
picture_id	varchar(255)	Unique identifier of the picture person.

Table 12: Wanted_picture Table

Column	Type	Description
tip_id	bigint(20)	Unique identifier of the tip.
pictures_id	varchar(255)	Unique identifier of the picture person.

Table 13: Tip_picture Table

E. Technical Architecture

1. The minimum hardware requirement for the machine of the developer are:

   (a) CPU: Pentium 2 266 MHz processor or higher

   (b) Disk Space: 1000 MB or higher

   (c) RAM: 1GB MB or higher

   (d) Internet Connection: 1 mbps download speed or higher

2. The minimum software requirements for the developer are:

   (a) Operating System (Windows 7, 8.x, 10, Mac OS X, Ubuntu Linux or Linux Mint)

   (b) Java SE Development Kit 8

   (c) MySQL version 5

   (d) Maven version 3

   (e) Apache Tomcat version 8 or Pivotal tc Server Developer Edition version 3

   (f) OpenCV version 3.0

3. The minimum hardware requirements for the MWIRS users are:

   (a) CPU: 1 gHz or higher

   (b) RAM: 512 MB or higher

   (c) Internet Connection: 256 kbps download speed or higher

4. The minimum software requirements for the MWIRS users are:

   (a) Operating System (Windows 7, 8.x, 10, Mac OS X, Ubuntu Linux or Linux Mint)

   (b) Browser (Opera, Google Chrome, Safari or Microsoft Edge)

F. System Architecture

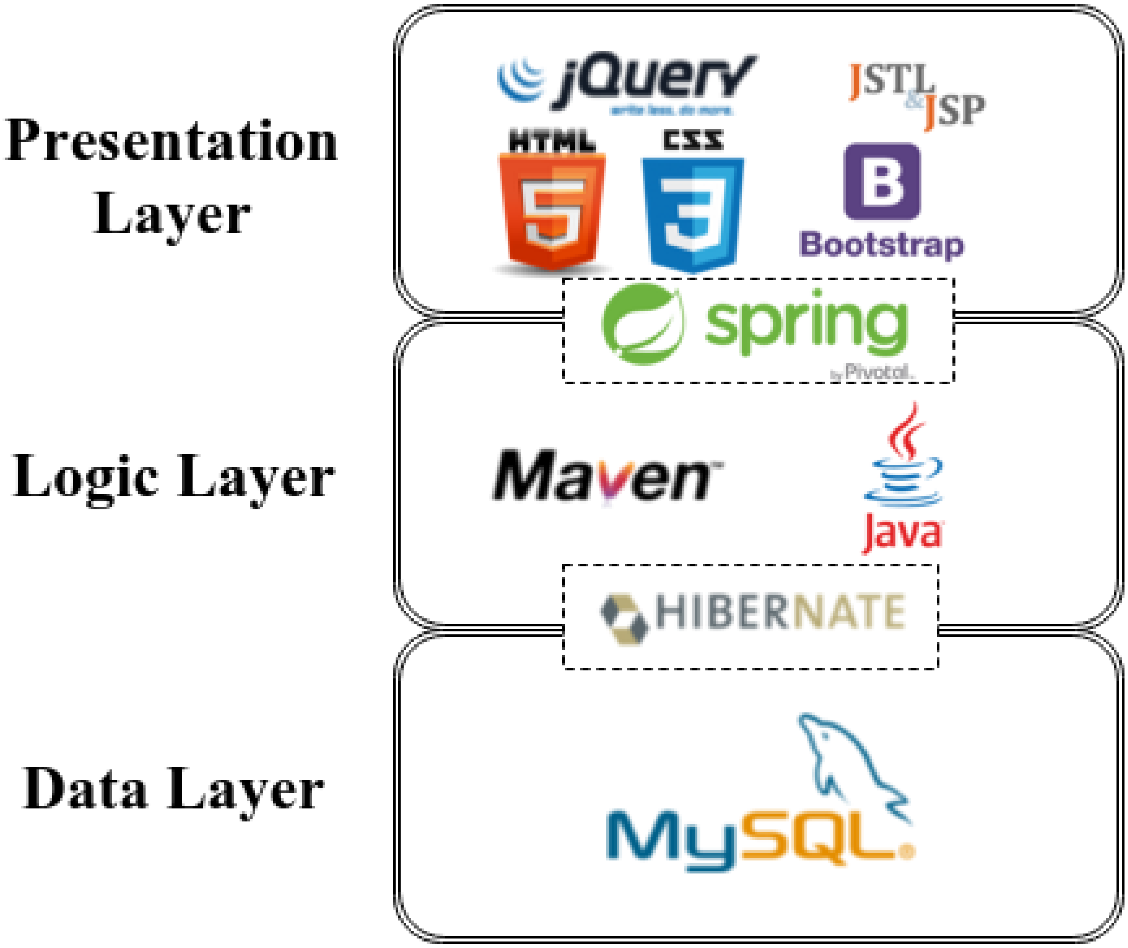


Figure 12: System Architecture

V. Results

The MWIRS is a system designed to be used primarily by the crime registrars and police officers of every police precincts to help organize reports of missing persons. The system also serves as a medium to publicize reports of missing persons as well as wanted fugitives by allowing anonymous users to access the system by viewing the reports missing person and wanted fugutives.

MWIRS home page, as shown in figure 13, is the login page which allows all the registered users to log in to the system.

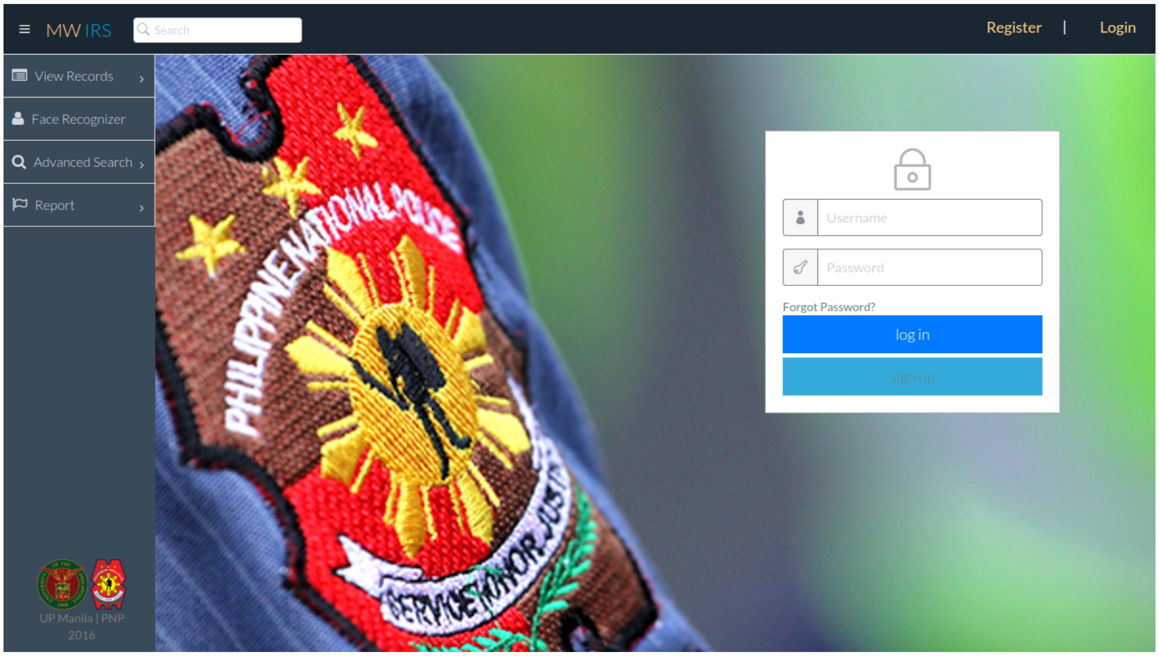


Figure 13: Login Page

Users without account yet can register to the system subject to the system administrator's approval, as shown in figure 14 and 15.

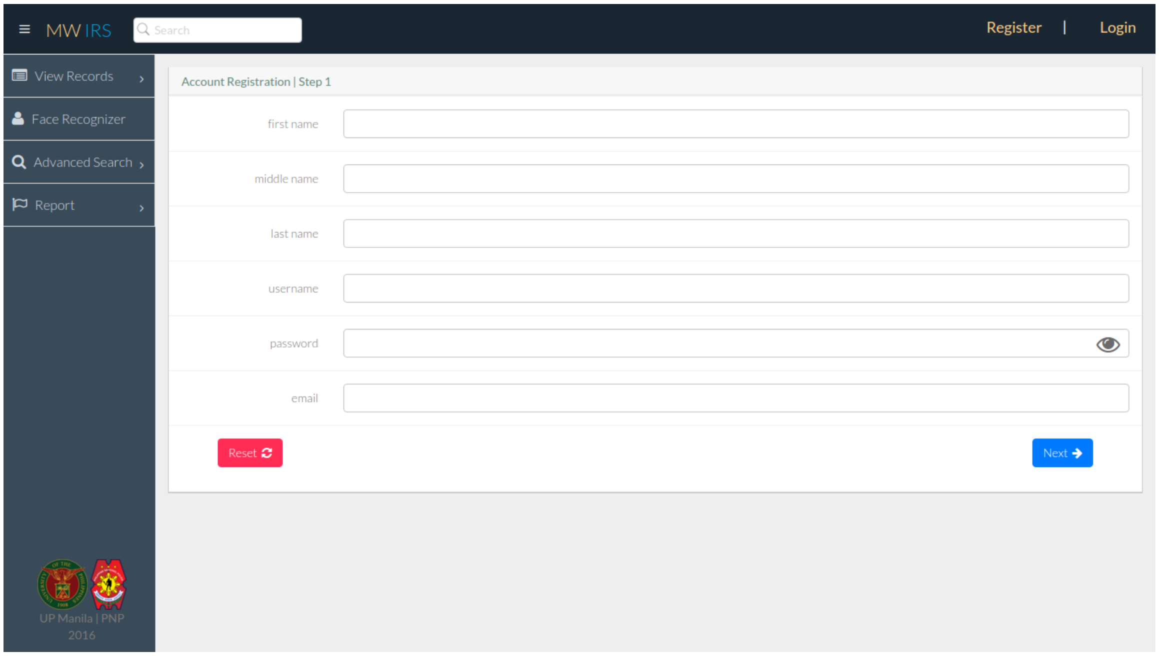
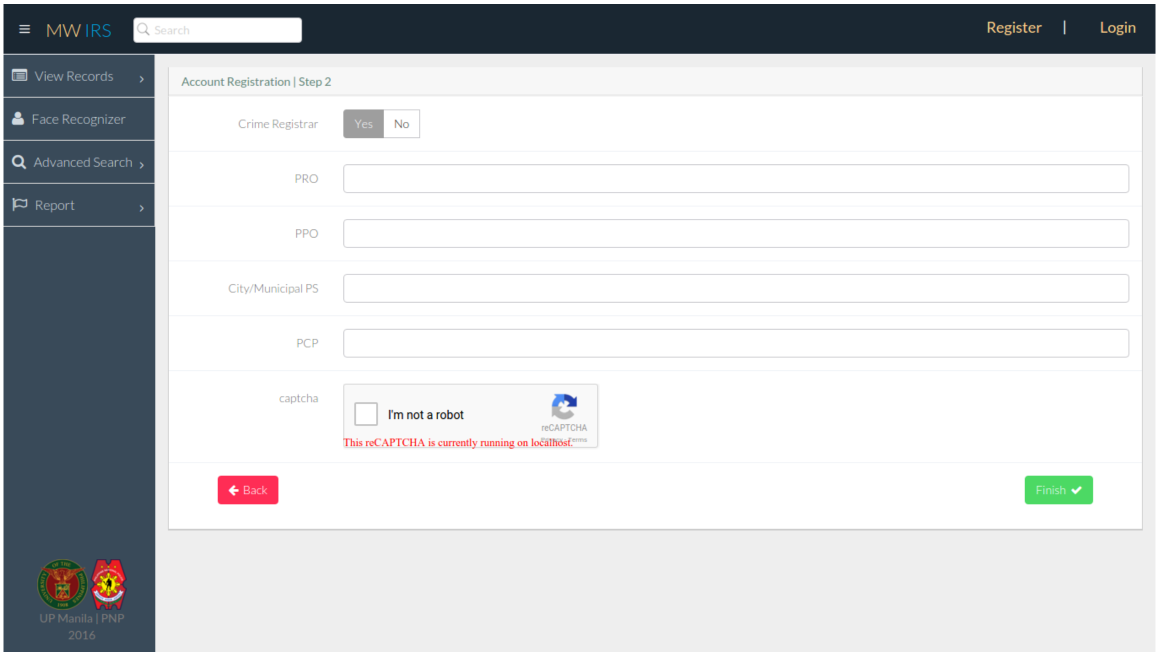


Figure 14: Registration Step 1 Page



This reCAPTCHA is currently running on localhost.

Figure 15: Registration Step 2 Page

The system allows an anonymous user, logged in crime registrar or police officer to view cases of wanted persons as shown in figure 16. Anonymous users are only allowed to view wanted cases with 'wanted' status while logged in users are allowed to view all wanted cases.

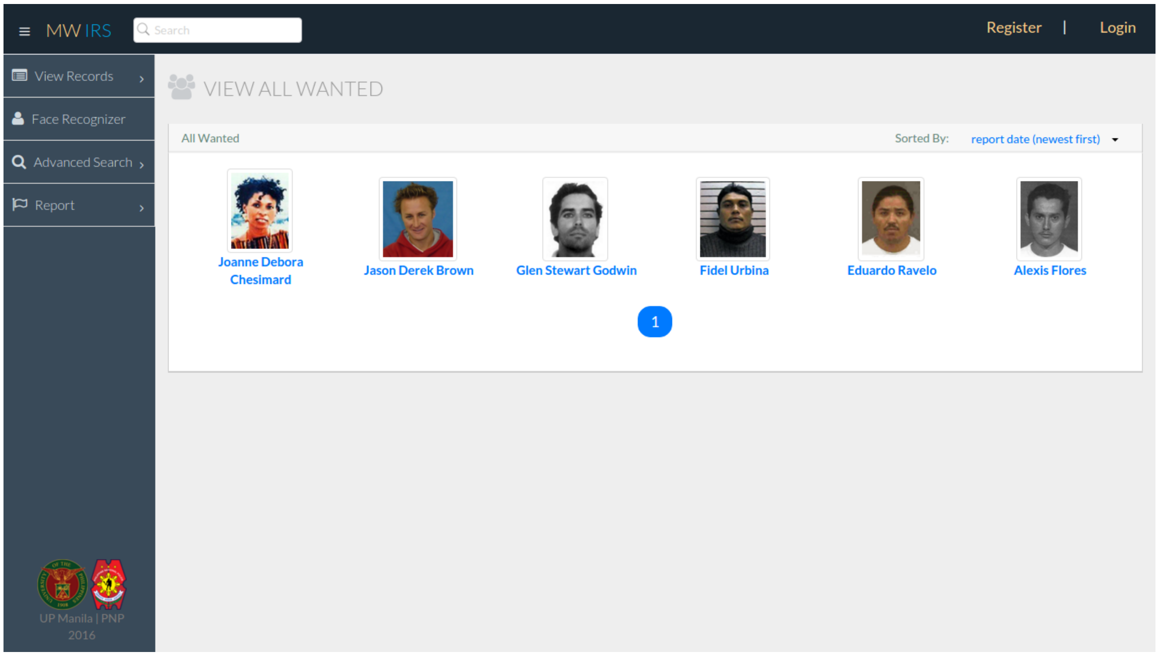
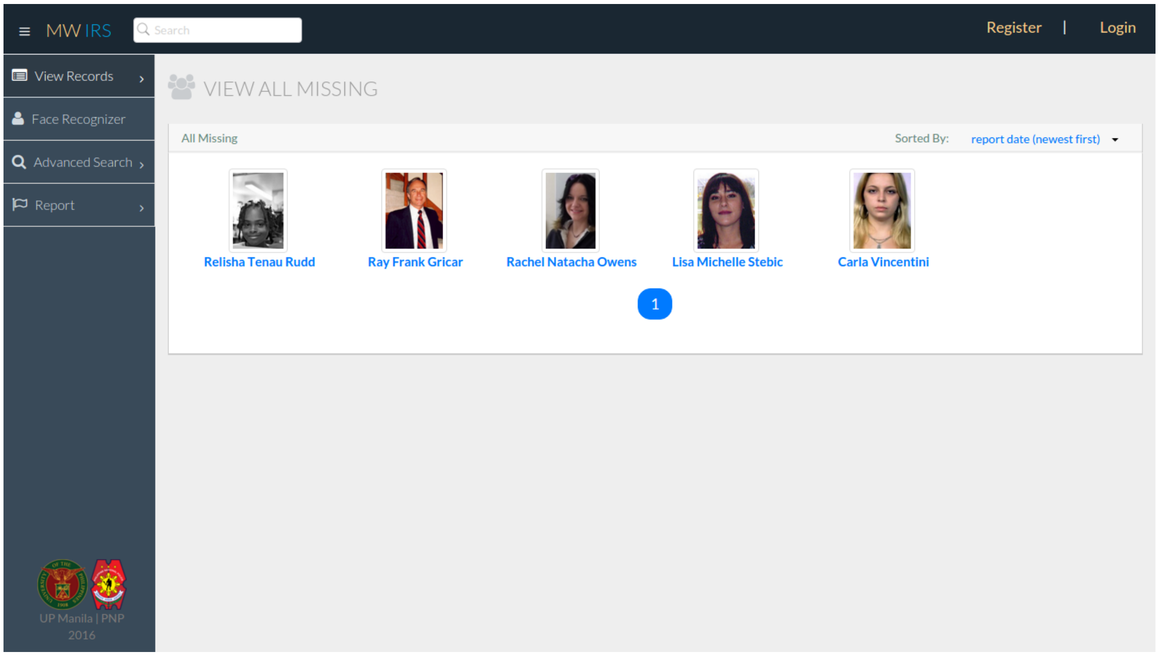


Figure 16: View All Wanted Page

For the missing persons report, the system allows an anonymous user, logged in crime registrar or police officer to view cases of missing persons as shown in figure 17. Anonymous users are only allowed to view missing persons cases with 'missing' status while logged in users are allowed to view all missing reports.



VIEW ALL MISSING

All Missing

Sorted By: report date (newest first)

Relisha Tenau Rudd

Ray Frank Gricar

Rachel Natacha Owens

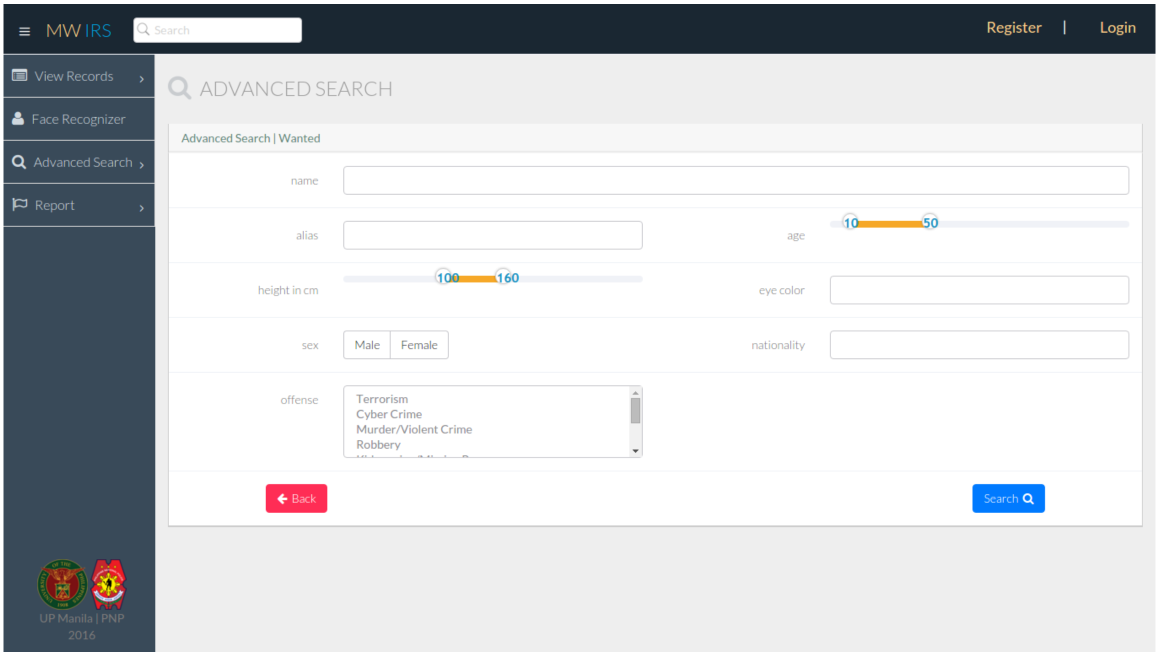
Lisa Michelle Stebic

Carla Vincentini

1

Figure 17: View All Missing Page

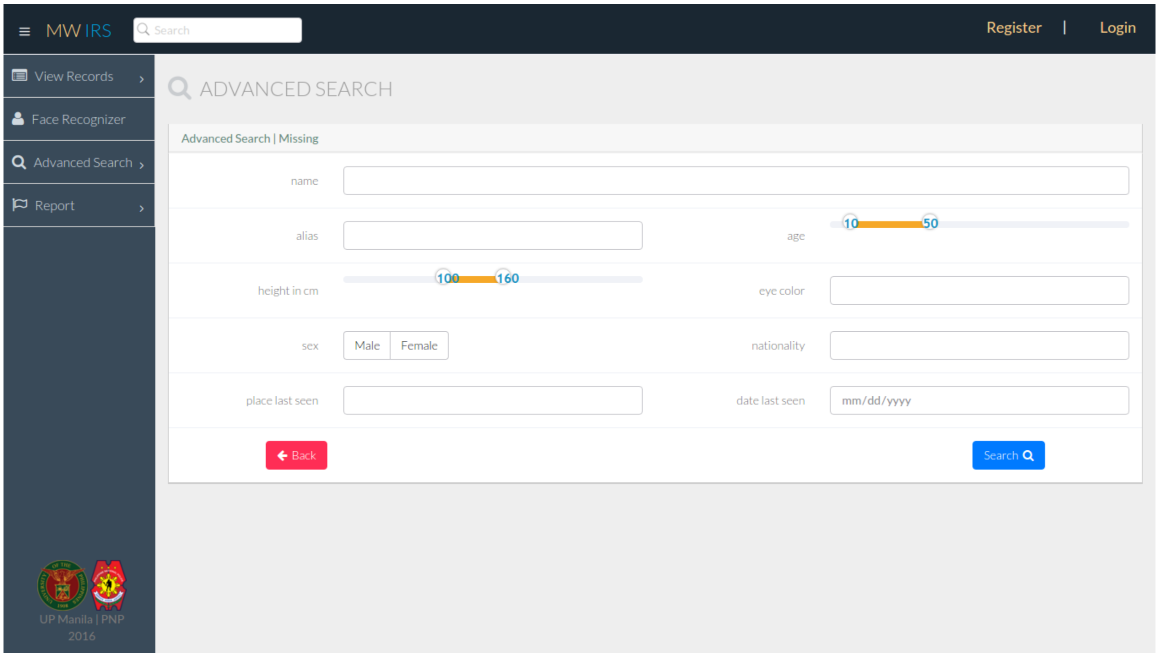
To search a case easily, the system also allows an anonymous user, logged in crime registrar or police officer to search by filling up text fields in the advanced search page for a wanted fugitive shown in figure 18 and missing person as shown in figure 19. The result of the search will be shown on the same page as shown in figure 20.



age: 10 – 50

height in cm: 100 – 160

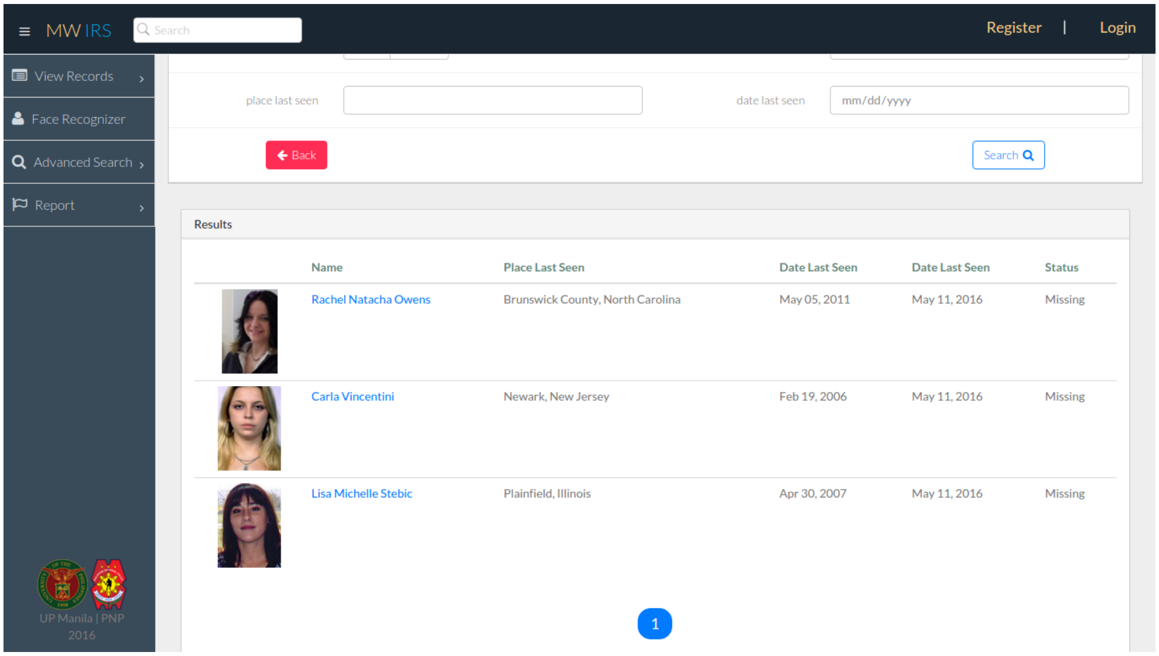
Figure 18: Advanced Search for Wanted Fugitives Page



age: 10 – 50

height in cm: 100 – 160

Figure 19: Advanced Search for Missing Persons Page



place last seen

date last seen: mm/dd/yyyy

Results

	Name	Place Last Seen	Date Last Seen	Date Last Seen	Status
	Rachel Natacha Owens	Brunswick County, North Carolina	May 05, 2011	May 11, 2016	Missing
	Carla Vincentini	Newark, New Jersey	Feb 19, 2006	May 11, 2016	Missing
	Lisa Michelle Stebic	Plainfield, Illinois	Apr 30, 2007	May 11, 2016	Missing

Figure 20: Advanced Search Results

The system also allows searching for cases through its face recognition module shown in figure 21 which allows anonymous users and logged in users to upload an image subject to face detection, preprocess it and rank the cases in the database according to their pictures' similarity with the test image as shown in figure 22.

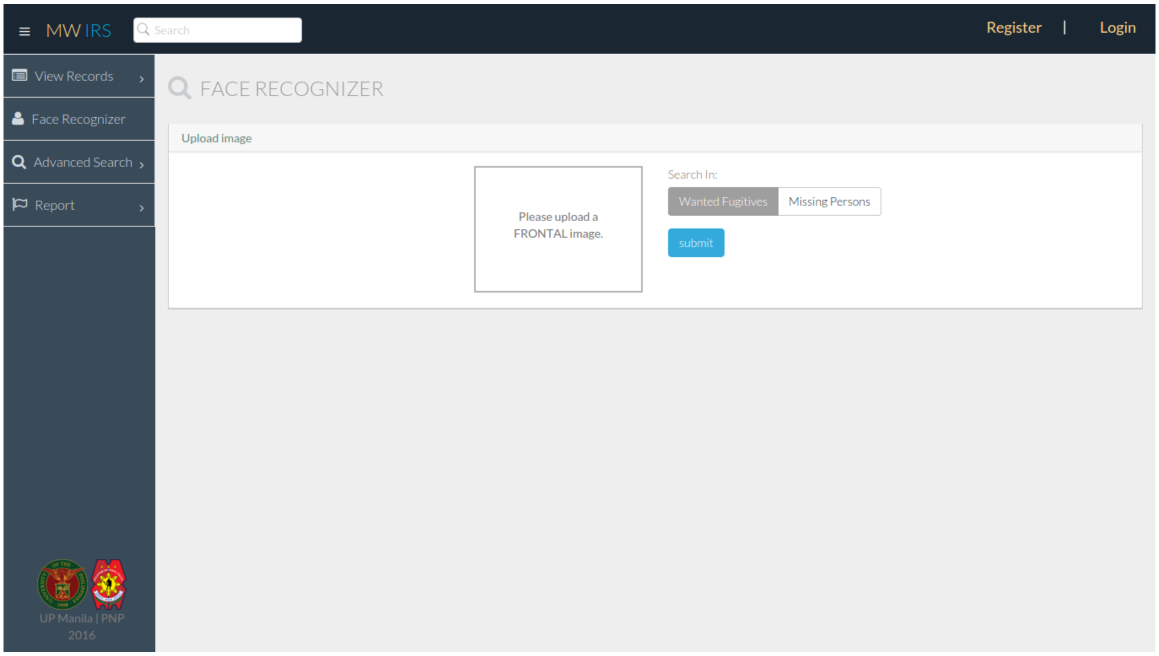
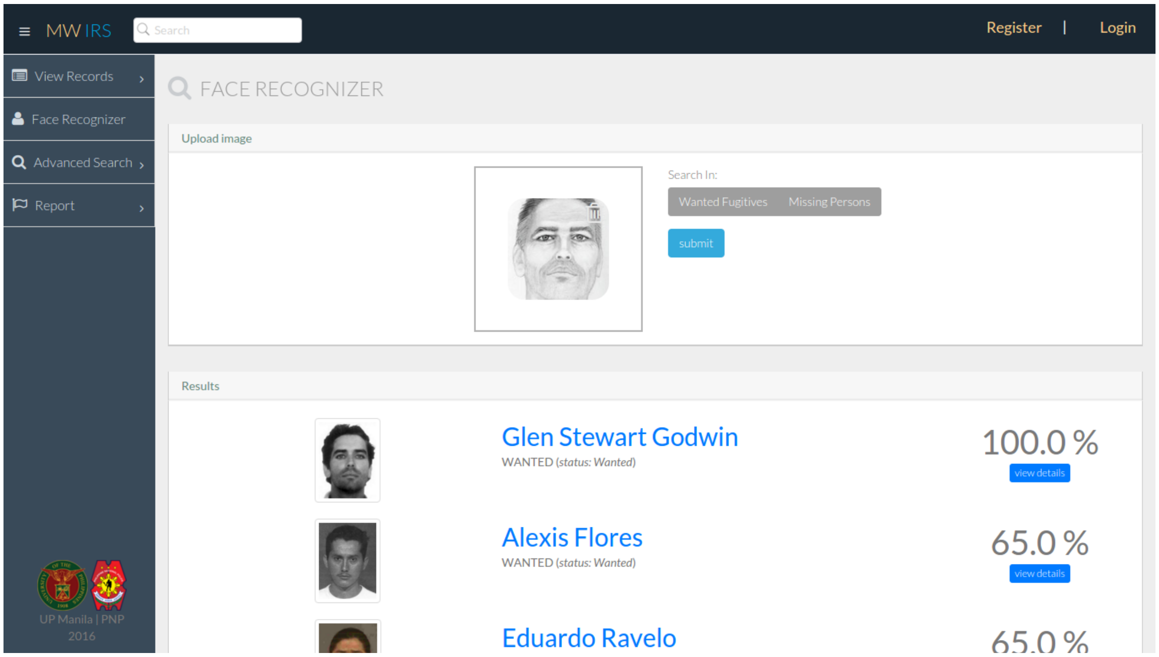


Figure 21: Face Recognizer Page



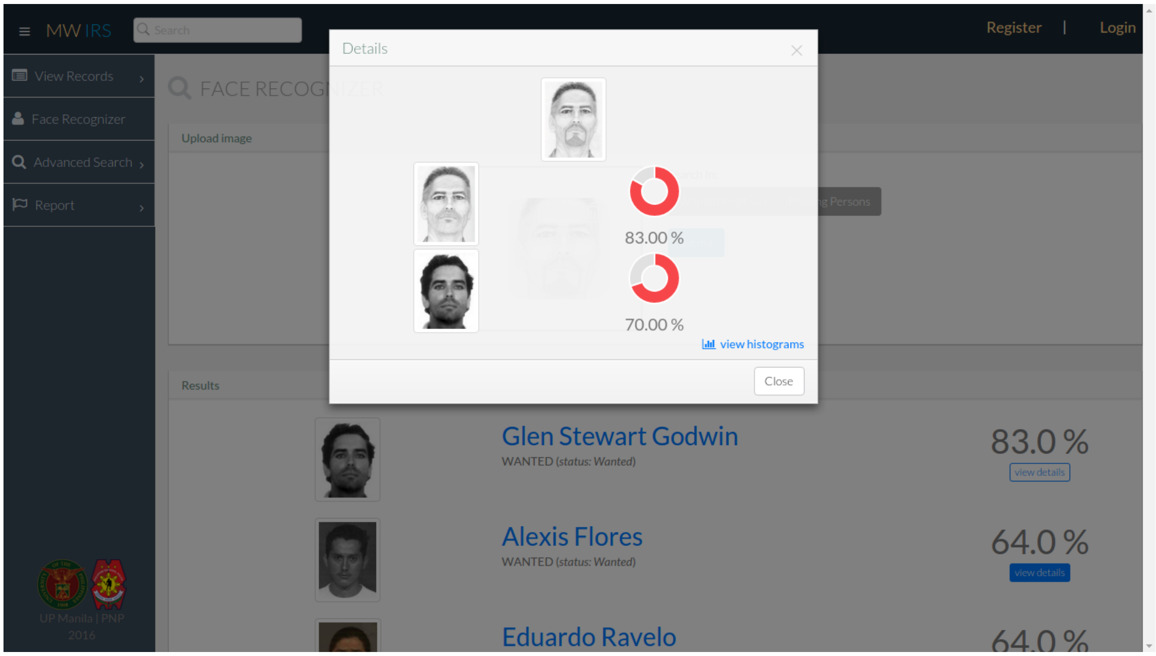
Glen Stewart Godwin
WANTED (*status: Wanted*)
100.0 %

Alexis Flores
WANTED (*status: Wanted*)
65.0 %

Eduardo Ravelo
65.0 %

Figure 22: Face Recognizer Results

When a user clicks on the 'view details' button. Similarity between the test image and all the case's pictures will be displayed as shown in 23.



Glen Stewart Godwin
WANTED (*status: Wanted*)
83.0 %
view details

Alexis Flores
WANTED (*status: Wanted*)
64.0 %
view details

Eduardo Ravelo
64.0 %

Figure 23: Face Recognizer Results (Similarities)

Upon clicking 'view histograms', the user will be directed to a page shown in figure 24 showing every picture's Local Binary Pattern Histograms used in the face recognition process.

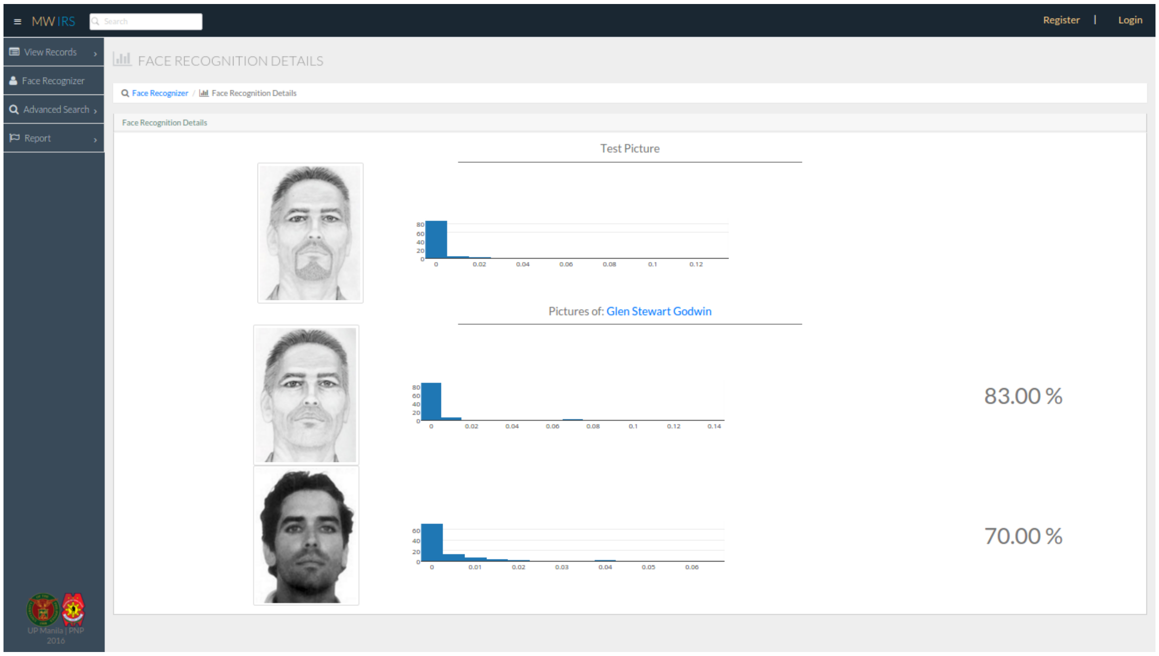
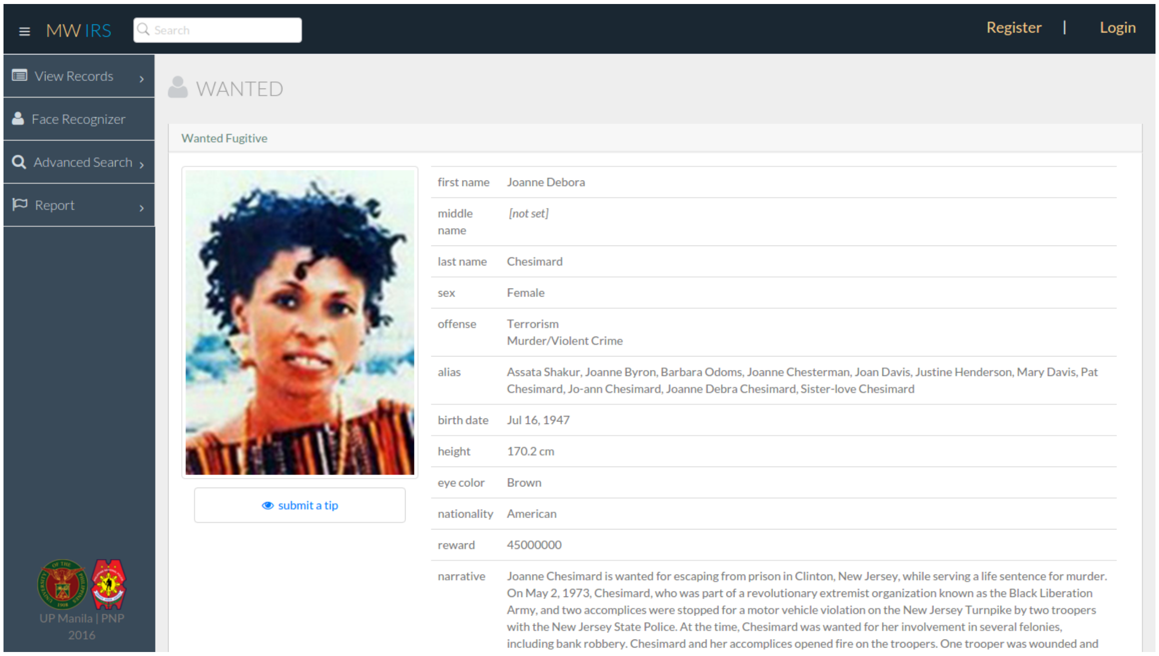


Figure 24: Face Recognizer Results (Histograms)

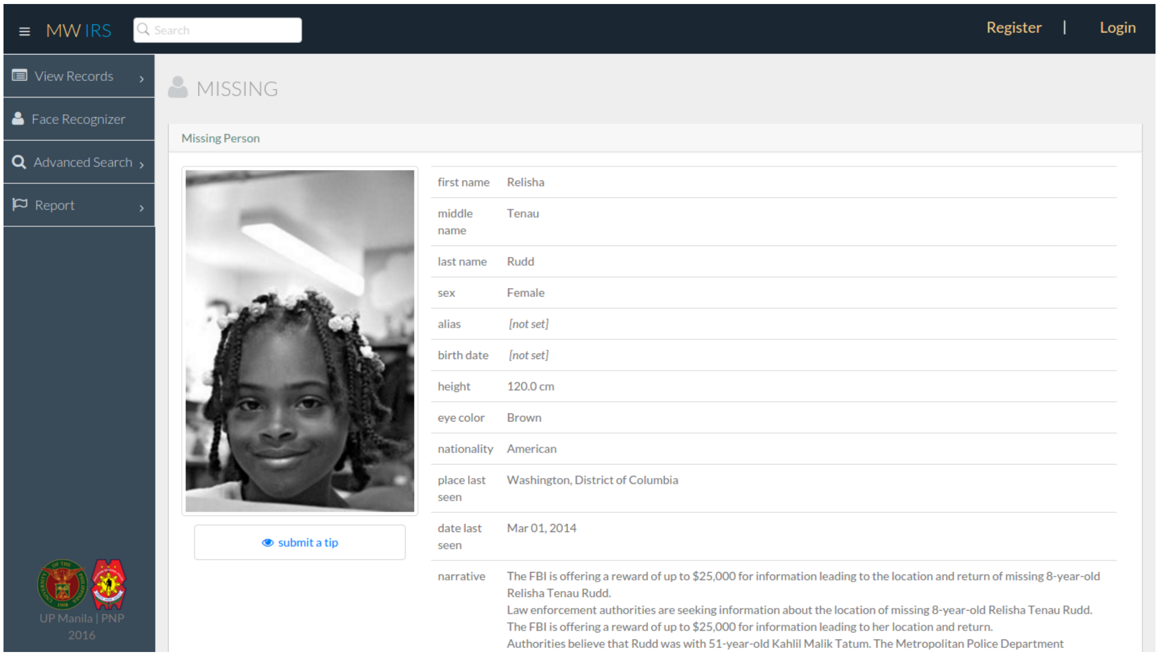
Shown in figure 25 is a wanted fugitive's profile as seen by an anonymous user. Anonymous user can view all the details of a wanted fugitive's profile with 'wanted' status and his/her pictures.



first name	Joanne Debora
middle name	*[not set]*
last name	Chesimard
sex	Female
offense	Terrorism Murder/Violent Crime
alias	Assata Shakur, Joanne Byron, Barbara Odoms, Joanne Chesterman, Joan Davis, Justine Henderson, Mary Davis, Pat Chesimard, Jo-ann Chesimard, Joanne Debra Chesimard, Sister-love Chesimard
birth date	Jul 16, 1947
height	170.2 cm
eye color	Brown
nationality	American
reward	45000000
narrative	Joanne Chesimard is wanted for escaping from prison in Clinton, New Jersey, while serving a life sentence for murder. On May 2, 1973, Chesimard, who was part of a revolutionary extremist organization known as the Black Liberation Army, and two accomplices were stopped for a motor vehicle violation on the New Jersey Turnpike by two troopers with the New Jersey State Police. At the time, Chesimard was wanted for her involvement in several felonies, including bank robbery. Chesimard and her accomplices opened fire on the troopers. One trooper was wounded and

Figure 25: Wanted Fugitive Profile (Seen by Anonymous User)

Shown in figure 26 is a missing person's profile as seen by an anonymous user. Anonymous user can view the details of a person's profile with 'missing' status and his/her pictures. An anonymous user is not allowed to view the details of the contact person of the case.



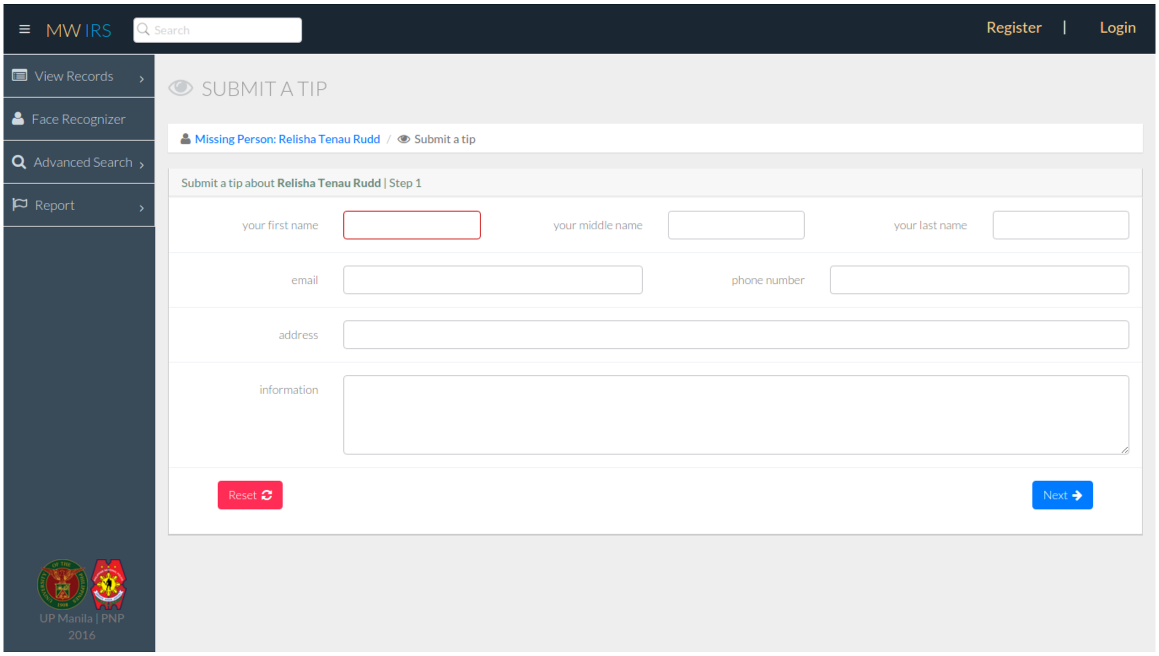
MISSING

Missing Person

first name	Relisha
middle name	Tenau
last name	Rudd
sex	Female
alias	*[not set]*
birth date	*[not set]*
height	120.0 cm
eye color	Brown
nationality	American
place last seen	Washington, District of Columbia
date last seen	Mar 01, 2014
narrative	The FBI is offering a reward of up to $25,000 for information leading to the location and return of missing 8-year-old Relisha Tenau Rudd. Law enforcement authorities are seeking information about the location of missing 8-year-old Relisha Tenau Rudd. The FBI is offering a reward of up to $25,000 for information leading to her location and return. Authorities believe that Rudd was with 51-year-old Kahlil Malik Tatum. The Metropolitan Police Department

Figure 26: Missing Person Profile (Seen by Anonymous User)

MWIRS allows anonymous users to send tips about a missing person or wanted fugitive in the database. In submitting a tip, the user is required to fill up all the fields in the form in figure 27. The user can also upload pictures as additional information as shown in figure 28.



SUBMIT A TIP

Missing Person: Relisha Tenau Rudd / Submit a tip

Submit a tip about **Relisha Tenau Rudd** | Step 1

your first name

your middle name

your last name

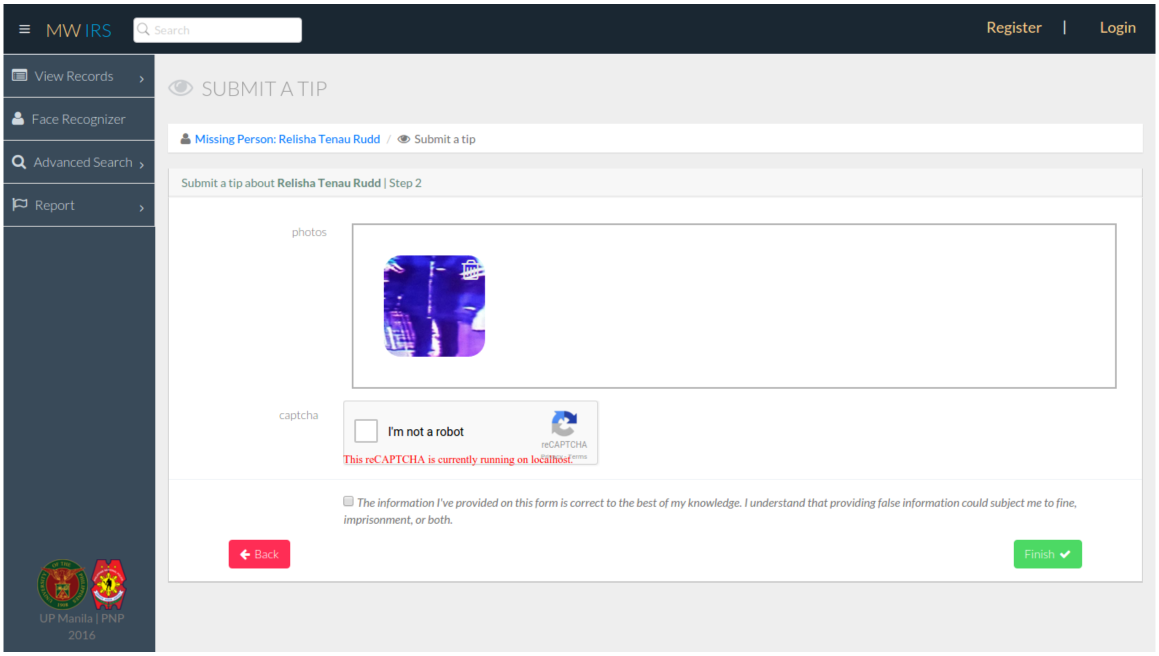
email

phone number

address

information

Figure 27: Send Tip Step 1 Page



SUBMIT A TIP

Missing Person: Relisha Tenau Rudd / Submit a tip

Submit a tip about **Relisha Tenau Rudd** | Step 2

photos

captcha

□ I'm not a robot

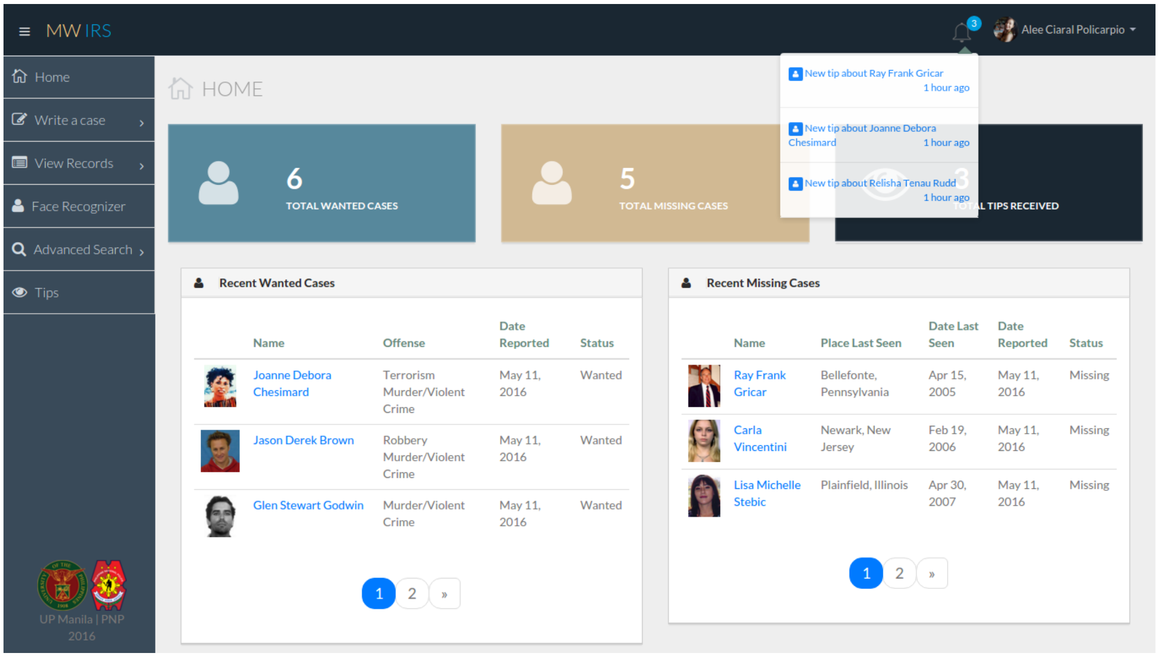
This reCAPTCHA is currently running on localhost.

□ *The information I've provided on this form is correct to the best of my knowledge. I understand that providing false information could subject me to fine, imprisonment, or both.*

Figure 28: Send Tip Step 2 Page

Shown in figure 29 is the home page for a crime registrar and police officer. Shown in this page are the counts for wanted fugitives and misisng persons reported on his/her office and tips submitted about cases reported on the user's designated office.

Recent cases of wanted fugitives and wanted person are also shown in this page. In the header, the logged in user is notified of submitted tips that have not yet been seen by an officer.



New tip about Ray Frank Gricar 1 hour ago

New tip about Joanne Debora Chesimard 1 hour ago

New tip about Relisha Tenau Rudd 1 hour ago

Recent Wanted Cases

Name	Offense	Date Reported	Status
Joanne Debora Chesimard	Terrorism Murder/Violent Crime	May 11, 2016	Wanted
Jason Derek Brown	Robbery Murder/Violent Crime	May 11, 2016	Wanted
Glen Stewart Godwin	Murder/Violent Crime	May 11, 2016	Wanted

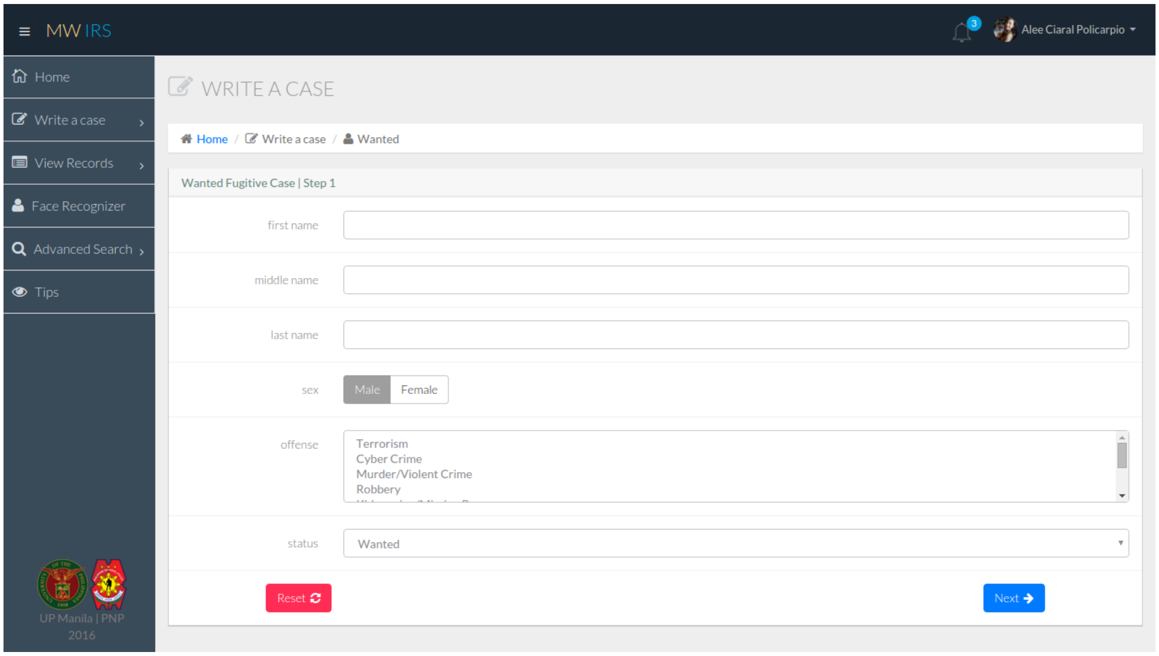
Recent Missing Cases

Name	Place Last Seen	Date Last Seen	Date Reported	Status
Ray Frank Gricar	Bellefonte, Pennsylvania	Apr 15, 2005	May 11, 2016	Missing
Carla Vincentini	Newark, New Jersey	Feb 19, 2006	May 11, 2016	Missing
Lisa Michelle Stebic	Plainfield, Illinois	Apr 30, 2007	May 11, 2016	Missing

Figure 29: Crime Registrar and Police Officer Home Page

What differs a crime registrar from a police officer is the privelege of a Crime Registrar to manage the cases of wanted fugitives and missing person whereas a police officer can only view all the cases with any status and the tips submitted about cases reported on his/her designated office.

Shown in figure 30 is the page for the first step of writing a case of wanted person. Figure 30 and 31 are the forms gathering information about the wanted fugitives. In figure 32, the crime registrar can upload pictures of the fugitive and choose a primary picture as shown in figure 33. Upon completion of all the form, the crime registrar has to verify all the information as shown in figure 34 and hit 'Finish' to compelete writing the case.



WRITE A CASE

Home / Write a case / Wanted

Wanted Fugitive Case | Step 1

first name

middle name

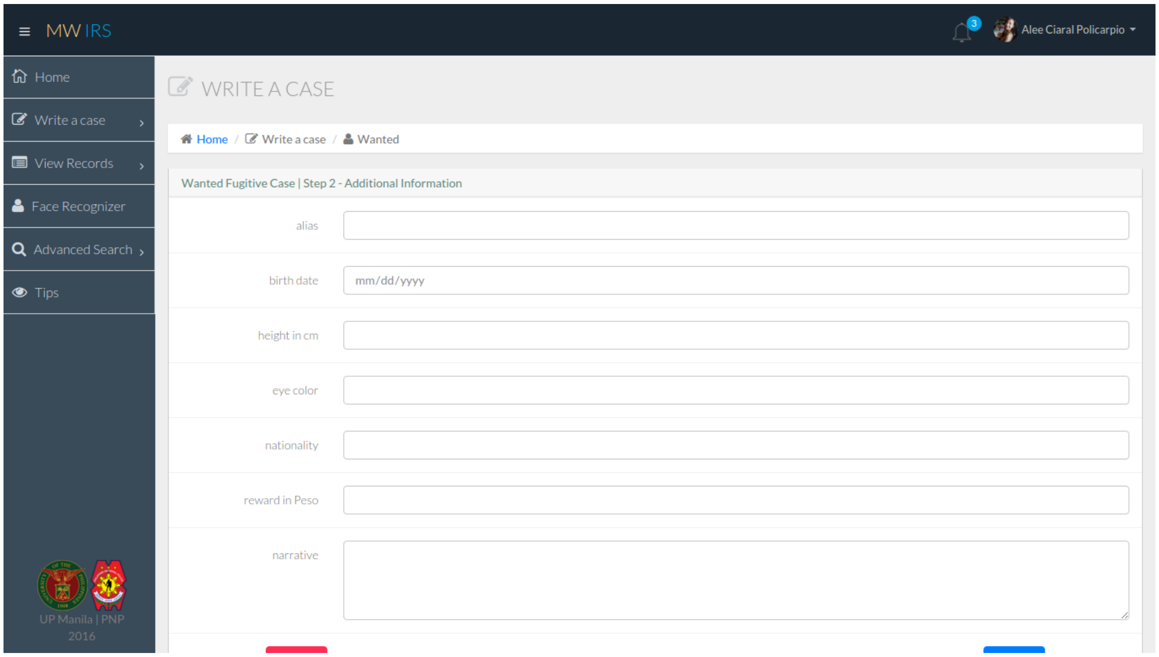
last name

sex: [✓ Male] Female

offense:
Terrorism
Cyber Crime
Murder/Violent Crime
Robbery

status: Wanted

Figure 30: Created Wanted Step 1 Page



WRITE A CASE

Home / Write a case / Wanted

Wanted Fugitive Case | Step 2 - Additional Information

alias

birth date: mm/dd/yyyy

height in cm

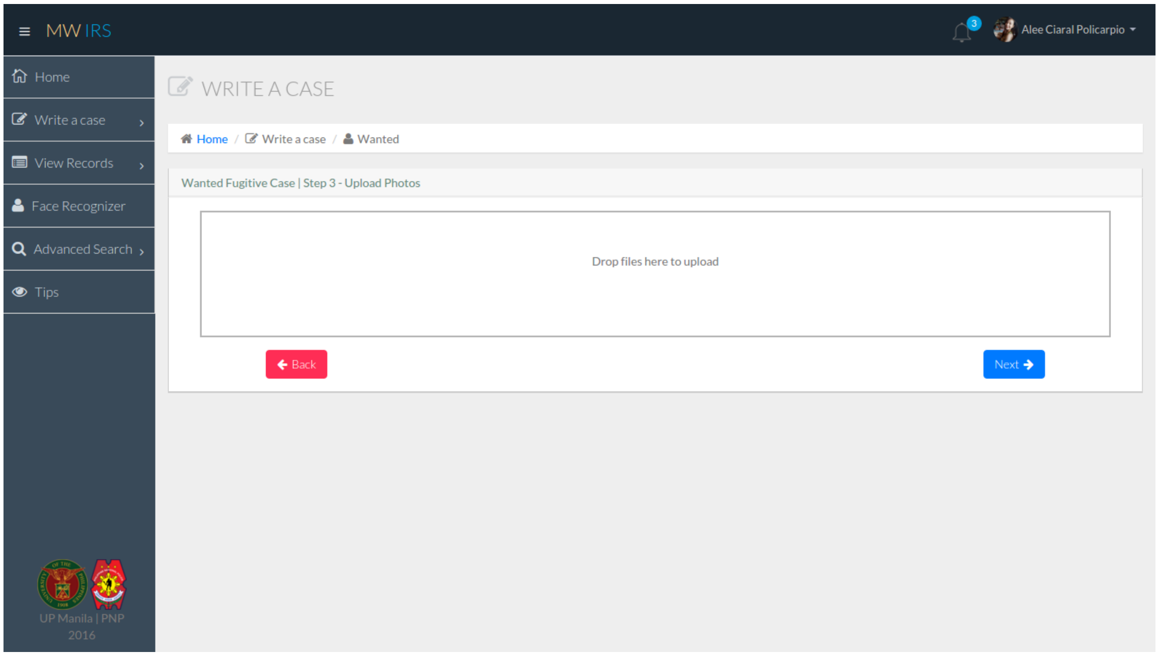
eye color

nationality

reward in Peso

narrative

Figure 31: Created Wanted Step 2 Page



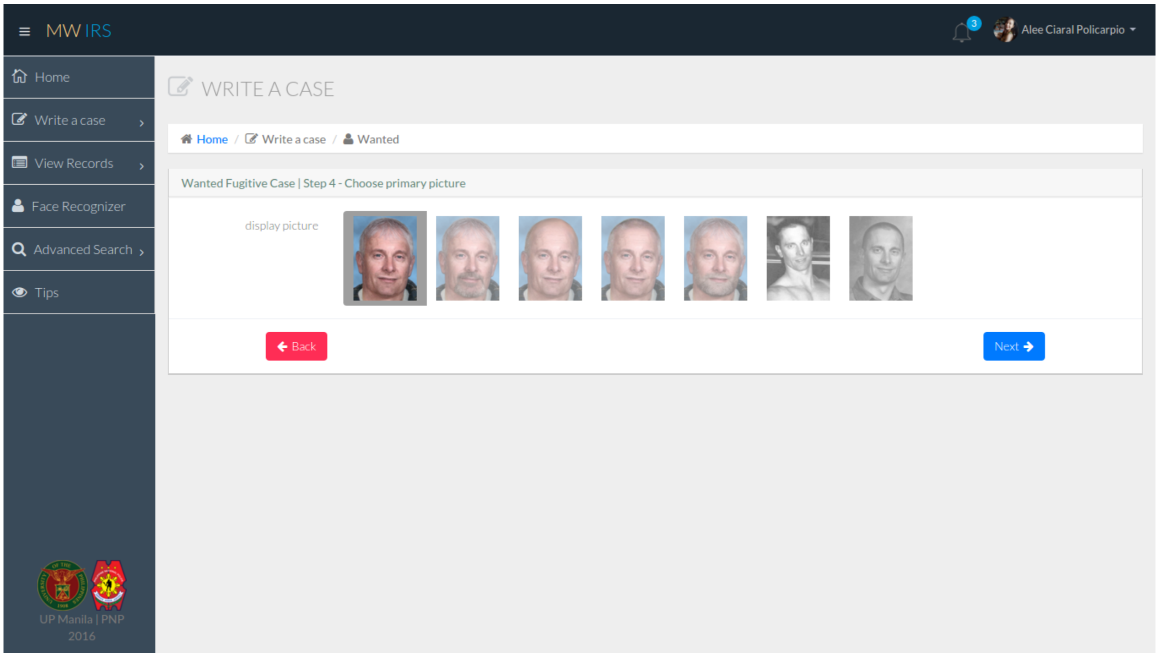
WRITE A CASE

Home / Write a case / Wanted

Wanted Fugitive Case | Step 3 - Upload Photos

Drop files here to upload

Figure 32: Created Wanted Step 3 Page



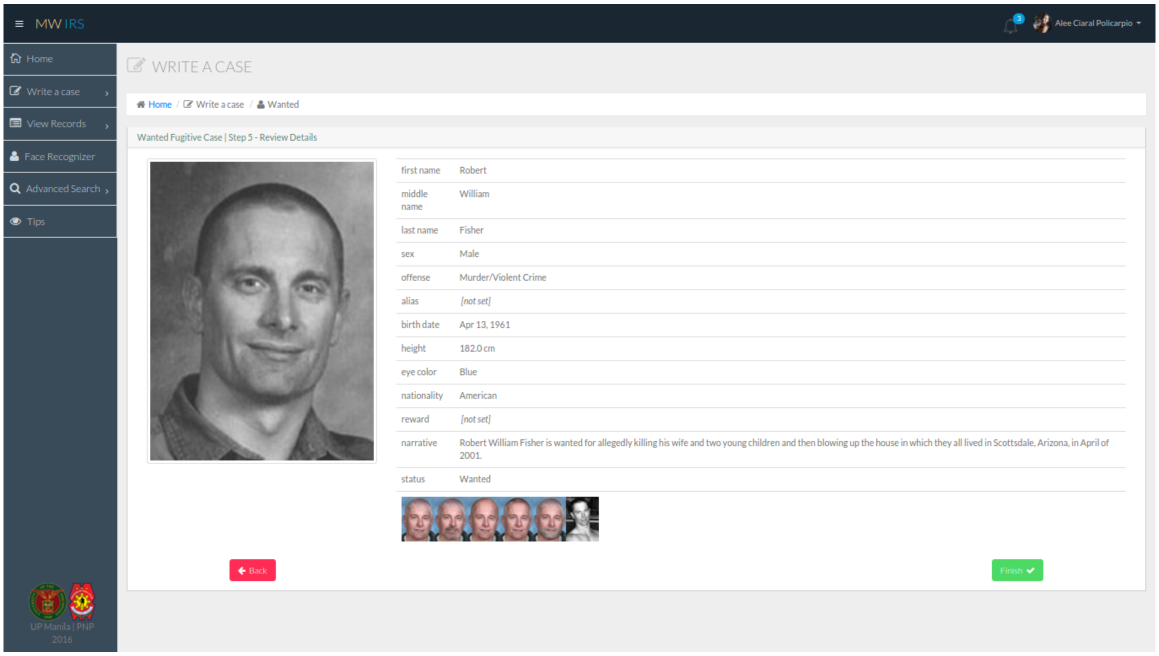
WRITE A CASE

Home / Write a case / Wanted

Wanted Fugitive Case | Step 4 - Choose primary picture

display picture

Figure 33: Created Wanted Step 4 Page



WRITE A CASE

Home / Write a case / Wanted

Wanted Fugitive Case | Step 5 - Review Details

first name	Robert
middle name	William
last name	Fisher
sex	Male
offense	Murder/Violent Crime
alias	*[not set]*
birth date	Apr 13, 1961
height	182.0 cm
eye color	Blue
nationality	American
reward	*[not set]*
narrative	Robert William Fisher is wanted for allegedly killing his wife and two young children and then blowing up the house in which they all lived in Scottsdale, Arizona, in April of 2001.
status	Wanted

Figure 34: Created Wanted Step 5 Page

Shown in figure 35 is the page for the first step of creating a Missing Person's case which contains a form about the missing person's information. In figure 36, the second step is shown which is a form for the details of the case's contact person. In fiure 37, the crime registrar can upload pictures of the missing person and choose a primary picture in figure 38. Upon completion of all the form, the crime registrar has to verify all the information as shown in figure 39 and hit 'Finish' to compelete writing the case.

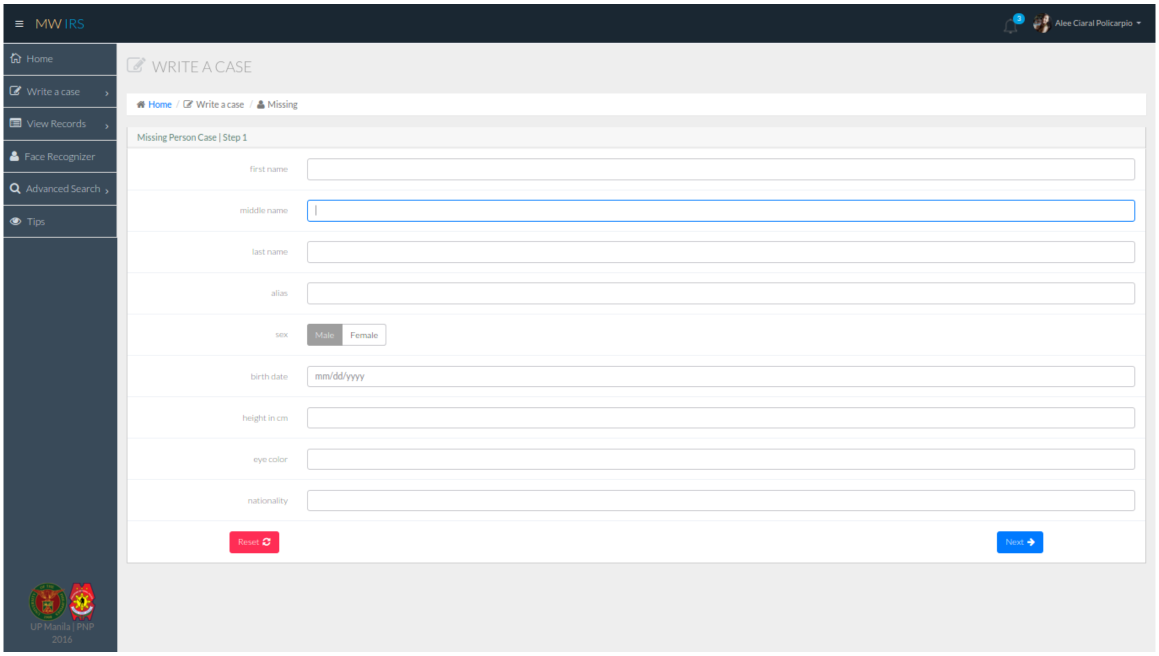


Figure 35: Created Missing Step 1 Page

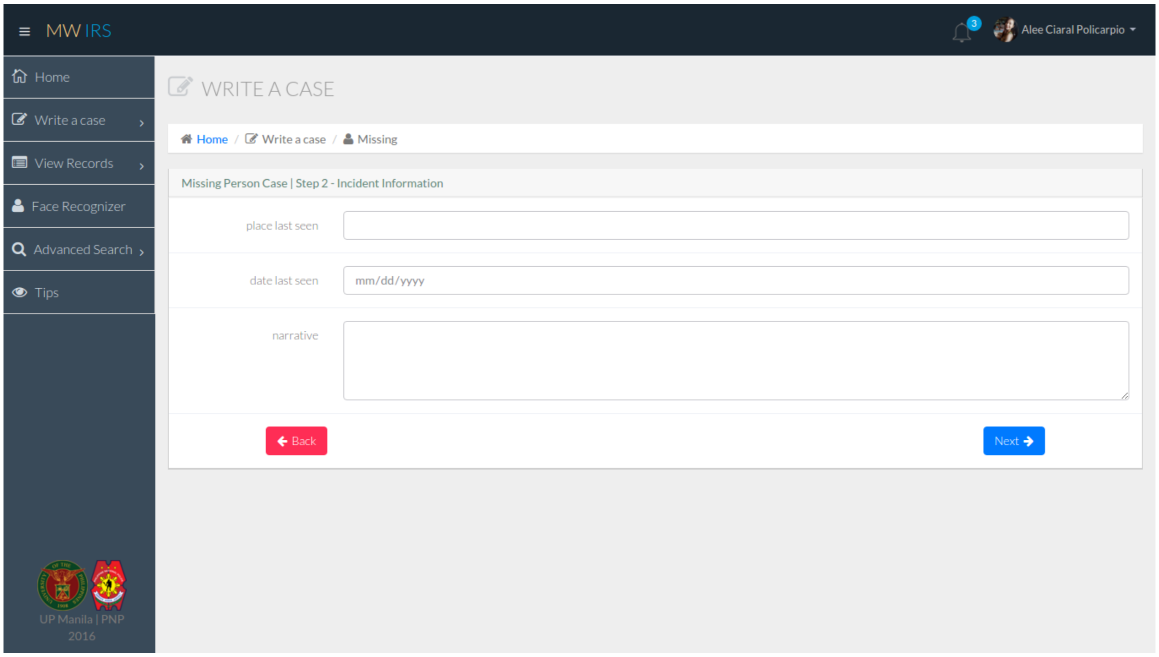
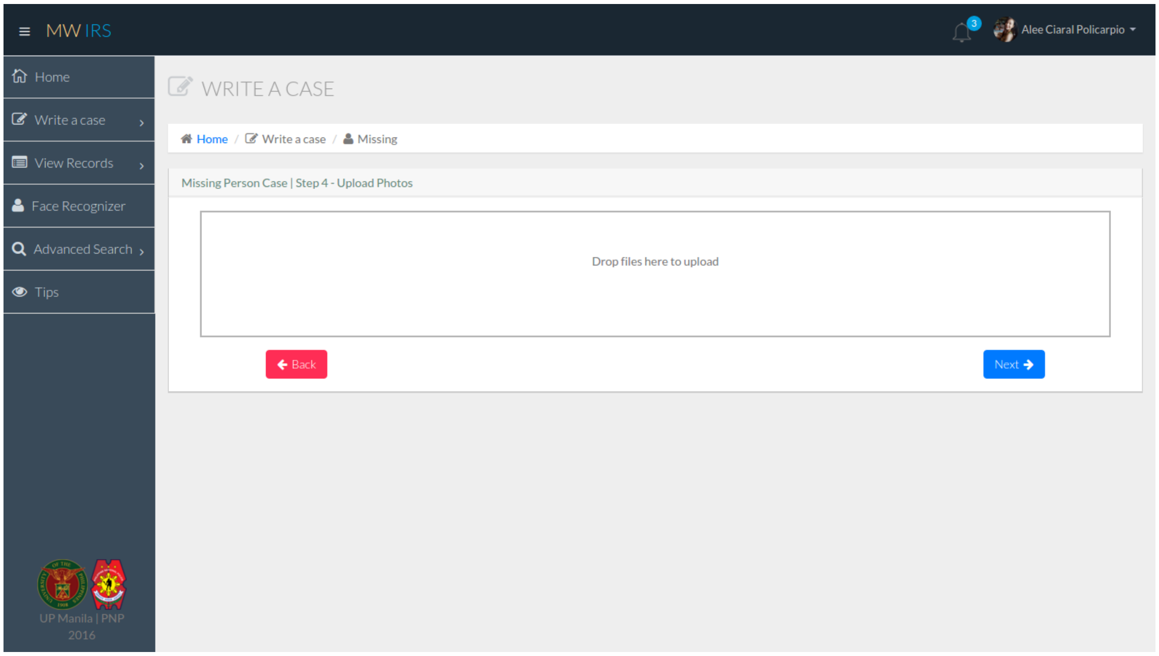


Figure 36: Created Missing Step 2 Page



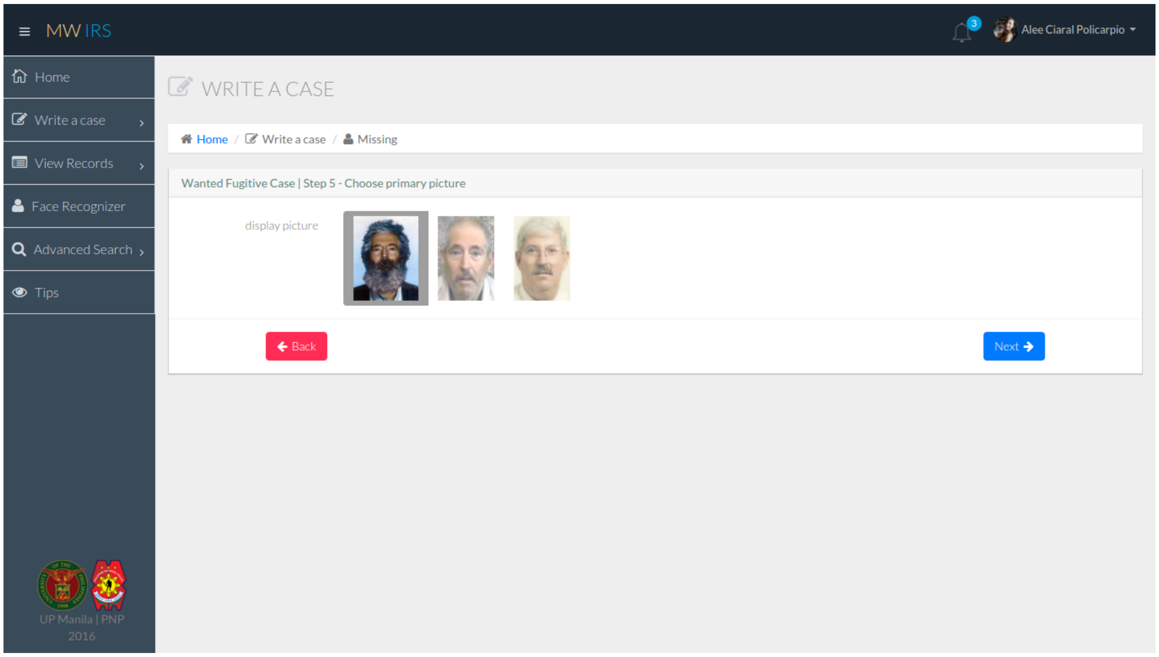
WRITE A CASE

Home / Write a case / Missing

Missing Person Case | Step 4 - Upload Photos

Drop files here to upload

Figure 37: Created Missing Step 3 Page



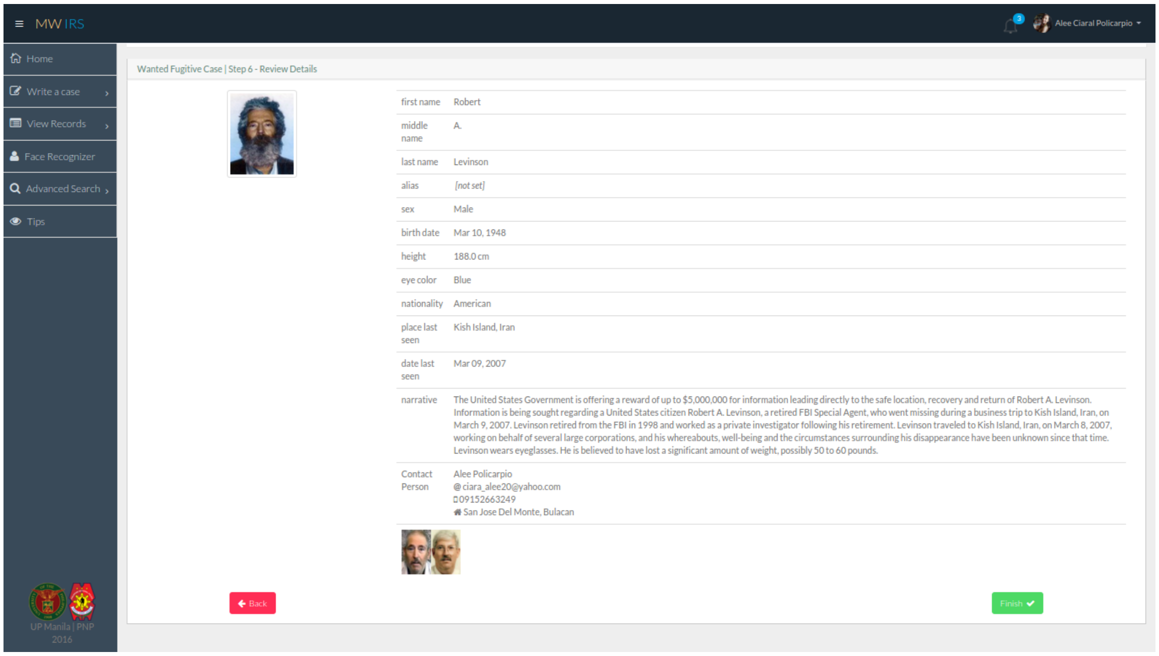
WRITE A CASE

Home / Write a case / Missing

Wanted Fugitive Case | Step 5 - Choose primary picture

display picture

Figure 38: Created Missing Step 4 Page

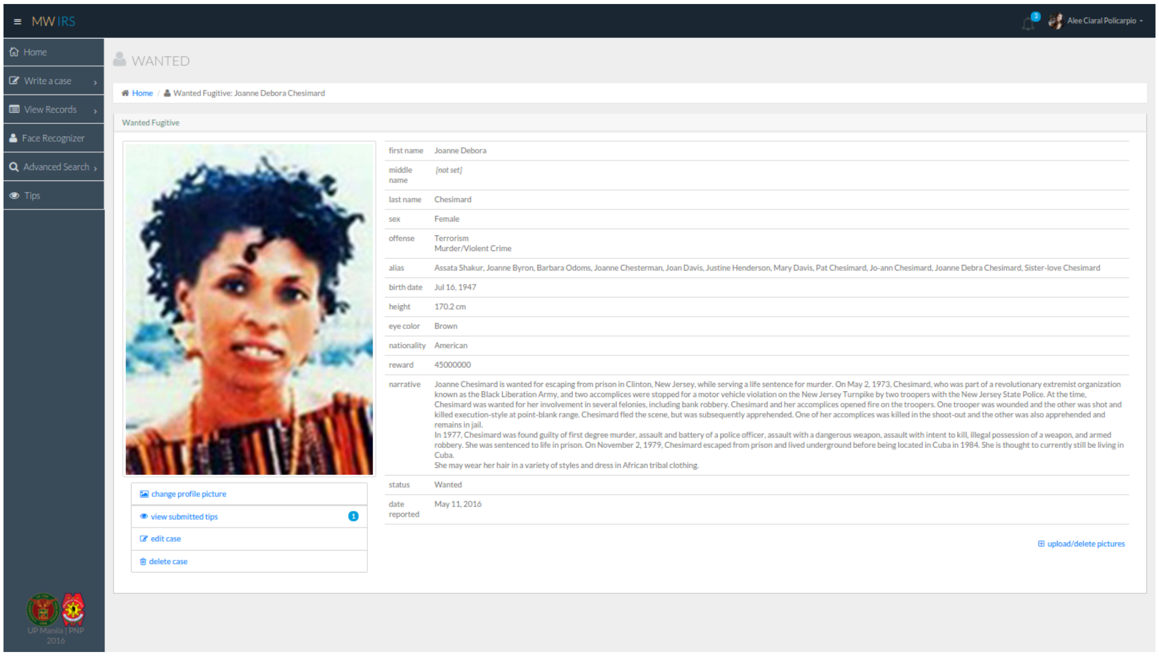


Wanted Fugitive Case | Step 6 - Review Details

first name	Robert
middle name	A.
last name	Levinson
alias	*[not set]*
sex	Male
birth date	Mar 10, 1948
height	188.0 cm
eye color	Blue
nationality	American
place last seen	Kish Island, Iran
date last seen	Mar 09, 2007
narrative	The United States Government is offering a reward of up to $5,000,000 for information leading directly to the safe location, recovery and return of Robert A. Levinson. Information is being sought regarding a United States citizen Robert A. Levinson, a retired FBI Special Agent, who went missing during a business trip to Kish Island, Iran, on March 9, 2007. Levinson retired from the FBI in 1998 and worked as a private investigator following his retirement. Levinson traveled to Kish Island, Iran, on March 8, 2007, working on behalf of several large corporations, and his whereabouts, well-being and the circumstances surrounding his disappearance have been unknown since that time. Levinson wears eyeglasses. He is believed to have lost a significant amount of weight, possibly 50 to 60 pounds.
Contact Person	Alee Policarpio @ ciara_alee20@yahoo.com ☎09152663249 🏠 San Jose Del Monte, Bulacan

Figure 39: Created Missing Step 5 Page

In figure 40, a wanted fugitive's profile is showed as seen by a crime registrar. The system allows the crime registrar to upload additional pictures for the case, edit the case and view tips about the case if the case was reported on his/her designated office.



WANTED

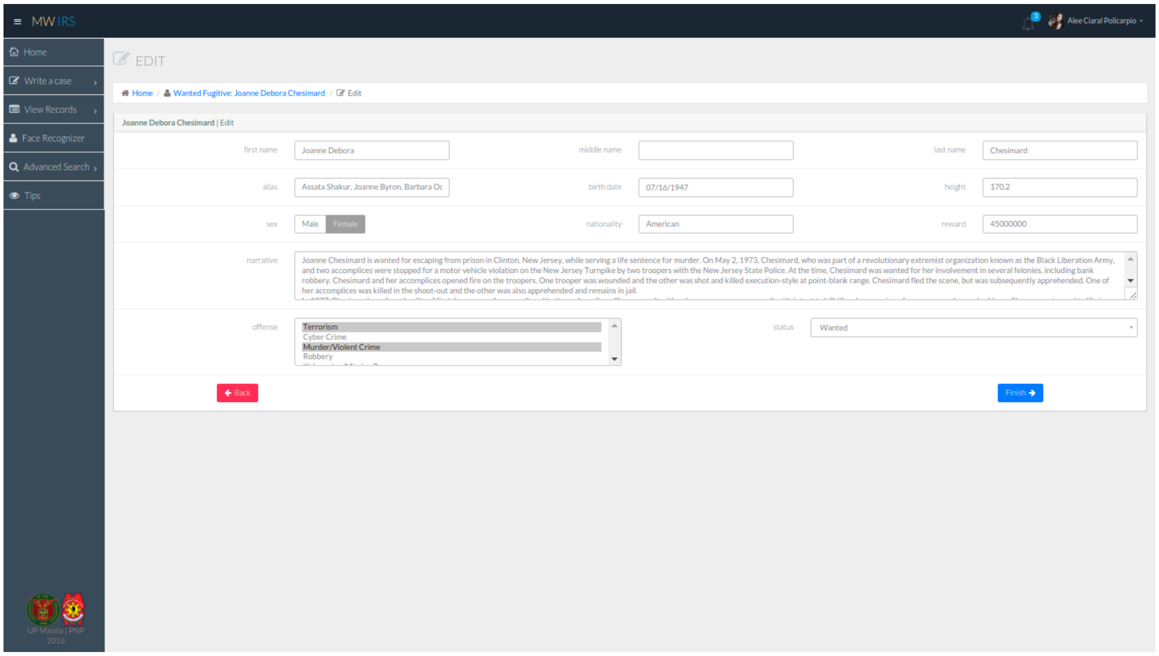
Home / Wanted Fugitive: Joanne Debora Chesimard

Wanted Fugitive

first name	Joanne Debora
middle name	[not set]
last name	Chesimard
sex	Female
offense	Terrorism Murder/Violent Crime
alias	Assata Shakur, Joanne Byron, Barbara Odoms, Joanne Chesterman, Joan Davis, Justine Henderson, Mary Davis, Pat Chesimard, Jo-ann Chesimard, Joanne Debra Chesimard, Sister-love Chesimard
birth date	Jul 16, 1947
height	170.2 cm
eye color	Brown
nationality	American
reward	45000000
narrative	Joanne Chesimard is wanted for escaping from prison in Clinton, New Jersey, while serving a life sentence for murder. On May 2, 1973, Chesimard, who was part of a revolutionary extremist organization known as the Black Liberation Army, and two accomplices were stopped for a motor vehicle violation on the New Jersey Turnpike by two troopers with the New Jersey State Police. At the time, Chesimard was wanted for her involvement in several felonies, including bank robbery. Chesimard and her accomplices opened fire on the troopers. One trooper was wounded and the other was shot and killed execution-style at point-blank range. Chesimard fled the scene, but was subsequently apprehended. One of her accomplices was killed in the shoot-out and the other was also apprehended and remains in jail. In 1977, Chesimard was found guilty of first degree murder, assault and battery of a police officer, assault with a dangerous weapon, assault with intent to kill, illegal possession of a weapon, and armed robbery. She was sentenced to life in prison. On November 2, 1979, Chesimard escaped from prison and lived underground before being located in Cuba in 1984. She is thought to currently still be living in Cuba. She may wear her hair in a variety of styles and dress in African tribal clothing.
status	Wanted
date reported	May 11, 2016

Figure 40: Wanted Fugitive Profile (Seen bycrime registrar)

Shown in figure 41 is the page for editing a wanted fugitive's profile.



EDIT

Home / Wanted Fugitive: Joanne Debora Chesimard / Edit

Joanne Debora Chesimard | Edit

first name	Joanne Debora	middle name		last name	Chesimard
alias	Assata Shakur, Joanne Byron, Barbara Oc	birth date	07/16/1947	height	170.2
sex	Male [✓ Female]	nationality	American	reward	45000000

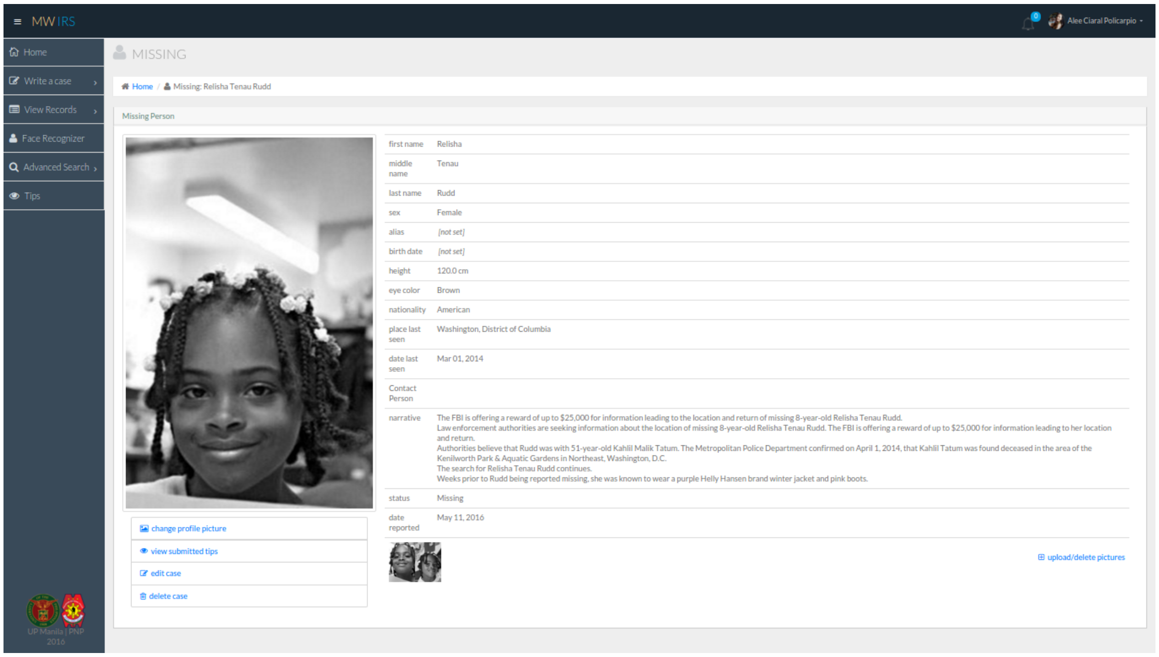
narrative: Joanne Chesimard is wanted for escaping from prison in Clinton, New Jersey, while serving a life sentence for murder. On May 2, 1973, Chesimard, who was part of a revolutionary extremist organization known as the Black Liberation Army, and two accomplices were stopped for a motor vehicle violation on the New Jersey Turnpike by two troopers with the New Jersey State Police. At the time, Chesimard was wanted for her involvement in several felonies, including bank robbery. Chesimard and her accomplices opened fire on the troopers. One trooper was wounded and the other was shot and killed execution-style at point-blank range. Chesimard fled the scene, but was subsequently apprehended. One of her accomplices was killed in the shoot-out and the other was also apprehended and remains in jail.

offense: [✓ Terrorism] Cyber Crime [✓ Murder/Violent Crime] Robbery

status: Wanted

Figure 41: Edit Wanted Page

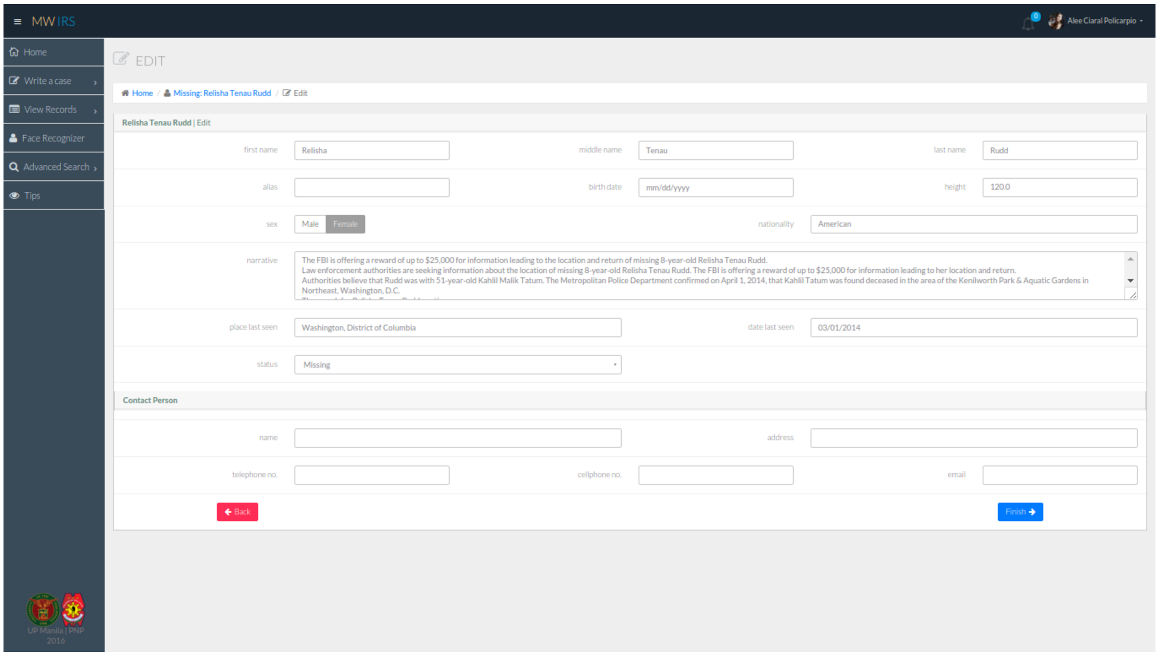
Shown in figure 42 is a wanted person's profile as seen by a crime registrar. The system allows the crime registrar to upload additional pictures for the case, edit the case and view tips about the case if the case was reported on his/her designated office.



first name	Relisha
middle name	Tenau
last name	Rudd
sex	Female
alias	*[not set]*
birth date	*[not set]*
height	120.0 cm
eye color	Brown
nationality	American
place last seen	Washington, District of Columbia
date last seen	Mar 01, 2014
Contact Person	
narrative	The FBI is offering a reward of up to $25,000 for information leading to the location and return of missing 8-year-old Relisha Tenau Rudd. Law enforcement authorities are seeking information about the location of missing 8-year-old Relisha Tenau Rudd. The FBI is offering a reward of up to $25,000 for information leading to her location and return. Authorities believe that Rudd was with 51-year-old Kahlil Malik Tatum. The Metropolitan Police Department confirmed on April 1, 2014, that Kahlil Tatum was found deceased in the area of the Kenilworth Park & Aquatic Gardens in Northeast, Washington, D.C. The search for Relisha Tenau Rudd continues. Weeks prior to Rudd being reported missing, she was known to wear a purple Helly Hansen brand winter jacket and pink boots.
status	Missing
date reported	May 11, 2016

Figure 42: Missing Person Profile (Seen by crime registrar)

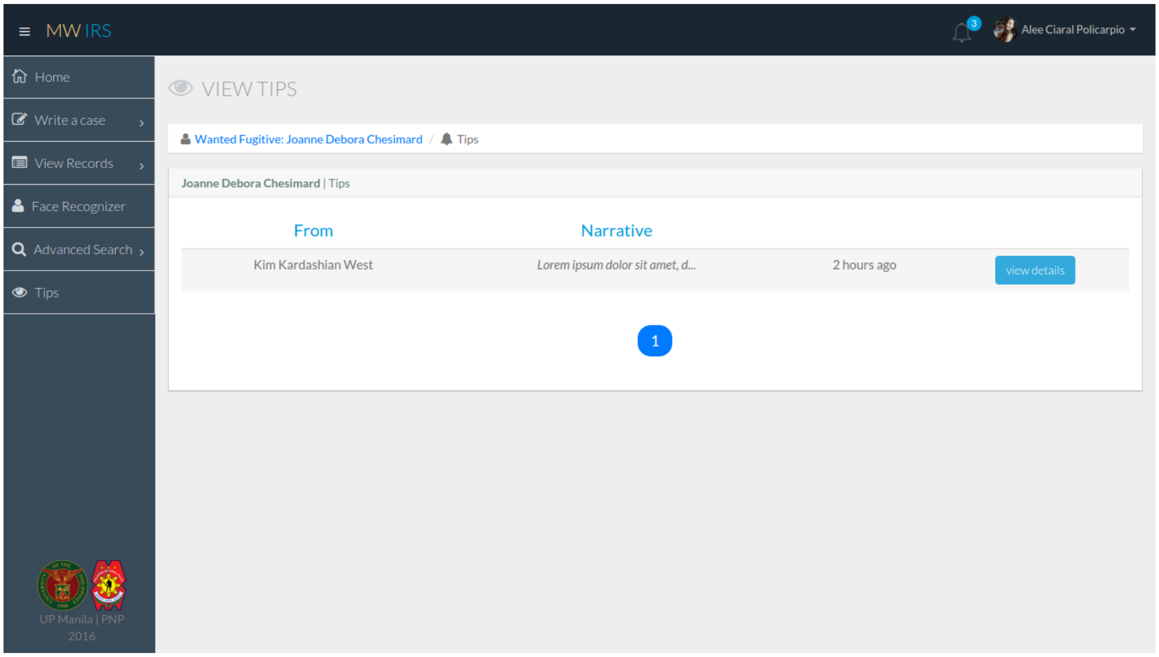
Shown in figure 43 is the page for editing a missing person's profile.



first name: Relisha
middle name: Tenau
last name: Rudd
alias:
birth date: mm/dd/yyyy
height: 120.0
sex: Male [✓ Female]
nationality: American
narrative: The FBI is offering a reward of up to $25,000 for information leading to the location and return of missing 8-year-old Relisha Tenau Rudd.
Law enforcement authorities are seeking information about the location of missing 8-year-old Relisha Tenau Rudd. The FBI is offering a reward of up to $25,000 for information leading to her location and return.
Authorities believe that Rudd was with 51-year-old Kahlil Malik Tatum. The Metropolitan Police Department confirmed on April 1, 2014, that Kahlil Tatum was found deceased in the area of the Kenilworth Park & Aquatic Gardens in Northeast, Washington, D.C.
place last seen: Washington, District of Columbia
date last seen: 03/01/2014
status: Missing
name:
address:
telephone no.:
cellphone no.:
email:

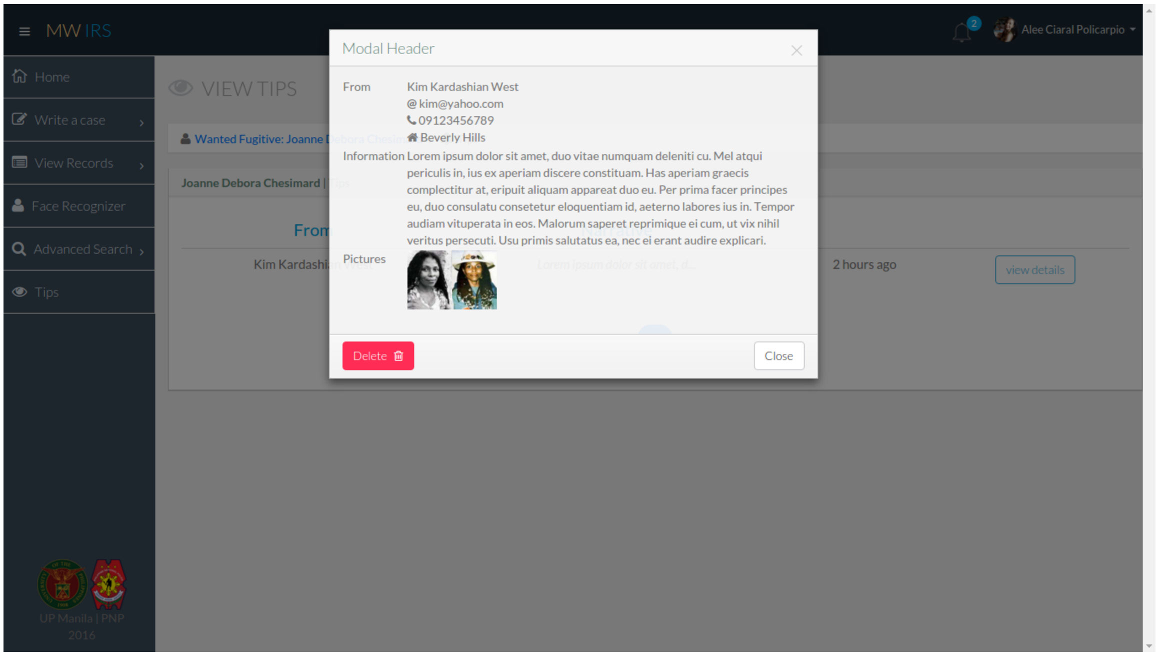
Figure 43: Missing Person Profile (Seen by crime registrar)

A crime registrar or Police Officer can view tips about a case. The page showing all the tips about a particular case is shown on figure 44. Upon clicking 'view details' details about the submitted tip will be displayed as shown in figure 45.



From	Narrative		
Kim Kardashian West	*Lorem ipsum dolor sit amet, d...*	2 hours ago	view details

Figure 44: View Tips Page



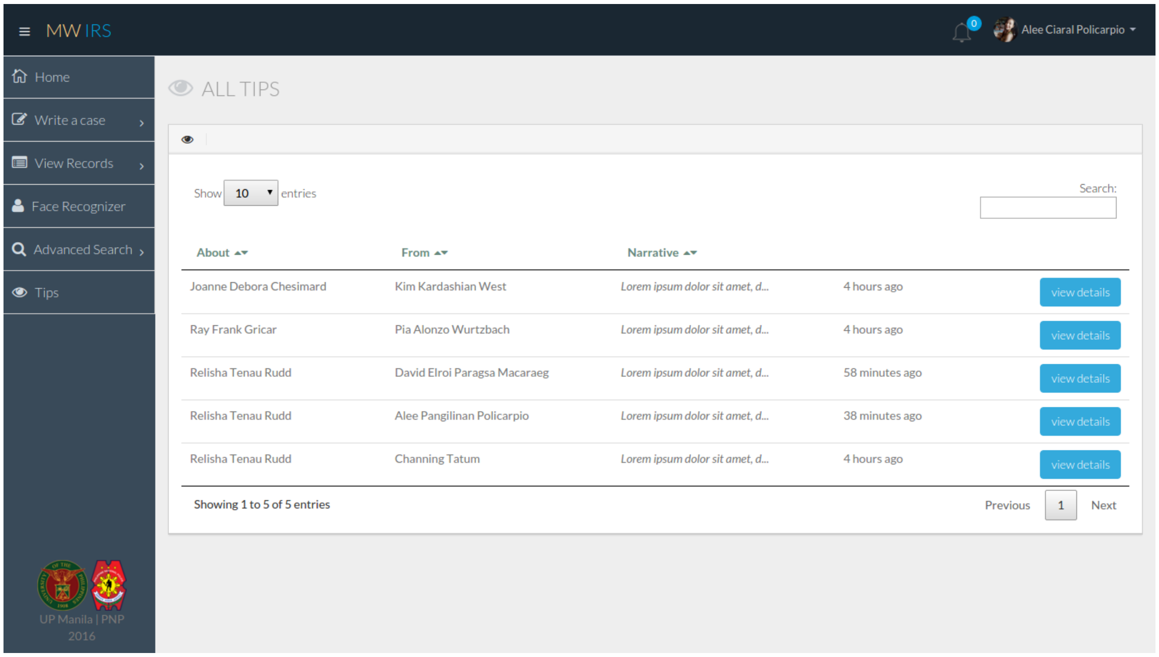
From Kim Kardashian West
@ kim@yahoo.com
☎ 09123456789
Beverly Hills

Information Lorem ipsum dolor sit amet, duo vitae numquam deleniti cu. Mel atqui periculis in, ius ex aperiam discere constituam. Has aperiam graecis complectitur at, eripuit aliquam appareat duo eu. Per prima facer principes eu, duo consulatu consetetur eloquentiam id, aeterno labores ius in. Tempor audiam vituperata in eos. Malorum saperet reprimique ei cum, ut vix nihil veritus persecuti. Usu primis salutatus ea, nec ei erant audire explicari.

Pictures

Figure 45: View Tip Details

A crime registrar or police officer can also view all tips about cases reported on their office on View All Tips page shown in 46.



Show 10 entries

Search:

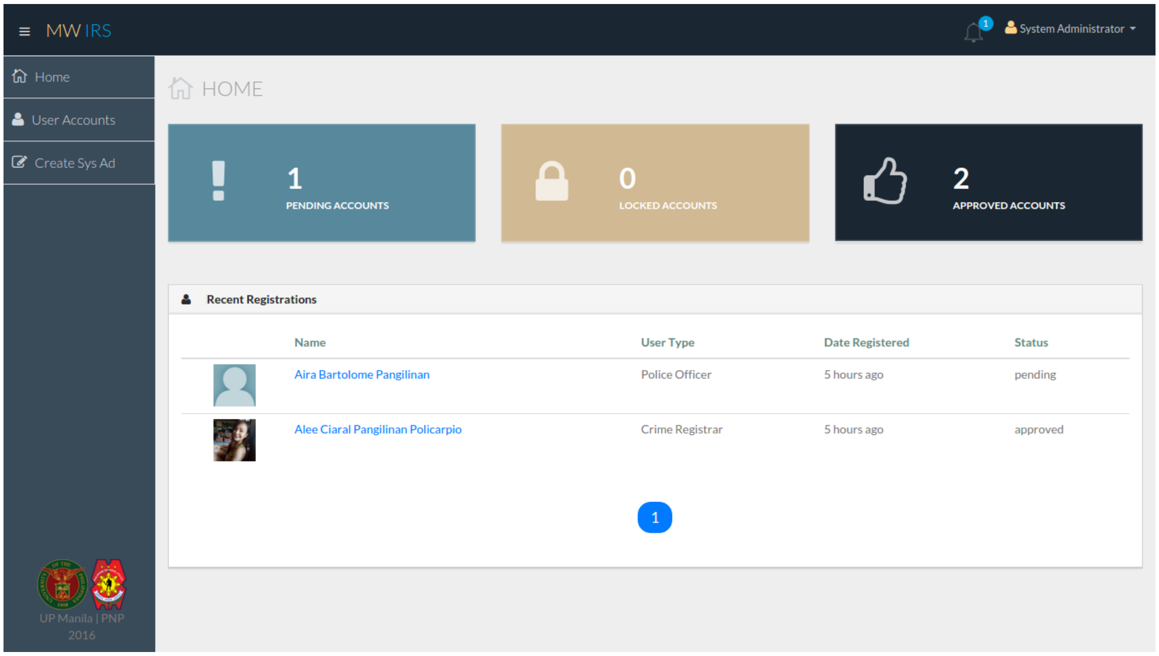
About	From	Narrative		
Joanne Debora Chesimard	Kim Kardashian West	*Lorem ipsum dolor sit amet, d...*	4 hours ago	view details
Ray Frank Gricar	Pia Alonzo Wurtzbach	*Lorem ipsum dolor sit amet, d...*	4 hours ago	view details
Relisha Tenau Rudd	David Elroi Paragsa Macaraeg	*Lorem ipsum dolor sit amet, d...*	58 minutes ago	view details
Relisha Tenau Rudd	Alee Pangilinan Policarpio	*Lorem ipsum dolor sit amet, d...*	38 minutes ago	view details
Relisha Tenau Rudd	Channing Tatum	*Lorem ipsum dolor sit amet, d...*	4 hours ago	view details

Showing 1 to 5 of 5 entries

Previous 1 Next

Figure 46: View All Tips Page

The system administrator is responsible for managing all user accounts. Every account registration is subject to the systed administrato approval and has the rights to modify user account details. The home page for system administrator is shown in figure 47. The counts of all the users for every status and all the account registrations made within the past 24 hours is shown here.



1 PENDING ACCOUNTS

0 LOCKED ACCOUNTS

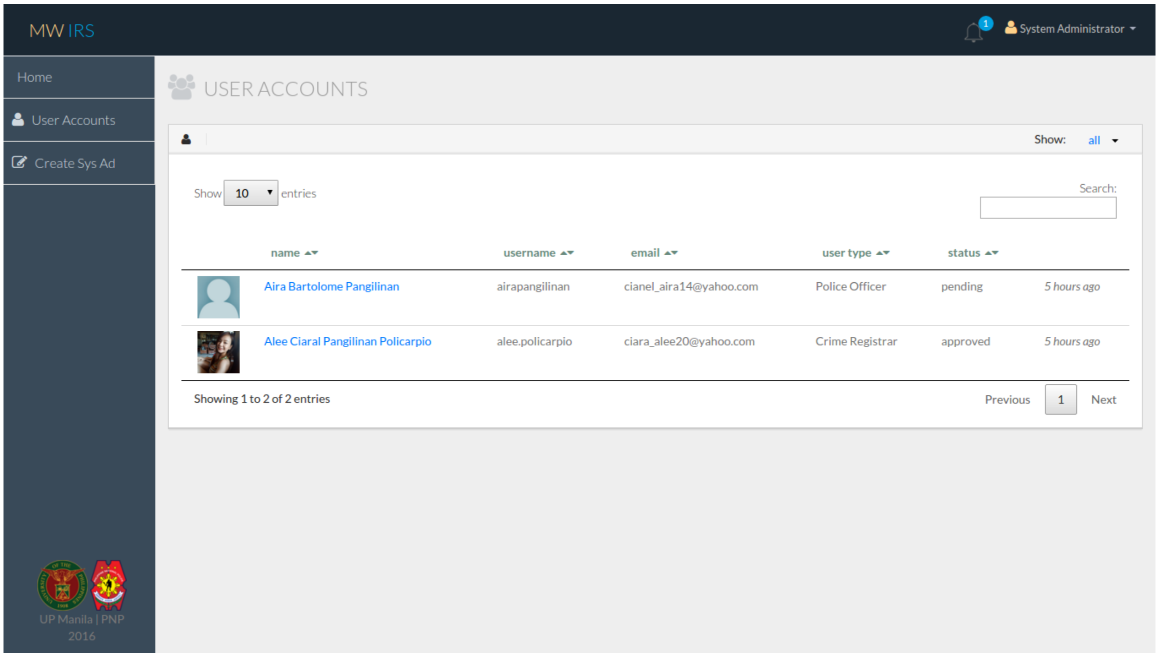
2 APPROVED ACCOUNTS

Recent Registrations

Name	User Type	Date Registered	Status
Aira Bartolome Pangilinan	Police Officer	5 hours ago	pending
Alee Ciaral Pangilinan Policarpio	Crime Registrar	5 hours ago	approved

Figure 47: System Administrator Home Page

The system administrator can view all the user accounts in the system through the All Users Page shown in figure 48.



name	username	email	user type	status	
Aira Bartolome Pangilinan	airapangilinan	cianel_aira14@yahoo.com	Police Officer	pending	*5 hours ago*
Alee Ciaral Pangilinan Policarpio	alee.policarpio	ciara_alee20@yahoo.com	Crime Registrar	approved	*5 hours ago*

Showing 1 to 2 of 2 entries

Figure 48: All Users Page

The system administrator also has rights to create other system administrator accounts in the Create System Admin Page as shown in figure 49.

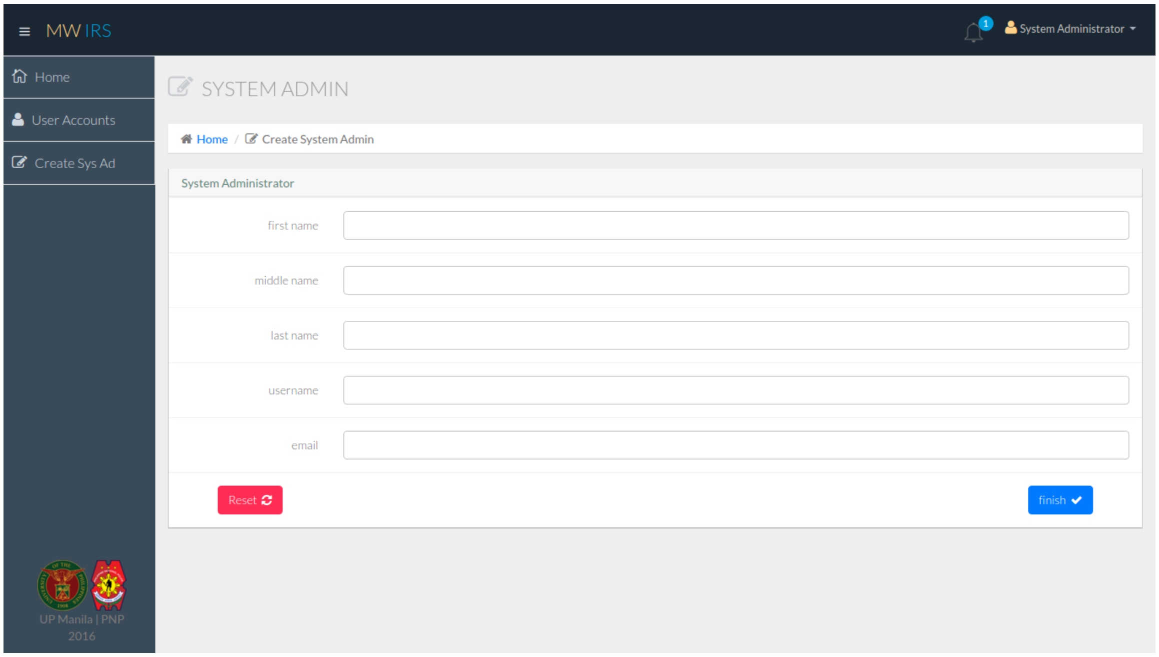
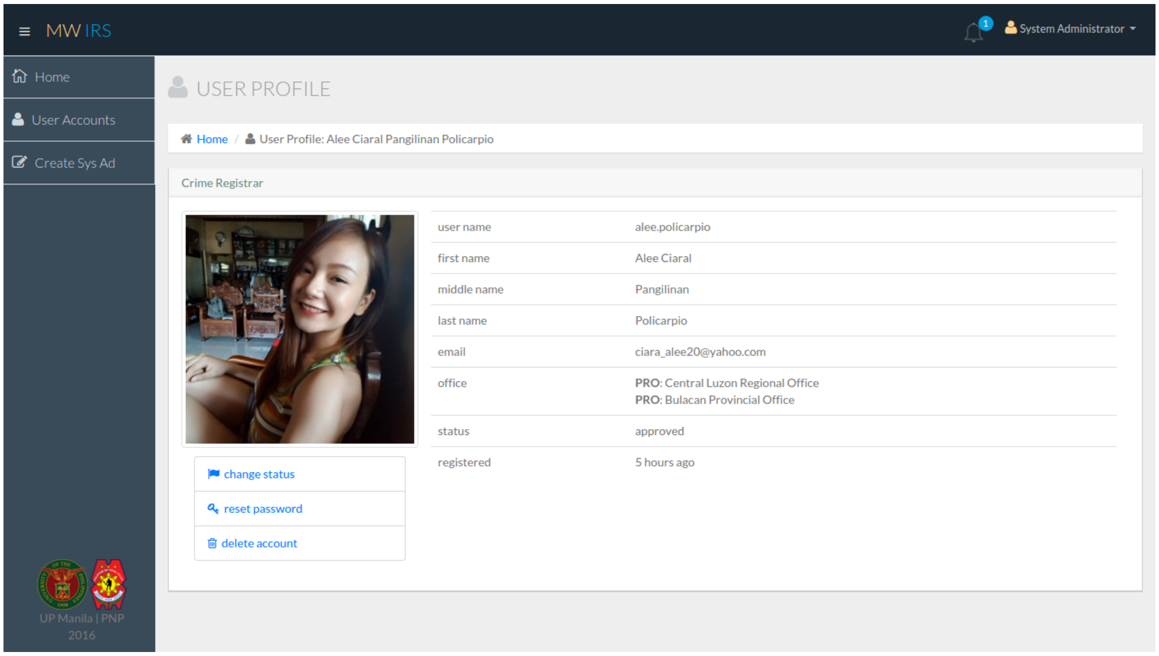


Figure 49: Create System Admin Page

Figure 50 shows a user account managed by a System Administrator. A system administrator can change the status, reset password and delete the user account from the system.



USER PROFILE

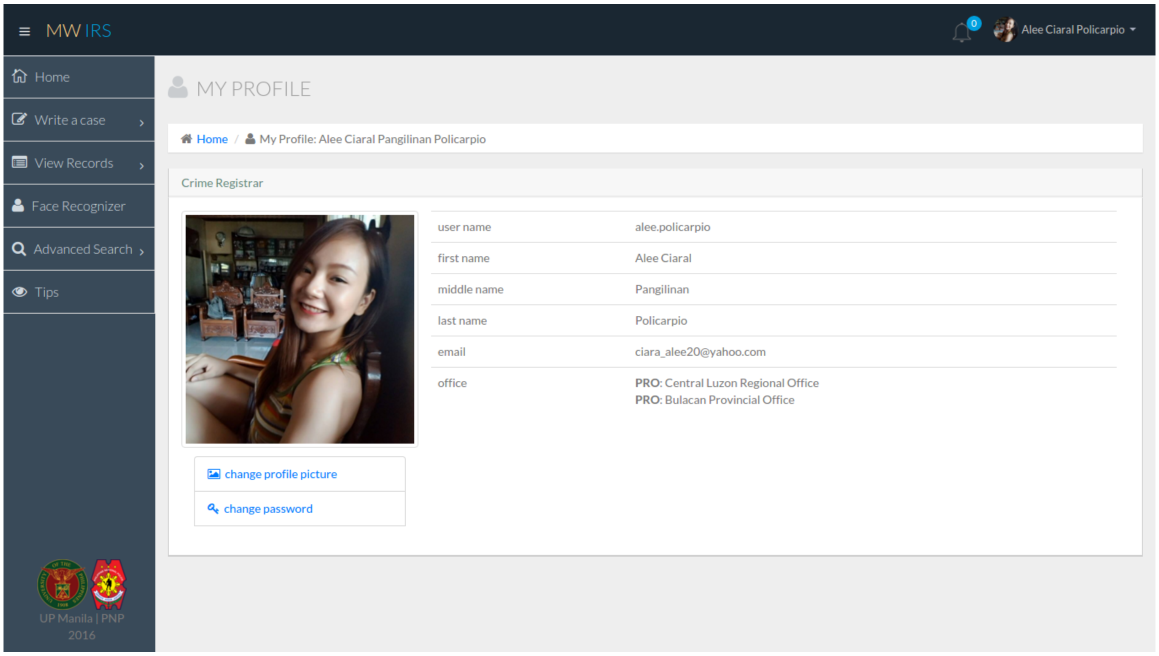
Home / User Profile: Alee Ciaral Pangilinan Policarpio

Crime Registrar

user name	alee.policarpio
first name	Alee Ciaral
middle name	Pangilinan
last name	Policarpio
email	ciara_alee20@yahoo.com
office	**PRO:** Central Luzon Regional Office **PRO:** Bulacan Provincial Office
status	approved
registered	5 hours ago

Figure 50: User Profile (Seen by System Administrator)

Every logged in user can view the details of their accounts in My Profile Page shown in 51. A user has rights to upload a profile picture and to change own password.



MY PROFILE

Home / My Profile: Alee Ciaral Pangilinan Policarpio

Crime Registrar

user name	alee.policarpio
first name	Alee Ciaral
middle name	Pangilinan
last name	Policarpio
email	ciara_alee20@yahoo.com
office	**PRO:** Central Luzon Regional Office **PRO:** Bulacan Provincial Office

Figure 51: My Profile

VI. Discussions

The Missing and Wanted Person Information and Reporting System (MWIRS) is an online application designed to help the Philippine National Police to organize reports of missing persons and and publicize details about missing persons and wanted fugitives. Through the MWIRS, the public can also send tips about cases on the database.

The MWIRS target users are the crime registrars, police officers and the public (anonymous users). The crime registrars are responsible for creating and managing reports of missing persons and wanted fugitive and view tips submitted about cases reported on their office. Police officers are allowed to view all cases and tips reported on their office while anonymous users can only view missing persons with 'missing' status and wanted fugitives with 'wanted' status.

In order to filter the cases, the MWIRS has an advance search page for wanted fugitives and missing person. By filling up fields in the form, results matching the criteria will be shown.

Another way for searching cases is through MWIRS' face recognition which uses Local Binary Pattern (LBP) through OpenCV. A user can upload a single image subject to face detection which is also implemented using LBP. If the image has been detected to contain exactly one face, it will be accepted and rejected otherwise. If the image is accepted, the user can proceed to face recognition.

The face recognition process starts with 2 step image preprocessing: face detection and color conversion. The image is cropped to only contain the face and coverted to grayscalel. OpenCV will create spatially enhanced histogram for every image and then get the chi-square distance from the query image's histogram. The system will rank the cases according to their pictures' similarity with the test image and display the results on the same page. After displaying the results, the user can view the similarity for each of a case' picture and the test image or view the histograms constructed by

OpenCV.

In submitting a tip, user is required to fill up all the information asked by the system. This is necessary in order to verify the identity of the user and also to verify the truthfulness of the tip. A short information or narrative on the tip is required and the user can also upload photographs as supporting information. Crime registrars and police officers logged in to the system are notified of new tips submitted about cases reported on their office. Both crime registrars and police officers have rights to view and delete submitted tips.

The system administrator is responsible for managing all user accounts. A system administrator can change the status and reset password of any account. Any changes made by the system administrator on an will be sent to the account owner via email. A system administrator also has rights to delete an account from the system. A system administrator is also allowed to create other system administrator accounts and the system will automatically send details of the account to the account owner via email. The system administrator is also notified of new account registrations that are subject for approval.

Every logged in user is allowed to customize his/her account by uploading a primary picture and is also allowed to change his/her password.

In the course of making the project, there were some difficulties encountered with the implementation of face detection and face recognition using OpenCV. Even though OpenCV has been widely used for several computer vision projects, the library lacks documentation for some of its API specifically with the face detection using Local Binary Patterns.

VII. Conclusions

The MWIRS provides a way for the Philippine National Police to organize reports of missing persons and allows for faster publicization of details of missing persons and wanted fugitives. Any updates made in a missing person's or wanted fugitive's profile can be easily reflected in the system.

The MWIRS also allows the public to cooperate in investigations by allowing them to send tips electronically which also allows the public to upload image to support the tip.

Through the MWIRS' face recognition, officers can search through the database of missing persons and wanted fugitives with only face image available. This is helpful especially in occassions when a person can not be identified by his/her name. Through face recognition, artist sketches can be used to query the database and identify a person described by an eye witness.

The Local Binary Pattern face recognition through OpenCV showed good results in recognizing faces and artist sketches. However, the result is highly dependent on the quality of the images used and on the alignment of the face in the image. The time for the face recognition process also depends on the number of images used and compared to the test image. Therefore, as the number of cases grow larger, the time for face recognition also increases.

VIII. Recommendations

The MWIRS is designed to serve as an iformation system for the missing persons report and wanted fugitives. In order to strengthen the information in the system, it is recommended to include more descriptions for a missing person and wanted fugitive to help identify a profile such as medical records and dental records. In tip submission, it would be good to allow users to upload files besides photos such as CCTV footage.

The face recognition module of the system has been proven to show good results but is highly dependent on the image to be used. It is recommended to improve the face recognition by implementing methods that still allows for recognition whether the face image is in frontal view or side view or to at least improve the image preprocessing of the system such as implementing face alignment, noise reduction or color correction in order to obtain better results.

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X. Appendix

A. XML Files

Source Code 1: pom.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<project xmlns="http://maven.apache.org/POM/4.0.0" xmlns:xsi="
      http://www.w3.org/2001/XMLSchema-instance"
  xsi:schemaLocation="http://maven.apache.org/POM/4.0.0 http://
        maven.apache.org/maven-v4_0_0.xsd">
  <modelVersion>4.0.0</modelVersion>
  <groupId>gov.pnp</groupId>
  <artifactId>mwirs</artifactId>
  <name>MWIRS</name>
  <packaging>war</packaging>
  <version>1.0.0-BUILD-SNAPSHOT</version>
  <properties>
    <java-version>1.8</java-version>
    <org.springframework-version>3.1.1.RELEASE</org.
          springframework-version>
    <org.aspectj-version>1.6.10</org.aspectj-version>
    <org.slf4j-version>1.6.6</org.slf4j-version>
  </properties>
  <dependencies>
    <!-- Spring -->
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-context</artifactId>
      <version>4.2.5.RELEASE</version>
      <exclusions>
        <!-- Exclude Commons Logging in favor of SLF4j -->
        <exclusion>
          <groupId>commons-logging</groupId>
          <artifactId>commons-logging</artifactId>
         </exclusion>
      </exclusions>
    </dependency>
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-webmvc</artifactId>
      <version>4.2.5.RELEASE</version>
    </dependency>
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-orm</artifactId>
      <version>4.2.5.RELEASE</version>
    </dependency>
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-test</artifactId>
      <scope>test</scope>
      <version>4.2.5.RELEASE</version>
    </dependency>
    <dependency>
      <groupId>org.springframework</groupId>
      <artifactId>spring-context-support</artifactId>
      <version>4.2.5.RELEASE</version>
    </dependency>
    <!-- Persistence -->
    <dependency>
       <groupId>org.hibernate</groupId>
       <artifactId>hibernate-core</artifactId>
       <version>5.0.6.Final</version>
    </dependency>
    <dependency>
       <groupId>org.hibernate</groupId>
       <artifactId>hibernate-entitymanager</artifactId>
       <version>5.0.6.Final</version>
    </dependency>
    <dependency>
     <groupId>mysql</groupId>
     <artifactId>mysql-connector-java</artifactId>
     <version>5.1.31</version>
    </dependency>
    <dependency>
       <groupId>org.springframework</groupId>
       <artifactId>spring-jdbc</artifactId>
       <version>4.2.5.RELEASE</version>
    </dependency>
    <dependency>
      <groupId>org.hibernate</groupId>
      <artifactId>hibernate-core</artifactId>
      <version>5.0.1.Final</version>
```

```
</dependency>
<dependency>
  <groupId>org.hsqldb</groupId>
  <artifactId>hsqldb</artifactId>
  <version>2.3.3</version>
</dependency>
<dependency>
  <groupId>org.jadira.usertype</groupId>
  <artifactId>usertype.core</artifactId>
  <version>5.0.0.GA</version>
</dependency>
<!-- AspectJ -->
<dependency>
  <groupId>org.aspectj</groupId>
  <artifactId>aspectjrt</artifactId>
  <version>${org.aspectj-version}</version>
</dependency>
<!-- Logging -->
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-api</artifactId>
  <version>${org.slf4j-version}</version>
</dependency>
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>jcl-over-slf4j</artifactId>
  <version>${org.slf4j-version}</version>
  <scope>runtime</scope>
</dependency>
<dependency>
  <groupId>org.slf4j</groupId>
  <artifactId>slf4j-log4j12</artifactId>
  <version>${org.slf4j-version}</version>
  <scope>runtime</scope>
</dependency>
<dependency>
  <groupId>log4j</groupId>
  <artifactId>log4j</artifactId>
  <version>1.2.15</version>
  <exclusions>
    <exclusion>
      <groupId>javax.mail</groupId>
      <artifactId>mail</artifactId>
    </exclusion>
    <exclusion>
      <groupId>javax.jms</groupId>
      <artifactId>jms</artifactId>
    </exclusion>
    <exclusion>
      <groupId>com.sun.jdmk</groupId>
      <artifactId>jmxtools</artifactId>
    </exclusion>
    <exclusion>
      <groupId>com.sun.jmx</groupId>
      <artifactId>jmxri</artifactId>
    </exclusion>
  </exclusions>
  <scope>runtime</scope>
</dependency>
<!-- @Inject -->
<dependency>
  <groupId>javax.inject</groupId>
  <artifactId>javax.inject</artifactId>
  <version>1</version>
</dependency>
<!-- Servlet -->
<dependency>
  <groupId>javax.servlet</groupId>
  <artifactId>servlet-api</artifactId>
  <version>2.5</version>
  <scope>provided</scope>
</dependency>
<dependency>
  <groupId>javax.servlet.jsp</groupId>
  <artifactId>jsp-api</artifactId>
  <version>2.1</version>
  <scope>provided</scope>
</dependency>
<dependency>
  <groupId>javax.servlet</groupId>
  <artifactId>jstl</artifactId>
  <version>1.2</version>
</dependency>
<!-- Test -->
<dependency>
  <groupId>junit</groupId>
  <artifactId>junit</artifactId>
```

```
      <scope>test</scope>
      <version>4.12</version>
   </dependency>
   <!-- Utilities -->
   <dependency>
      <groupId>org.apache.commons</groupId>
      <artifactId>commons-lang3</artifactId>
      <version>3.4</version>
   </dependency>
   <dependency>
     <groupId>joda-time</groupId>
     <artifactId>joda-time</artifactId>
     <version>2.9.1</version>
   </dependency>
   <dependency>
      <groupId>commons-collections</groupId>
      <artifactId>commons-collections</artifactId>
      <version>3.0</version>
   </dependency>
   <dependency>
      <groupId>org.ocpsoft.prettytime</groupId>
      <artifactId>prettytime</artifactId>
      <version>3.2.7.Final</version>
   </dependency>
   <!-- Security -->
   <dependency>
      <groupId>org.springframework.security</groupId>
      <artifactId>spring-security-core</artifactId>
      <version>4.0.3.RELEASE</version>
   </dependency>
   <!--File Upload -->
   <dependency>
      <groupId>commons-fileupload</groupId>
      <artifactId>commons-fileupload</artifactId>
      <version>1.3.1</version>
   </dependency>
   <dependency>
      <groupId>commons-io</groupId>
      <artifactId>commons-io</artifactId>
      <version>2.4</version>
   </dependency>
   <!--json Mapper -->
   <dependency>
      <groupId>com.fasterxml.jackson.core</groupId>
      <artifactId>jackson-core</artifactId>
      <version>2.7.2</version>
   </dependency>
   <dependency>
      <groupId>com.fasterxml.jackson.core</groupId>
      <artifactId>jackson-databind</artifactId>
      <version>2.7.2</version>
   </dependency>
   <dependency>
      <groupId>com.fasterxml.jackson.core</groupId>
      <artifactId>jackson-annotations</artifactId>
      <version>2.7.2</version>
   </dependency>
   <!--Mail -->
   <dependency>
      <groupId>javax.mail</groupId>
      <artifactId>mail</artifactId>
      <version>1.5.0-b01</version>
   </dependency>
   <!-- OpenCV -->
   <dependency>
       <groupId>org.bytedeco</groupId>
       <artifactId>javacv</artifactId>
       <version>1.1</version>
   </dependency>
   <!-- ReCaptcha -->
   <dependency>
       <groupId>org.glassfish</groupId>
       <artifactId>javax.json</artifactId>
       <version>1.0.2</version>
   </dependency>
</dependencies>
 <build>
     <plugins>
        <plugin>
            <artifactId>maven-eclipse-plugin</artifactId>
            <version>2.9</version>
            <configuration>
               <additionalProjectnatures>
                   <projectnature>org.springframework.ide.
                         eclipse.core.springnature</
                         projectnature>
               </additionalProjectnatures>
               <additionalBuildcommands>
                   <buildcommand>org.springframework.ide.
                         eclipse.core.springbuilder</
                         buildcommand>
               </additionalBuildcommands>
```

```
                  <downloadSources>true</downloadSources>
                  <downloadJavadocs>true</downloadJavadocs>
              </configuration>
           </plugin>
           <plugin>
              <groupId>org.apache.maven.plugins</groupId>
              <artifactId>maven-compiler-plugin</artifactId>
              <version>2.5.1</version>
              <configuration>
                  <source>1.6</source>
                  <target>1.6</target>
                  <compilerArgument>-Xlint:all</compilerArgument>
                  <showWarnings>true</showWarnings>
                  <showDeprecation>true</showDeprecation>
              </configuration>
           </plugin>
           <plugin>
              <groupId>org.codehaus.mojo</groupId>
              <artifactId>exec-maven-plugin</artifactId>
              <version>1.2.1</version>
              <configuration>
                  <mainClass>org.test.int1.Main</mainClass>
              </configuration>
           </plugin>
       </plugins>
    </build>
</project>
```

Source Code 2: web.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<web-app xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
      xmlns="http://java.sun.com/xml/ns/javaee"
   xsi:schemaLocation="http://java.sun.com/xml/ns/javaee http://
         java.sun.com/xml/ns/javaee/web-app_2_5.xsd"
   version="2.5">
  <context-param>
    <param-name>contextConfigLocation</param-name>
    <param-value>/WEB-INF/spring/root-context.xml</param-value>
  </context-param>
  <listener>
    <listener-class>org.springframework.web.context.
          ContextLoaderListener</listener-class>
  </listener>
  <servlet>
    <servlet-name>appServlet</servlet-name>
    <servlet-class>org.springframework.web.servlet.
          DispatcherServlet</servlet-class>
    <init-param>
      <param-name>contextConfigLocation</param-name>
      <param-value>/WEB-INF/spring/appServlet/servlet-context.xml</
            param-value>
    </init-param>
    <load-on-startup>1</load-on-startup>
  </servlet>
  <servlet-mapping>
    <servlet-name>appServlet</servlet-name>
    <url-pattern>/</url-pattern>
  </servlet-mapping>
  <error-page>
    <error-code>404</error-code>
    <location>/404</location>
  </error-page>
</web-app>
```

Source Code 3: root-context.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:context="http://www.springframework.org/schema/context"
   xmlns:jdbc="http://www.springframework.org/schema/jdbc"
   xmlns:tx="http://www.springframework.org/schema/tx"
   xmlns:mvc="http://www.springframework.org/schema/mvc"
   xsi:schemaLocation="http://www.springframework.org/schema/jdbc
         http://www.springframework.org/schema/jdbc/spring-jdbc.
         xsd
      http://www.springframework.org/schema/mvc http://www.
            springframework.org/schema/mvc/spring-mvc.xsd
      http://www.springframework.org/schema/beans http://www.
            springframework.org/schema/beans/spring-beans.xsd
      http://www.springframework.org/schema/context http://www.
            springframework.org/schema/context/spring-context.xsd
```

```
     http://www.springframework.org/schema/tx http://www.
            springframework.org/schema/tx/spring-tx.xsd">
   <context:component-scan base-package="gov.pnp.mwirs " />
   <context:annotation-config/>
   <mvc:annotation-driven/>
  <bean id="dataSource"
         class="org.springframework.jdbc.datasource.
                DriverManagerDataSource">
      <property name="driverClassName" value="com.mysql.jdbc.Driver
            " />
      <property name="url" value="jdbc:mysql://127.0.0.1:3306/
            muwirs_db" />
      <property name="username" value="root" />
      <property name="password" value="root" />
  </bean>
  <bean id="entityManagerFactory" class="org.springframework.orm.
         jpa.LocalContainerEntityManagerFactoryBean" scope="
         singleton">
      <property name="dataSource" ref="dataSource" />
      <property name="jpaVendorAdapter">
         <bean class="org.springframework.orm.jpa.vendor.
               HibernateJpaVendorAdapter"/>
      </property>
      <property name="persistenceProvider">
         <bean class="org.hibernate.jpa.
               HibernatePersistenceProvider"/>
      </property>
      <property name="jpaProperties">
         <props>
            <prop key="hibernate.format_sql">true</prop>
            <prop key="hibernate.dialect">org.hibernate.dialect.
                  MySQL5Dialect</prop>
            <prop key="javax.persistence.schema-generation.create-
                  source">metadata</prop>
            <prop key="hibernate.enable_lazy_load_no_trans">true</
                  prop>
<!--          <prop key="javax.persistence.schema-generation.
       database.action">drop-and-create</prop> -->
         </props>
      </property>
      <property name="packagesToScan" value="gov.pnp.mwirs.domain"/
            >
   </bean>
   <bean id="transactionManager" class="org.springframework.orm.
         jpa.JpaTransactionManager">
      <constructor-arg name="emf" ref="entityManagerFactory" />
   </bean>
   <tx:annotation-driven/>
   <bean class="org.springframework.dao.annotation.
         PersistenceExceptionTranslationPostProcessor"/>
   <!--import other xml configurations -->
   <import resource="appServlet/spring-security.xml"/>
   <import resource="appServlet/spring-mail.xml"/>
</beans>
```

Source Code 4: servlet-context.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans:beans xmlns="http://www.springframework.org/schema/mvc"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xmlns:context="http://www.springframework.org/schema/context"
   xmlns:beans="http://www.springframework.org/schema/beans"
   xsi:schemaLocation="http://www.springframework.org/schema/mvc
         http://www.springframework.org/schema/mvc/spring-mvc.xsd
      http://www.springframework.org/schema/context http://www.
            springframework.org/schema/context/spring-context.xsd
      http://www.springframework.org/schema/beans http://www.
            springframework.org/schema/beans/spring-beans.xsd">
   <annotation-driven />
   <context:component-scan base-package="gov.pnp.mwirs.controller"
          />
   <!-- Handles HTTP GET requests for /resources/** by efficiently
         serving up static resources in the ${webappRoot}/resources
          directory -->
   <resources mapping="/resources/**" location="/resources/" />
   <!-- Resolves views selected for rendering by @Controllers to .
         jsp resources in the /WEB-INF/views directory -->
   <beans:bean class="org.springframework.web.servlet.view.
         InternalResourceViewResolver">
      <beans:property name="prefix" value="/WEB-INF/views/" />
      <beans:property name="suffix" value=".jsp" />
   </beans:bean>
   <beans:bean id="multipartResolver" class="org.springframework.
         web.multipart.commons.CommonsMultipartResolver"/>
   <interceptors>
         <beans:bean class="gov.pnp.mwirs.interceptor.
               UrlInterceptor" />
   </interceptors>
</beans:beans>
```

Source Code 5: spring-mail.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xsi:schemaLocation="http://www.springframework.org/schema/beans
http://www.springframework.org/schema/beans/spring-beans-2.5.xsd">
   <bean id="mailSender" class="org.springframework.mail.javamail.
         JavaMailSenderImpl">
      <property name="host" value="smtp.gmail.com" />
      <property name="port" value="587" />
      <!-- change to default website's email -->
      <property name="username" value="appolicarpio@up.edu.ph" />
      <property name="password" value="654123aleli" />
      <property name="javaMailProperties">
         <props>
            <prop key="mail.transport.protocol">smtp</prop>
            <prop key="mail.smtp.auth">true</prop>
            <prop key="mail.smtp.starttls.enable">true</prop>
         </props>
      </property>
   </bean>
</beans>
```

Source Code 6: spring-security.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<beans xmlns="http://www.springframework.org/schema/beans"
   xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
   xsi:schemaLocation="http://www.springframework.org/schema/beans
         http://www.springframework.org/schema/beans/spring-beans
         .xsd">
   <bean id="encoder" class="org.springframework.security.crypto.
         bcrypt.BCryptPasswordEncoder"/>
</beans>
```

B. Java Files

Source Code 7: AdvancedSearchMissingController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.Enumeration;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.servlet.ModelAndView;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.service.AdvancedSearchService;
@Controller
@RequestMapping("/search/missing")
public class AdvancedSearchMissingController {
@Autowired
private AdvancedSearchService advancedSearchService;
@RequestMapping("")
public String getAvancedSearchMissing(HttpSession session,Model
      model){
model.addAttribute("missingStatus", MissingStatus.toStringAll());
session.removeAttribute("results");
return "advaced_search_missing";
}
@RequestMapping(value="/submit", method=RequestMethod.POST)
public @ResponseBody ModelAndView submitSearchMissing(
      HttpServletRequest request, HttpSession session,
HttpServletResponse response, Model model){
Enumeration<String> paramNames = request.getParameterNames();
Map<String, String[]> criteria = new HashMap<String, String[]>();
if(session.getAttribute("loggedInUser") == null){
criteria.put("status[]", new String[]{"Missing"});
}
while(paramNames.hasMoreElements()){
String param = paramNames.nextElement();
if(param.contains("[]")){
if(request.getParameterValues(param).length > 0){
criteria.put(param, request.getParameterValues(param));
}
}
else{
if(!request.getParameter(param).isEmpty()){
criteria.put(param, new String[]{request.getParameter(param)});
}
}
}
List<MissingDTO> results = advancedSearchService.searchMissing(
      criteria);
session.setAttribute("results", results);
return new ModelAndView("advanced_search_missing_results");
}
@RequestMapping("/picture/{id}")
public void getImage(HttpSession session, HttpServletResponse
      response,
@PathVariable("id") int id){
byte[] data = null;
List<MissingDTO> missingResult = (List<MissingDTO>) session.
      getAttribute("results");
for(MissingDTO missingDTO:missingResult){
if(missingDTO.getId() == id){
data = missingDTO.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
}
```

Source Code 8: AdvancedSearchWantedController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.Enumeration;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.servlet.ModelAndView;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.AdvancedSearchService;
@Controller
@RequestMapping("/search/wanted")
public class AdvancedSearchWantedController {
@Autowired
private AdvancedSearchService advancedSearchService;
@RequestMapping("")
public String getAvancedSearchWanted(HttpSession session,Model
      model){
model.addAttribute("offenses",Offense.toStringAll());
model.addAttribute("wantedStatus", WantedStatus.toStringAll());
session.removeAttribute("results");
return "advaced_search_wanted";
}
@RequestMapping(value="/submit", method=RequestMethod.POST)
public @ResponseBody ModelAndView submitSearchWanted(
      HttpServletRequest request, HttpSession session,
HttpServletResponse response, Model model){
Enumeration<String> paramNames = request.getParameterNames();
Map<String, String[]> criteria = new HashMap<String, String[]>();
if(session.getAttribute("loggedInUser") == null){
criteria.put("status[]", new String[]{"Wanted"});
}
while(paramNames.hasMoreElements()){
String param = paramNames.nextElement();
if(param.contains("[]")){
if(request.getParameterValues(param).length > 0){
criteria.put(param, request.getParameterValues(param));
}
}
else{
if(!request.getParameter(param).isEmpty()){
criteria.put(param, new String[]{request.getParameter(param)});
}
}
}
List<WantedDTO> result = advancedSearchService.searchWanted(
      criteria);
session.setAttribute("results", result);
return new ModelAndView("advanced_search_wanted_results");
}
@RequestMapping("/picture/{id}")
public void getImage(HttpSession session, HttpServletResponse
      response,
@PathVariable("id") int id){
byte[] data = null;
List<WantedDTO> wantedResult = (List<WantedDTO>) session.
      getAttribute("results");
for(WantedDTO wantedDTO:wantedResult){
if(wantedDTO.getId() == id){
data = wantedDTO.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
}
```

Source Code 9: CreateMissingController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
      MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import org.springframework.web.servlet.view.json.
      MappingJackson2JsonView;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PersonDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.image.FaceDetectionException;
import gov.pnp.mwirs.service.FaceDetectorService;
import gov.pnp.mwirs.service.MissingProfileService;
@Controller
@RequestMapping("/create/missing")
public class CreateMissingController {
@Autowired
private FaceDetectorService faceDetectorService;
@Autowired
private MissingProfileService missingProfileService;
@RequestMapping("")
public String createMissing(){
return "create_missing";
}
@RequestMapping(value="/step2", method=RequestMethod.POST)
public String missingStepTwo(HttpServletRequest request,
      HttpSession session){
MissingDTO missingDTO = new MissingDTO();
missingDTO.setFirstName(request.getParameter("firstName"));
missingDTO.setMiddleName(request.getParameter("middleName"));
missingDTO.setLastName(request.getParameter("lastName"));
missingDTO.setAlias(request.getParameter("alias"));
missingDTO.setSex(request.getParameter("sex"));
missingDTO.setBirthDate(request.getParameter("birthDate"));
missingDTO.setHeight(request.getParameter("height"));
missingDTO.setEyeColor(request.getParameter("eyeColor"));
missingDTO.setNationality(request.getParameter("nationality"));
missingDTO.setInvestigator(request.getParameter("investigator"));
UserDTO userDTO = (UserDTO) session.getAttribute("loggedInUser");
missingDTO.setUserDTO(userDTO);
session.setAttribute("missingOnCreate", missingDTO);
return "create_missing_step2";
}
@RequestMapping(value="/step3", method = RequestMethod.POST)
public String missingStepThree(HttpServletRequest request,
      HttpSession session){
MissingDTO missingDTO = (MissingDTO) session.getAttribute("
      missingOnCreate");
missingDTO.setPlaceLastSeen(request.getParameter("placeLastSeen"))
      ;
missingDTO.setDateLastSeen(request.getParameter("dateLastSeen"));
missingDTO.setNarrative(request.getParameter("narrative"));
return "create_missing_step3";
}
@RequestMapping(value="/step4", method = RequestMethod.POST)
public String missingStepFour(HttpServletRequest request,
      HttpSession session){
PersonDTO personDTO = new PersonDTO();
personDTO.setName(request.getParameter("name"));
personDTO.setTelNumber(request.getParameter("telNumber"));
personDTO.setCellNumber(request.getParameter("cellNumber"));
personDTO.setEmail(request.getParameter("email"));
personDTO.setAddress(request.getParameter("address"));
MissingDTO missingDTO = (MissingDTO) session.getAttribute("
      missingOnCreate");
missingDTO.setContactPerson(personDTO);
session.setAttribute("contactPerson", personDTO);
List<PictureDTO> validImages = new ArrayList<PictureDTO>();
session.setAttribute("validImages", validImages);
return "create_missing_step4";
}
@RequestMapping(value = "/validatePicture",method=RequestMethod.
      POST, headers = "content-type=multipart/*")
public ModelAndView testPageSubmit(MultipartHttpServletRequest
      request, HttpServletResponse response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO facePictureDTO = faceDetectorService.
      createFacePictureDTO(file);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
if(!validImages.contains(facePictureDTO)){
validImages.add(facePictureDTO);
}
else{
throw new DuplicateImageException("Duplicate filename.");
}
}catch(DuplicateImageException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(FaceDetectionException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/deletePicture")
public @ResponseBody void deletePicture(@RequestParam("fileName")
      String fileName, HttpSession session){
PictureDTO imageToDelete = new PictureDTO();
imageToDelete.setFileName(fileName);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
validImages.remove(imageToDelete);
}
private MappingJackson2JsonView setErrorMessage(
      HttpServletResponse response, String message){
response.reset();
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
response.setCharacterEncoding("UTF-8");
response.setContentType("text/json");
MappingJackson2JsonView view = new MappingJackson2JsonView();
Map<String, String> asd = new HashMap<String, String>();
asd.put("error", message);
view.setAttributesMap(asd);
return view;
}
@RequestMapping("/step5")
public String nextStep(HttpSession session, Model model){
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
if(validImages.isEmpty()){
return "create_missing_review";
}
else if(validImages.size() == 1){
int primaryIndex = 0;
model.addAttribute("primaryIndex", primaryIndex);
MissingDTO missingDTO = (MissingDTO) session.getAttribute("
      missingOnCreate");
missingDTO.setPrimaryPictureDTO(validImages.get(primaryIndex));
return "create_missing_review";
}
return "create_missing_choose";
}
@RequestMapping("/getMissingPicture/{index}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("index") int index){
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
byte[] data = validImages.get(index).getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/reviewDetails")
public String reviewDetails(HttpSession session,HttpServletRequest
        request, Model model){
int primaryIndex = Integer.parseInt(request.getParameter("primary"
       ));
model.addAttribute("primaryIndex", primaryIndex);
List<PictureDTO> validImages = (List<PictureDTO>) session.
       getAttribute("validImages");
MissingDTO missingDTO = (MissingDTO) session.getAttribute("
       missingOnCreate");
missingDTO.setPrimaryPictureDTO(validImages.get(primaryIndex));
return "create_missing_review";
}
@RequestMapping("/finish")
public @ResponseBody void finishCreateMissing(HttpSession session)
       {
MissingDTO missingDTO = (MissingDTO) session.getAttribute("
       missingOnCreate");
List<PictureDTO> pictureDTOs = (List<PictureDTO>) session.
       getAttribute("validImages");
pictureDTOs.remove(missingDTO.getPrimaryPictureDTO());
missingDTO.setPictures(pictureDTOs);
missingProfileService.createNewRecord(missingDTO);
cleanSession(session);
}
private void cleanSession(HttpSession session){
session.removeAttribute("missingOnCreate");
session.removeAttribute("contactPerson");
session.removeAttribute("validImages");
session.removeAttribute("primaryIndex");
}
}
```

Source Code 10: CreateSystemAdminController.java

```
package gov.pnp.mwirs.controller;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.mail.SimpleMailMessage;
import org.springframework.mail.javamail.JavaMailSender;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.service.SystemAdminService;
@Controller
@RequestMapping("/SysAd/create")
public class CreateSystemAdminController {
@Autowired
private JavaMailSender mailSender;
@Autowired
private SystemAdminService sysAdService;
@RequestMapping("")
public String getCreatePage(){
return "create_sysad";
}
@RequestMapping(value="/finish", method=RequestMethod.POST)
public @ResponseBody String finishCreate(HttpServletRequest
       request, HttpSession session){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
       loggedInUser");
UserDTO userDTO = new UserDTO();
userDTO.setFirstName(request.getParameter("firstName"));
userDTO.setMiddleName(request.getParameter("middleName"));
userDTO.setLastName(request.getParameter("lastName"));
userDTO.setUsername(request.getParameter("username"));
userDTO.setEmail(request.getParameter("email"));
userDTO.setUserType(UserType.SYSTEM_ADMIN);
String password = sysAdService.generatePassword();
userDTO.setPassword(password);
sysAdService.createSysAd(userDTO);
StringBuilder sb = new StringBuilder();
sb.append("Dear ").append(userDTO.getFirstName()).append(" ").
       append(userDTO.getLastName()).append(", \n\n");
sb.append("A system administrator account was registered under
       your name. The following are the details of your account:")
       .append("\n");
sb.append("first name:\t").append(userDTO.getFirstName()).append("
       \n");
sb.append("middle name:\t").append(userDTO.getMiddleName()).append
       ("\n");
sb.append("last name:\t").append(userDTO.getLastName()).append("\n
       ");
sb.append("username:\t").append(userDTO.getUsername()).append("\n"
       );
sb.append("email:\t").append(userDTO.getEmail()).append("\n");
sb.append("password:\t").append(password).append("\n\n");
sb.append("Please do reply in this email if you have any concerns.
        Thank you.\n\n\n");
sb.append(loggedInUser.getFirstName()).append(" ").append(
       loggedInUser.getLastName()).append("\n");
sb.append("System Administrator\n");
sb.append("MWIRS\n");
sendEmail(userDTO.getEmail(), "MWIRS (system administrator account
       )", sb.toString());
return "success";
}
private void sendEmail(String recipientAddress, String subject,
       String message){
SimpleMailMessage email = new SimpleMailMessage();
email.setTo(recipientAddress);
email.setSubject(subject);
email.setText(message);
mailSender.send(email);
}
}
```

Source Code 11: CreateWantedController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.ArrayList;
import java.util.Arrays;
import java.util.HashMap;
import java.util.HashSet;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
       MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import org.springframework.web.servlet.view.json.
       MappingJackson2JsonView;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.image.FaceDetectionException;
import gov.pnp.mwirs.service.FaceDetectorService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping("/create/wanted")
public class CreateWantedController {
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private FaceDetectorService faceDetectorService;
@RequestMapping("")
public String createWanted(Model model){
model.addAttribute("offenses",Offense.toStringAll());
model.addAttribute("wantedStatus", WantedStatus.toStringAll());
return "create_wanted";
}
@RequestMapping(value="/step2", method=RequestMethod.POST)
public String wantedStepTwo(HttpServletRequest request,
       HttpSession session){
WantedDTO wantedDTO = new WantedDTO();
wantedDTO.setFirstName(request.getParameter("firstName"));
wantedDTO.setMiddleName(request.getParameter("middleName"));
wantedDTO.setLastName(request.getParameter("lastName"));
wantedDTO.setSex(request.getParameter("sex"));
String[] offenses = request.getParameterValues("offense");
wantedDTO.setOffense(new HashSet<String>(Arrays.asList(offenses)))
      ;
wantedDTO.setStatus(request.getParameter("status"));
wantedDTO.setInvestigator(request.getParameter("investigator"));
UserDTO userDTO = (UserDTO) session.getAttribute("loggedInUser");
wantedDTO.setUserDTO(userDTO);
session.setAttribute("wantedOnCreate", wantedDTO);
return "create_wanted_step2";
}
@RequestMapping(value="/step3", method=RequestMethod.POST)
public String wantedStepThree(HttpServletRequest request,
      HttpSession session){
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("
      wantedOnCreate");
wantedDTO.setAlias(request.getParameter("alias"));
wantedDTO.setBirthDate(request.getParameter("birthDate"));
wantedDTO.setHeight(request.getParameter("height"));
wantedDTO.setEyeColor(request.getParameter("eyeColor"));
wantedDTO.setNationality(request.getParameter("nationality"));
wantedDTO.setReward(request.getParameter("reward"));
wantedDTO.setNarrative(request.getParameter("narrative"));
List<PictureDTO> validImages = new ArrayList<PictureDTO>(wantedDTO
      .getPictures());
session.setAttribute("validImages", validImages);
return "create_wanted_step3";
}
@RequestMapping(value = "/validatePicture",method=RequestMethod.
      POST, headers = "content-type=multipart/*")
public ModelAndView testPageSubmit(MultipartHttpServletRequest
      request, HttpServletResponse response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO facePictureDTO = faceDetectorService.
      createFacePictureDTO(file);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
if(!validImages.contains(facePictureDTO)){
validImages.add(facePictureDTO);
}
else{
throw new DuplicateImageException("Duplicate filename.");
}
}catch(DuplicateImageException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(FaceDetectionException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/deletePicture")
public @ResponseBody void deletePicture(@RequestParam("fileName")
      String fileName, HttpSession session){
PictureDTO imageToDelete = new PictureDTO();
imageToDelete.setFileName(fileName);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
validImages.remove(imageToDelete);
}
private MappingJackson2JsonView setErrorMessage(
      HttpServletResponse response, String message){
response.reset();
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
response.setCharacterEncoding("UTF-8");
response.setContentType("text/json");
MappingJackson2JsonView view = new MappingJackson2JsonView();
Map<String, String> asd = new HashMap<String, String>();
asd.put("error", message);
view.setAttributesMap(asd);
return view;
}
@RequestMapping("/step4")
public String nextStep(HttpSession session){
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
if(validImages.isEmpty()){
return "create_wanted_review";
}
else if(validImages.size() == 1){
int primaryIndex = 0;
session.setAttribute("primaryIndex", primaryIndex);
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("
      wantedOnCreate");
wantedDTO.setPrimaryPictureDTO(validImages.get(primaryIndex));
return "create_wanted_review";
}
return "create_wanted_choose";
}
@RequestMapping("/getWantedPicture/{index}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("index") int index){
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
byte[] data = validImages.get(index).getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/reviewDetails")
public String reviewDetails(HttpSession session,HttpServletRequest
       request, Model model){
int primaryIndex = Integer.parseInt(request.getParameter("primary"
      ));
model.addAttribute("primaryIndex", primaryIndex);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("validImages");
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("
      wantedOnCreate");
wantedDTO.setPrimaryPictureDTO(validImages.get(primaryIndex));
return "create_wanted_review";
}
@RequestMapping("/finish")
public @ResponseBody void finishCreateWanted(HttpSession session){
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("
      wantedOnCreate");
List<PictureDTO> pictureDTOs = (List<PictureDTO>) session.
      getAttribute("validImages");
pictureDTOs.remove(wantedDTO.getPrimaryPictureDTO());
wantedDTO.setPictures(pictureDTOs);
wantedProfileService.createNewRecord(wantedDTO);
cleanSession(session);
}
private void cleanSession(HttpSession session){
session.removeAttribute("wantedOnCreate");
session.removeAttribute("validImages");
session.removeAttribute("primaryIndex");
}
}
```

Source Code 12:

DuplicateImageException.java

```
package gov.pnp.mwirs.controller;
public class DuplicateImageException extends RuntimeException {
public DuplicateImageException() {
super();
}
public DuplicateImageException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
public DuplicateImageException(String message, Throwable cause) {
super(message, cause);
}
public DuplicateImageException(String message) {
super(message);
}
public DuplicateImageException(Throwable cause) {
super(cause);
}
}
```

Source Code 13:

EditMissingController.java

```
package gov.pnp.mwirs.controller;
import java.io.IOException;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PersonDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.service.MissingProfileService;
@Controller
@RequestMapping("/missing/edit")
public class EditMissingController {
@Autowired
private MissingProfileService missingProfileService;
@RequestMapping("/{id}")
public String editMissingProfile(HttpSession session,
      HttpServletResponse response, Model model,
@PathVariable long id) throws IOException{
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
MissingDTO missing = missingProfileService.findById(id);
if(loggedInUser.canUpdate(missing)){
session.setAttribute("wanted", missing);
model.addAttribute("person",missing.getContactPerson());
}else{
response.sendRedirect("/mwirs/denied");
}
model.addAttribute("status",MissingStatus.toStringAll());
return "edit_missing";
}
@RequestMapping(value="/step2",method=RequestMethod.POST)
public @ResponseBody
String editStepTwo(HttpSession session, HttpServletRequest request
      ){
MissingDTO missing = (MissingDTO) session.getAttribute("missing");
missing.setFirstName(request.getParameter("firstName"));
missing.setMiddleName(request.getParameter("middleName"));
missing.setLastName(request.getParameter("lastName"));
missing.setAlias(request.getParameter("alias"));
missing.setBirthDate(request.getParameter("birthDate"));
missing.setHeight(request.getParameter("height"));
missing.setSex(request.getParameter("sex"));
missing.setNationality(request.getParameter("nationality"));
missing.setNarrative(request.getParameter("narrative"));
missing.setPlaceLastSeen(request.getParameter("placeLastSeen"));
missing.setDateLastSeen(request.getParameter("dateLastSeen"));
missing.setInvestigator(request.getParameter("investigator"));
missing.setStatus(request.getParameter("status"));
PersonDTO contactPerson = new PersonDTO();
contactPerson.setName(request.getParameter("personName"));
contactPerson.setAddress(request.getParameter("personAddress"));
contactPerson.setTelNumber(request.getParameter("personTel"));
contactPerson.setCellNumber(request.getParameter("personCell"));
contactPerson.setEmail(request.getParameter("personEmail"));
missing.setContactPerson(contactPerson);
missingProfileService.updateRecord(missing);
session.removeAttribute("wanted");
return "success";
}
}
```

Source Code 14: EditWantedController.java

```
package gov.pnp.mwirs.controller;
import java.io.IOException;
import java.util.Arrays;
import java.util.HashSet;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping("/wanted/edit")
public class EditWantedController {
@Autowired
private WantedProfileService wantedProfileService;
@RequestMapping("/{id}")
public String editWantedProfile(HttpSession session,
      HttpServletResponse response, Model model,
@PathVariable long id) throws IOException{
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
WantedDTO wanted = wantedProfileService.findById(id);
if(loggedInUser.canUpdate(wanted)){
session.setAttribute("wanted", wanted);
}else{
response.sendRedirect("/mwirs/denied");
}
model.addAttribute("offenses",Offense.toStringAll());
model.addAttribute("wantedStatus", WantedStatus.toStringAll());
return "edit_wanted";
}
@RequestMapping(value="/step2",method=RequestMethod.POST)
public @ResponseBody
String editStepTwo(HttpSession session, HttpServletRequest request
      ){
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("wanted");
wantedDTO.setFirstName(request.getParameter("firstName"));
wantedDTO.setMiddleName(request.getParameter("middleName"));
wantedDTO.setLastName(request.getParameter("lastName"));
wantedDTO.setSex(request.getParameter("sex"));
String[] offenses = request.getParameterValues("offense");
wantedDTO.setOffense(new HashSet<String>(Arrays.asList(offenses)))
      ;
wantedDTO.setStatus(request.getParameter("status"));
wantedDTO.setAlias(request.getParameter("alias"));
wantedDTO.setBirthDate(request.getParameter("birthDate"));
wantedDTO.setHeight(request.getParameter("height"));
wantedDTO.setEyeColor(request.getParameter("eyeColor"));
wantedDTO.setNationality(request.getParameter("nationality"));
wantedDTO.setReward(request.getParameter("reward"));
wantedDTO.setNarrative(request.getParameter("narrative"));
wantedDTO.setInvestigator(request.getParameter("investigator"));
wantedProfileService.updateRecord(wantedDTO);
session.removeAttribute("wanted");
return "success";
}
}
```

Source Code 15: ExceptionController.java

```
package gov.pnp.mwirs.controller;
import java.sql.SQLException;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.ExceptionHandler;
@Controller
public class ExceptionController {
@ExceptionHandler(RuntimeException.class)
public String runtimeException(){
  return "redirect:/404";
}
@ExceptionHandler(SQLException.class)
public void databaseException(){
}
@ExceptionHandler(NullPointerException.class)
public String exception(){
  return "redirect:/404";
}
}
```

Source Code 16: FaceRecognitionController.java

```
package gov.pnp.mwirs.controller;
import static gov.pnp.mwirs.dto.UserDTO.UserType.CRIME_REGISTRAR;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.math.BigDecimal;
import java.math.RoundingMode;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import java.util.Set;
import java.util.TreeMap;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
      MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import org.springframework.web.servlet.view.json.
      MappingJackson2JsonView;
import gov.pnp.mwirs.Sorter;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.image.FaceDetectionException;
import gov.pnp.mwirs.service.FaceDetectorService;
import gov.pnp.mwirs.service.FaceRecognitionDetails;
import gov.pnp.mwirs.service.FaceRecognizerService;
@Controller
@RequestMapping("/faceRecognizer")
public class FaceRecognitionController {
@Autowired
private FaceDetectorService faceDetectorService;
@Autowired
private FaceRecognizerService faceRecognizerService;
@RequestMapping("")
public String faceRecognizer(HttpSession session){
cleanSession(session);
return "recognize_face";
}
@RequestMapping(value = "/validatePicture",method=RequestMethod.
      POST, headers = "content-type=multipart/*")
public ModelAndView testPageSubmit(MultipartHttpServletRequest
      request, HttpServletResponse response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO facePictureDTO = faceDetectorService.
      createFacePictureDTO(file);
session.setAttribute("testPicture", facePictureDTO);
}catch(FaceDetectionException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/deletePicture")
public @ResponseBody void deletePicture(@RequestParam("fileName")
      String fileName, HttpSession session){
PictureDTO imageToDelete = new PictureDTO();
imageToDelete.setFileName(fileName);
session.removeAttribute("testPicture");
}
private MappingJackson2JsonView setErrorMessage(
      HttpServletResponse response, String message){
response.reset();
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
response.setCharacterEncoding("UTF-8");
response.setContentType("text/json");
MappingJackson2JsonView view = new MappingJackson2JsonView();
Map<String, String> asd = new HashMap<String, String>();
asd.put("error", message);
view.setAttributesMap(asd);
return view;
}
private Map<WantedDTO, Double> performFaceRecogniztionOnWanted(
      HttpSession session){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
if(testPicture == null){
return new HashMap<WantedDTO, Double>();
}
if(loggedInUser == null){
return faceRecognizerService.findTopMatchesInCurrentWanted(
      testPicture);
}
UserType userType = loggedInUser.getUserType();
if(!userType.equals(UserType.SYSTEM_ADMIN)){
return faceRecognizerService.findTopMatchesInAllWanted(testPicture
      );
}
return new HashMap<WantedDTO, Double>();
}
private Map<MissingDTO, Double> performFaceRecogniztionOnMissing(
      HttpSession session){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
if(testPicture == null){
return new HashMap<MissingDTO, Double>();
}
if(loggedInUser == null){
return faceRecognizerService.findTopMatchesInCurrentMissing(
      testPicture);
}
UserType userType = loggedInUser.getUserType();
if(!userType.equals(UserType.SYSTEM_ADMIN)){
return faceRecognizerService.findTopMatchesInAllMissing(
      testPicture);
}
return new HashMap<MissingDTO, Double>();
}
@RequestMapping(value="/recognize",method=RequestMethod.POST)
public @ResponseBody ModelAndView recognizeFace(HttpSession
      session, Model model, HttpServletRequest request){
Map<WantedDTO, Double> wantedResult = new HashMap<WantedDTO,
      Double>();
Map<MissingDTO, Double> missingResult = new HashMap<MissingDTO,
      Double>();
Map<Long, Double> allResults= new TreeMap<Long, Double>();
if(Boolean.parseBoolean(request.getParameter("wanted"))){
wantedResult = performFaceRecogniztionOnWanted(session);
for(Map.Entry<WantedDTO, Double> entry:wantedResult.entrySet()){
BigDecimal similarity = new BigDecimal(entry.getValue()).setScale
      (2, RoundingMode.CEILING);
allResults.put(entry.getKey().getId(), similarity.doubleValue());
}
session.setAttribute("wantedResult",wantedResult);
}
if(Boolean.parseBoolean(request.getParameter("missing"))){
missingResult = performFaceRecogniztionOnMissing(session);
for(Map.Entry<MissingDTO, Double> entry:missingResult.entrySet()){
BigDecimal similarity = new BigDecimal(entry.getValue()).setScale
      (2, RoundingMode.CEILING);
allResults.put(entry.getKey().getId(), similarity.doubleValue());
}
session.setAttribute("missingResult",missingResult);
}
session.setAttribute("allResults", Sorter.sortByValue(allResults))
      ;
return new ModelAndView("recognize_face_results");
}
@RequestMapping("/results/picture/wanted/{caseId}/{pictureId}")
public void getImageWanted(HttpSession session,
      HttpServletResponse response, @PathVariable("caseId") int
      caseId,
@PathVariable("pictureId") int pictureId){
byte[] data = null;
Set<WantedDTO> wantedResult = ((Map<WantedDTO,Double>) session.
      getAttribute("wantedResult")).keySet();
mainloop:
for(WantedDTO wantedDTO:wantedResult){
if(wantedDTO.getId() == caseId){
List<PictureDTO> pictureDTOs = wantedDTO.getAllPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == pictureId){
data = pictureDTO.getContent();
break mainloop;
}
}
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
```

```
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/results/picture/missing/{caseId}/{pictureId}")
public void getImageMissing(HttpSession session,
      HttpServletResponse response, @PathVariable("caseId") long
      caseId,
@PathVariable("pictureId") int pictureId){
byte[] data = null;
Set<MissingDTO> missingResult = ((Map<MissingDTO,Double>) session.
      getAttribute("missingResult")).keySet();
mainloop:
for(MissingDTO missingDTO:missingResult){
if(missingDTO.getId() == caseId){
List<PictureDTO> pictureDTOs = missingDTO.getAllPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == pictureId){
data = pictureDTO.getContent();
break mainloop;
}
}
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/results/testPicture")
public void getImageWanted(HttpSession session,
      HttpServletResponse response){
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
byte[] data = testPicture.getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/viewDetails/wanted/{id}")
public @ResponseBody ModelAndView viewDetailsWanted(HttpSession
      session, HttpServletResponse response,
Model model,@PathVariable("id") long id){
Set<WantedDTO> wantedResult = ((Map<WantedDTO,Double>) session.
      getAttribute("wantedResult")).keySet();
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
List<PictureDTO> pictureDTOs = new ArrayList<PictureDTO>();
for(WantedDTO wantedDTO:wantedResult){
if(wantedDTO.getId() == id){
pictureDTOs = wantedDTO.getAllPictures();
model.addAttribute("category", "wanted");
model.addAttribute("caseId", wantedDTO.getId());
break;
}
}
List<FaceRecognitionDetails> details = new ArrayList<
      FaceRecognitionDetails>();
for(PictureDTO pictureDTO:pictureDTOs){
FaceRecognitionDetails detail = new FaceRecognitionDetails();
double sim = faceRecognizerService.getSimilatiry(pictureDTO,
      testPicture);
BigDecimal similarity = new BigDecimal(sim).setScale(2,
      RoundingMode.CEILING);
detail.setId(pictureDTO.getId());
detail.setSimilarity(similarity.toString());
details.add(detail);
}
model.addAttribute("details", details);
return new ModelAndView("view_details_results");
}
@RequestMapping("/viewDetails/missing/{id}")
public @ResponseBody ModelAndView viewDetailsMissing(HttpSession
      session, HttpServletResponse response,
Model model,@PathVariable("id") long id){
Set<MissingDTO> missingResult = ((Map<MissingDTO,Double>) session.
      getAttribute("missingResult")).keySet();
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
List<PictureDTO> pictureDTOs = new ArrayList<PictureDTO>();
for(MissingDTO missingDTO:missingResult){
if(missingDTO.getId() == id){
pictureDTOs = missingDTO.getAllPictures();
model.addAttribute("category", "missing");
model.addAttribute("caseId", missingDTO.getId());
break;
}
}
List<FaceRecognitionDetails> details = new ArrayList<
      FaceRecognitionDetails>();
for(PictureDTO pictureDTO:pictureDTOs){
FaceRecognitionDetails detail = new FaceRecognitionDetails();
double sim = faceRecognizerService.getSimilatiry(pictureDTO,
      testPicture);
BigDecimal similarity = new BigDecimal(sim).setScale(2,
      RoundingMode.CEILING);
detail.setId(pictureDTO.getId());
detail.setSimilarity(similarity.toString());
details.add(detail);
}
model.addAttribute("details", details);
return new ModelAndView("view_details_results");
}
@RequestMapping("/histograms/wanted/{id}")
public String getHistogramWanted(HttpSession session,
      HttpServletResponse response,
Model model,@PathVariable("id") long id){
Set<WantedDTO> wantedResult = ((Map<WantedDTO,Double>) session.
      getAttribute("wantedResult")).keySet();
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
List<PictureDTO> pictureDTOs = new ArrayList<PictureDTO>();
for(WantedDTO wantedDTO:wantedResult){
if(wantedDTO.getId() == id){
pictureDTOs = wantedDTO.getAllPictures();
model.addAttribute("caseProfile", wantedDTO);
model.addAttribute("category", "wanted");
model.addAttribute("testHistogram", faceRecognizerService.
      getHistogram(testPicture));
model.addAttribute("caseId", wantedDTO.getId());
break;
}
}
List<FaceRecognitionDetails> details = new ArrayList<
      FaceRecognitionDetails>();
for(PictureDTO pictureDTO:pictureDTOs){
FaceRecognitionDetails detail = new FaceRecognitionDetails();
double sim = faceRecognizerService.getSimilatiry(pictureDTO,
      testPicture);
BigDecimal similarity = new BigDecimal(sim).setScale(2,
      RoundingMode.CEILING);
detail.setId(pictureDTO.getId());
detail.setSimilarity(similarity.toString());
detail.setHistogram(faceRecognizerService.getHistogram(pictureDTO)
      );
details.add(detail);
}
model.addAttribute("details", details);
return "histograms";
}
@RequestMapping("/histograms/missing/{id}")
public String getHistogramMissing(HttpSession session,
      HttpServletResponse response,
Model model,@PathVariable("id") long id){
Set<MissingDTO> missingResult = ((Map<MissingDTO,Double>) session.
      getAttribute("missingResult")).keySet();
PictureDTO testPicture = (PictureDTO) session.getAttribute("
      testPicture");
List<PictureDTO> pictureDTOs = new ArrayList<PictureDTO>();
for(MissingDTO missingDTO:missingResult){
if(missingDTO.getId() == id){
pictureDTOs = missingDTO.getAllPictures();
model.addAttribute("caseProfile", missingDTO);
model.addAttribute("category", "missing");
model.addAttribute("caseId", missingDTO.getId());
model.addAttribute("testHistogram", faceRecognizerService.
      getHistogram(testPicture));
break;
}
}
List<FaceRecognitionDetails> details = new ArrayList<
      FaceRecognitionDetails>();
for(PictureDTO pictureDTO:pictureDTOs){
FaceRecognitionDetails detail = new FaceRecognitionDetails();
double sim = faceRecognizerService.getSimilatiry(pictureDTO,
      testPicture);
BigDecimal similarity = new BigDecimal(sim).setScale(2,
      RoundingMode.CEILING);
detail.setId(pictureDTO.getId());
detail.setSimilarity(similarity.toString());
detail.setHistogram(faceRecognizerService.getHistogram(pictureDTO)
      );
details.add(detail);
}
model.addAttribute("details", details);
return "histograms";
}
private void cleanSession(HttpSession session){
session.removeAttribute("testPicture");
session.removeAttribute("wantedResult");
session.removeAttribute("missingResult");
session.removeAttribute("allResults");
}
}
```

Source Code 17: HomeController.java

```
package gov.pnp.mwirs.controller;
import java.io.BufferedInputStream;
import java.io.ByteArrayInputStream;
import java.io.File;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.io.InputStream;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.TipDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.TipService;
import gov.pnp.mwirs.service.UserService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
public class HomeController {
@Autowired
private TipService tipService;
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private MissingProfileService missingProfileService;
@Autowired
private UserService userService;
@RequestMapping("")
public String getHomePage(HttpSession session){
return "login";
}
@RequestMapping("/home/wanted/picture/{id}")
public void getWantedImage(HttpSession session,
      HttpServletResponse response, @PathVariable("id") int id){
List<WantedDTO> recentWanted = (List<WantedDTO>) session.
      getAttribute("recentWanted");
byte[] data = null;
for(WantedDTO wanted:recentWanted){
if(wanted.getId() == id){
data = wanted.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/home/missing/picture/{id}")
public void getMissingImage(HttpSession session,
      HttpServletResponse response, @PathVariable("id") int id){
List<MissingDTO> recentMissing = (List<MissingDTO>) session.
      getAttribute("recentMissing");
byte[] data = null;
for(MissingDTO missing:recentMissing){
if(missing.getId() == id){
data = missing.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/download/phoneDirectory")
public void downloadPhoneDirectory(HttpSession session,
      HttpServletResponse response) throws FileNotFoundException{
String filePath = this.getClass().getResource("/PNPTelDir2014.pdf"
      ).getPath();
File file = new File(filePath);
InputStream inputStream = new BufferedInputStream(new
      FileInputStream(file));
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/refreshNotifs")
public @ResponseBody String notification(HttpSession session){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
StringBuilder sb = new StringBuilder();
if(loggedInUser == null){
return "";
}
else if(!loggedInUser.getUserType().equals(UserType.SYSTEM_ADMIN))
      {
List<TipDTO> newTips = tipService.getAllNewTips(loggedInUser);
Map<Long,String> newTipToCaseMap= new HashMap<Long,String>();
Map<Long, Long> newTipToCaseId = new HashMap<Long,Long>();
for(TipDTO tip:newTips){
try{
MissingDTO missing = missingProfileService.findById(tip.getCaseId
      ());
newTipToCaseMap.put(tip.getId(), missing.getFirstName()+" "+
     missing.getMiddleName()+" "+missing.getLastName());
newTipToCaseId.put(tip.getId(), missing.getId());
}catch(RecordNotFoundException e){
try{
  WantedDTO wanted = wantedProfileService.findById(tip.getCaseId
        ());
  newTipToCaseMap.put(tip.getId(), wanted.getFirstName()+" "+
       wanted.getMiddleName()+" "+wanted.getLastName());
  newTipToCaseId.put(tip.getId(), wanted.getId());
}catch(RecordNotFoundException ex){
  newTipToCaseMap.put(tip.getId(), "[deleted case]");
}
}
}
session.setAttribute("newTips", newTips);
session.setAttribute("newTipToCaseMap", newTipToCaseMap);
session.setAttribute("newTipToCaseId", newTipToCaseId);
sb.append(Integer.toString(newTips.size())).append("//");
sb.append("<div class=\"notify-arrow notify-arrow-blue\"></div>");
for(TipDTO tip:newTips){
sb.append("<li><a href=\"/mwirs/tip/view/").append(newTipToCaseId.
      get(tip.getId())).append("\">");
sb.append("<span class=\"label label-primary\"><i class=\"fa fa-
      user\" aria-hidden=\"true\"></i></span> ");
sb.append("New tip about ").append(newTipToCaseMap.get(tip.getId()
      ));
sb.append("<span class=\"small italic pull-right\">");
sb.append(tip.getDateCreatedString()).append("</span></a></li>");
}
}
else{
List<UserDTO> pendingUsers = userService.getUsersByStatus("pending
      ");
session.setAttribute("pendingUsers", pendingUsers);
sb.append(Integer.toString(pendingUsers.size())).append("//");
sb.append("<div class=\"notify-arrow notify-arrow-blue\"></div>");
for(UserDTO user:pendingUsers){
sb.append("<li><a href=\"/mwirs/SysAd/users/pending\">");
sb.append("<span class=\"label label-primary\"><i class=\"fa fa-
      eye\"></i></span> ");
sb.append("Pending registration from <strong>").append(user.
      getFirstName());
sb.append(" ").append(user.getMiddleName()).append(" ").append(
      user.getLastName());
sb.append("</strong>");
sb.append("<span class=\"small italic pull-right\">");
sb.append(user.getDateCreatedString()).append("</span></a></li>");
}
}
return sb.toString();
}
@RequestMapping("/report")
public String getReportPage(){
return "report";
}
@RequestMapping("/404")
public String pageNotFound(HttpSession session){
return "404";
}
@RequestMapping("/denied")
public String accessDenied(){
return "access_denied";
}
}
```

Source Code 18: LoginController.java

```
package gov.pnp.mwirs.controller;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import javax.persistence.NoResultException;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.dao.EmptyResultDataAccessException;
import org.springframework.mail.SimpleMailMessage;
import org.springframework.mail.javamail.JavaMailSender;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.TipDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.LoginFailedException;
import gov.pnp.mwirs.service.LoginService;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.SystemAdminService;
import gov.pnp.mwirs.service.TipService;
import gov.pnp.mwirs.service.UserService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping("/login")
public class LoginController {
@Autowired
private LoginService loginService;
@Autowired
private TipService tipService;
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private MissingProfileService missingProfileService;
@Autowired
private UserService userService;
@Autowired
private SystemAdminService sysAdService;
@Autowired
private JavaMailSender mailSender;
@RequestMapping("")
public String login(HttpSession session) {
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
if(loggedInUser!=null){
return "redirect:/user/welcome";
}else{
return "login";
}
}
@RequestMapping("/")
public String loginWithSlash(HttpSession session){
return "redirect:/login";
}
@RequestMapping(value ="/validate", method=RequestMethod.POST)
public String validate(HttpServletRequest request, HttpSession
      session,
Model model){
String username = request.getParameter("username");
String password = request.getParameter("password");
UserDTO loggedInUser = null;
try{
loggedInUser = loginService.login(username, password);
session.setAttribute("loggedInUser", loggedInUser);
setPageElements(session, loggedInUser);
}
catch(LoginFailedException e){
model.addAttribute("errorMessage", e.getMessage());
return "login";
}
if(loggedInUser.getUserType().equals(UserType.SYSTEM_ADMIN)){
return "redirect:/SysAd/welcome";
}else{
return "redirect:/user/welcome";
}
}
@RequestMapping(value="/validateEmail", method = RequestMethod.
      POST)
public @ResponseBody String validateEmail(@RequestParam("email")
      String email){
try{
userService.findByEmail(email);
}catch(NoResultException e){
return "false";
}
catch(EmptyResultDataAccessException e){
return "false";
}
return "true";
}
@RequestMapping(value="/forgotPassword", method = RequestMethod.
      POST)
public @ResponseBody String forgotPassword(@RequestParam("email")
      String email){
try{
UserDTO user = userService.findByEmail(email);
String password = sysAdService.generatePassword();
user.setPassword(password);
sysAdService.updatePassword(user);
StringBuilder sb = new StringBuilder();
sb.append("Dear ").append(user.getFirstName()).append(" ").append(
      user.getLastName()).append(", \n\n");
sb.append("Your password has been reset to ’") .append(password).
      append("’.\n\n");
sb.append("System Administrator\n");
sb.append("MWIRS\n");
sb.append("\n\nDO NOT REPLY IN THIS EMAIL.");
sendEmail(user.getEmail(), "MWIRS (password reset)", sb.toString()
      );
return "success";
}catch(Exception e){
return "error";
}
}
private void setPageElements(HttpSession session, UserDTO userDTO)
      {
if(!userDTO.getUserType().equals(UserType.SYSTEM_ADMIN)){
List<TipDTO> newTips = tipService.getAllNewTips(userDTO);
Map<Long,String> newTipToCaseMap= new HashMap<Long,String>();
Map<Long, Long> newTipToCaseId = new HashMap<Long,Long>();
for(TipDTO tip:newTips){
try{
MissingDTO missing = missingProfileService.findById(tip.getCaseId
      ());
newTipToCaseMap.put(tip.getId(), missing.getFirstName()+" "+
missing.getMiddleName()+" "+missing.getLastName());
newTipToCaseId.put(tip.getId(), missing.getId());
}catch(RecordNotFoundException e){
try{
WantedDTO wanted = wantedProfileService.findById(tip.getCaseId());
newTipToCaseMap.put(tip.getId(), wanted.getFirstName()+" "+
wanted.getMiddleName()+" "+wanted.getLastName());
newTipToCaseId.put(tip.getId(), wanted.getId());
}catch(RecordNotFoundException ex){
newTipToCaseMap.put(tip.getId(), "[deleted case]");
}
}
}
session.setAttribute("newTips", newTips);
session.setAttribute("newTipToCaseMap", newTipToCaseMap);
session.setAttribute("newTipToCaseId", newTipToCaseId);
}else{
List<UserDTO> pendingUsers = userService.getUsersByStatus("pending
      ");
session.setAttribute("pendingUsers", pendingUsers);
}
if(userDTO.getUserType().equals(UserType.CRIME_REGISTRAR)){
session.setAttribute("page_header", "header_loggedin.jsp");
session.setAttribute("page_sidebar", "sidebar_cr.jsp");
session.setAttribute("home","/mwirs/user/welcome");
}
else if(userDTO.getUserType().equals(UserType.POLICE_OFFICER)){
session.setAttribute("page_header", "header_loggedin.jsp");
session.setAttribute("page_sidebar", "sidebar_po.jsp");
session.setAttribute("home","/mwirs/user/welcome");
}
else if(userDTO.getUserType().equals(UserType.SYSTEM_ADMIN)){
session.setAttribute("page_header", "header_sa.jsp");
session.setAttribute("page_sidebar", "sidebar_sa.jsp");
session.setAttribute("home","/mwirs/SysAd/welcome");
}
}
private void sendEmail(String recipientAddress, String subject,
      String message){
SimpleMailMessage email = new SimpleMailMessage();
email.setTo(recipientAddress);
email.setSubject(subject);
email.setText(message);
mailSender.send(email);
}
}
```

Source Code 19:

MissingProfileController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.List;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.MissingSortingCriteria;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.TipService;
@Controller
@RequestMapping("/missing")
public class MissingProfileController {
@Autowired
private MissingProfileService missingProfileService;
@Autowired
private TipService tipService;
@RequestMapping("/{id}")
public String viewProfile(HttpSession session, Model model,
@PathVariable("id") long id){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
try{
MissingDTO missingDTO = missingProfileService.findById(id);
if(loggedInUser == null && (!missingDTO.getStatus().equals("
      Missing"))){
return "redirect:/denied";
}
session.setAttribute("missing",missingDTO);
session.setAttribute("pictures", missingDTO.getPictures());
if(loggedInUser != null){
model.addAttribute("newTipCount", tipService.countNewTips(
      missingDTO));
}
if(missingDTO.getPrimaryPictureDTO()!=null){
model.addAttribute("hasPrimaryPic", true);
}
return "missing_profile";
}catch(RecordNotFoundException e){
return "redirect:/404";
}
}
@RequestMapping("/picture/{id}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("id") int id){
MissingDTO missingDTO = (MissingDTO) session.getAttribute("missing
      ");
byte[] data = null;
List<PictureDTO> pictureDTOs = missingDTO.getPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == id){
data = pictureDTO.getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/picture/primary")
public void getPrimaryImage(HttpSession session,
      HttpServletResponse response){
MissingDTO missingDTO = (MissingDTO) session.getAttribute("missing
      ");
byte[] data = missingDTO.getPrimaryPictureDTO().getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping(value = "/delete/case")
public @ResponseBody void deleteCase(HttpSession session,
      HttpServletResponse response,
HttpServletRequest request) throws IOException{
long id = Long.parseLong(request.getParameter("id"));
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
try{
MissingDTO missingDTO = missingProfileService.findById(id);
if(loggedInUser.canUpdate(missingDTO)){
missingProfileService.deleteRecord(missingDTO);
session.removeAttribute("missing");
}
else{
response.sendRedirect("/mwirs/denied");
}
}catch(RecordNotFoundException e){
response.sendRedirect("/mwirs/404");
}
}
@RequestMapping("/view_all/{criterion}")
public String viewAllmissing(HttpSession session,@PathVariable("
      criterion")String criterion,
Model model, HttpServletResponse response) throws IOException{
try{
List<MissingDTO> allMissing = null;
model.addAttribute("criterion",MissingSortingCriteria.valueOf(
      criterion));
model.addAttribute("sortingCriteria",MissingSortingCriteria.values
      ());
if(session.getAttribute("loggedInUser") == null){
allMissing = missingProfileService.getAllCurrent(
      MissingSortingCriteria.valueOf(criterion));
}else{
allMissing = missingProfileService.getAll(MissingSortingCriteria.
      valueOf(criterion));
}
session.setAttribute("allMissing", allMissing);
return "view_all_missing";
}catch(IllegalArgumentException e){
return "redirect:/404";
}
}
@RequestMapping("/picture/{caseId}/{pictureId}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("caseId") int caseId,
@PathVariable("pictureId") int pictureId){
byte[] data = null;
List<MissingDTO> missingResult = (List<MissingDTO>) session.
      getAttribute("allMissing");
mainloop:
for(MissingDTO missingDTO:missingResult){
if(missingDTO.getId() == caseId){
List<PictureDTO> pictureDTOs = missingDTO.getAllPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == pictureId){
data = pictureDTO.getContent();
break mainloop;
}
}
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
}
```

Source Code 20:

RegistrationController.java

```
package gov.pnp.mwirs.controller;
import static gov.pnp.mwirs.dto.UserDTO.UserType.CRIME_REGISTRAR;
import static gov.pnp.mwirs.dto.UserDTO.UserType.POLICE_OFFICER;
import java.io.IOException;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.OfficeDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.service.RegistrationService;
@Controller
@RequestMapping("/register")
public class RegistrationController {
@Autowired
private RegistrationService registrationService;
@RequestMapping(value = "")
public String register(HttpSession session){
session.invalidate();
return "register";
}
@RequestMapping(value = "/")
public String registerWithSlash(){
return "redirect:/register";
}
@RequestMapping(value = "/step_2", method=RequestMethod.POST)
public String registerStepTwo(HttpServletRequest request,
      HttpSession session){
session.setAttribute("firstName", request.getParameter("firstName"
      ));
session.setAttribute("middleName", request.getParameter("
      middleName"));
session.setAttribute("lastName", request.getParameter("lastName"))
      ;
session.setAttribute("username", request.getParameter("username"))
      ;
session.setAttribute("password", request.getParameter("password"))
      ;
session.setAttribute("email", request.getParameter("email"));
return "register_step2";
}
@RequestMapping(value = "/final_step", method=RequestMethod.POST)
public @ResponseBody String registerFinal(HttpServletRequest
      request, HttpSession session) throws IOException{
String gRecaptchaResponse = request
.getParameter("g-recaptcha-response");
if(!VerifyRecaptcha.verify(gRecaptchaResponse)){
StringBuilder sb = new StringBuilder();
sb.append("<div class=\"alert alert-danger\" role=\"alert\">")
.append("<i class=\"fa fa-exclamation-circle\"></i>")
.append("<span class=\"sr-only\">Error:</span>")
.append("Please answer the captcha.")
.append("</div>");
return sb.toString();
}
UserDTO userDTO = new UserDTO();
userDTO.setFirstName((String) session.getAttribute("firstName"));
userDTO.setMiddleName((String) session.getAttribute("middleName"))
      ;
userDTO.setLastName((String) session.getAttribute("lastName"));
userDTO.setUsername((String) session.getAttribute("username"));
userDTO.setPassword((String) session.getAttribute("password"));
userDTO.setEmail((String) session.getAttribute("email"));
if(((String) request.getParameter("crimeRegistrar")).equals("y")){
userDTO.setUserType(CRIME_REGISTRAR);
OfficeDTO officeDTO = new OfficeDTO(request.getParameter("PRO"),
request.getParameter("PPO"), request.getParameter("cityMunicipalPS
      "), request.getParameter("PCP"));
userDTO.setOfficeDTO(officeDTO);
}
else{
userDTO.setUserType(POLICE_OFFICER);
OfficeDTO officeDTO = new OfficeDTO(request.getParameter("PRO"),
request.getParameter("PPO"), request.getParameter("cityMunicipalPS
      "), request.getParameter("PCP"));
userDTO.setOfficeDTO(officeDTO);
}
registrationService.registerAccount(userDTO);
session.invalidate();
return "success";
}
@RequestMapping(value="/validateUniqueUsername", method =
      RequestMethod.POST)
public @ResponseBody String validateUniqueUserName(@RequestParam("
      username") String username){
if(registrationService.isUsernameAvailable(username)){
return "true";
}
else{
return "false";
}
}
@RequestMapping(value="/validateUniqueEmail", method =
      RequestMethod.POST)
public @ResponseBody String validateUniqueEmail(@RequestParam("
      email")String email){
if(registrationService.isEmailAvailable(email)){
return "true";
}
else{
return "false";
}
}
}
```

Source Code 21: SystemAdminController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.List;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.service.UserService;
@Controller
@RequestMapping("/SysAd")
public class SystemAdminController {
@Autowired
private UserService userService;
@RequestMapping("/welcome")
public String getWelcome(Model model, HttpSession session){
model.addAttribute("pendingCount", userService.getCountByStatus("
      pending"));
model.addAttribute("lockedCount", userService.getCountByStatus("
      locked"));
model.addAttribute("approvedCount", userService.getCountByStatus("
      approved"));
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
List<UserDTO> recentUsers = userService.getRecentRegistrations();
recentUsers.remove(loggedInUser);
session.setAttribute("recentUsers", recentUsers);
return "sysad_welcome";
}
@RequestMapping("/users/{status}")
public String getUsers(@PathVariable("status") String status,
      HttpSession session,
Model model){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
List<UserDTO> users = null;
if(status.equals("all")){
users = userService.getAllUsers();
}else{
try{
users = userService.getUsersByStatus(status);
}catch(IllegalArgumentException e){
return "redirect:/404";
}
}
users.remove(loggedInUser);
session.setAttribute("users", users);
model.addAttribute("status", status);
model.addAttribute("statusValues", AccountStatus.toStringAll());
return "users";
}
@RequestMapping("/picture/{id}")
public void getRecentImage(HttpSession session,
      HttpServletResponse response, @PathVariable("id") int id){
List<UserDTO> users = (List<UserDTO>) session.getAttribute("
      recentUsers");
byte[] data = null;
for(UserDTO user:users){
if(user.getId() == id){
data = user.getPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/users/picture/{id}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("id") int id){
List<UserDTO> users = (List<UserDTO>) session.getAttribute("users"
      );
byte[] data = null;
for(UserDTO user:users){
if(user.getId() == id){
data = user.getPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
}
```

Source Code 22: SystemAdminUserController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.mail.SimpleMailMessage;
import org.springframework.mail.javamail.JavaMailSender;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.SystemAdminService;
import gov.pnp.mwirs.service.UserService;
@Controller
@RequestMapping("/SysAd/user")
public class SystemAdminUserController {
@Autowired
private SystemAdminService sysAdService;
@Autowired
private UserService userService;
@Autowired
private JavaMailSender mailSender;
@RequestMapping("/{id}")
public String viewProfile(HttpSession session, @PathVariable("id")
       long id, Model model){
try{
UserDTO user = userService.findById(id);
session.setAttribute("user", user);
model.addAttribute("statusValues", AccountStatus.toStringAll());
return "user_profile_sysad";
}catch(RecordNotFoundException e){
return "redirect:/404";
}
}
@RequestMapping("/picture")
public void getWantedImage(HttpSession session,
      HttpServletResponse response){
UserDTO user = (UserDTO) session.getAttribute("user");
byte[] data = user.getPictureDTO().getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping(value = "/changeStatus", method=RequestMethod.POST
      )
public String changeStatus(HttpServletRequest request, Model model
      , HttpSession session){
try{
String status = request.getParameter("status");
UserDTO user = (UserDTO) session.getAttribute("user");
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
StringBuilder sb = new StringBuilder();
sb.append("Dear ").append(user.getFirstName()).append(" ").append(
      user.getLastName()).append(", \n\n");
sb.append("Your account status has been changed from ").append(
      user.getStatus()).append(" to ")
.append(status).append(".\n\n");
sb.append("Please do message in email:").append(loggedInUser.
      getEmail()).append(" if you have any concerns. Thank you.\n\
      n\n");
sb.append(loggedInUser.getFirstName()).append(" ").append(
      loggedInUser.getLastName()).append("\n");
sb.append("System Administrator\n");
sb.append("MWIRS\n");
sb.append("\n\nDO NOT REPLY IN THIS EMAIL.");
sendEmail(user.getEmail(), "MWIRS (account status changed)", sb.
      toString());
user.setStatus(status);
userService.updateUser(user);
model.addAttribute("successful", true);
model.addAttribute("message", "Status changed.");
}catch(Exception e){
model.addAttribute("successful", false);
model.addAttribute("message", "Status not changed. Please try
      again.");
}
return "user_profile_sysad";
}
@RequestMapping(value = "/resetPassword", method=RequestMethod.
      POST)
public String resetPassword(HttpServletRequest request, Model
      model, HttpSession session){
try{
UserDTO user = (UserDTO) session.getAttribute("user");
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
String password = sysAdService.generatePassword();
user.setPassword(password);
sysAdService.updatePassword(user);
StringBuilder sb = new StringBuilder();
sb.append("Dear ").append(user.getFirstName()).append(" ").append(
      user.getLastName()).append(", \n\n");
sb.append("Your password has been reset to ’") .append(password).
      append("’.\n\n");
sb.append("Please do message in email:").append(loggedInUser.
      getEmail()).append(" if you have any concerns. Thank you.\n\
      n\n");
sb.append(loggedInUser.getFirstName()).append(" ").append(
      loggedInUser.getLastName()).append("\n");
sb.append("System Administrator\n");
sb.append("MWIRS\n");
sb.append("\n\nDO NOT REPLY IN THIS EMAIL.");
sendEmail(user.getEmail(), "MWIRS (password reset)", sb.toString()
      );
model.addAttribute("successful", true);
model.addAttribute("message", "Password has been reset.");
}catch(Exception e){
model.addAttribute("successful", false);
model.addAttribute("message", "Password not reset. Please try
      again.");
}
return "user_profile_sysad";
}
@RequestMapping("/delete/account")
private @ResponseBody String deleteUser(HttpServletRequest request
      , HttpSession session){
long id = Long.parseLong(request.getParameter("id"));
UserDTO userDTO = userService.findById(id);
sysAdService.deleteAccount(userDTO);
session.removeAttribute("user");
return "success";
}
private void sendEmail(String recipientAddress, String subject,
      String message){
SimpleMailMessage email = new SimpleMailMessage();
email.setTo(recipientAddress);
email.setSubject(subject);
email.setText(message);
mailSender.send(email);
}
}
```

Source Code 23: TipController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
      MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import org.springframework.web.servlet.view.json.
      MappingJackson2JsonView;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.TipDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.TipService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping("/tip")
public class TipController {
@Autowired
private TipService tipService;
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private MissingProfileService missingProfileService;
@RequestMapping("/create/{id}")
public String getTipPage(@PathVariable("id")long id, HttpSession
      session,
HttpServletResponse response) throws IOException{
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
WantedDTO wantedDTO = null;
MissingDTO missingDTO = null;
session.removeAttribute("wanted");
session.removeAttribute("missing");
try{
wantedDTO = wantedProfileService.findById(id);
if(loggedInUser == null && (!wantedDTO.getStatus().equals("Wanted"
      ))){
response.sendRedirect("/mwirs/denied");
}
session.setAttribute("wanted", wantedDTO);
session.setAttribute("caseId", id);
}catch(RecordNotFoundException e){
try{
missingDTO = missingProfileService.findById(id);
if(loggedInUser == null && (!missingDTO.getStatus().equals("
      Missing"))){
response.sendRedirect("/mwirs/denied");
}
session.setAttribute("missing", missingDTO);
session.setAttribute("caseId", id);
}catch(RecordNotFoundException ex){
response.sendRedirect("/mwirs/404");
}
}
return "submit_tip";
}
@RequestMapping(value="/create/step1",method=RequestMethod.POST)
public String validateTipStepOne(HttpSession session,
      HttpServletRequest request,
HttpServletResponse response) throws IOException{
long caseId = (long) session.getAttribute("caseId");
TipDTO tipOnCreate = new TipDTO(caseId, request.getParameter("
      firstName"),
request.getParameter("middleName"), request.getParameter("lastName
      "),
request.getParameter("email"), request.getParameter("phoneNumber")
      ,
request.getParameter("address"), request.getParameter("narrative")
      );
session.setAttribute("tipOnCreate", tipOnCreate);
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
session.setAttribute("pictures", pictures);
return "submit_tip_step2";
}
@RequestMapping(value="/create/final",method=RequestMethod.POST)
public @ResponseBody String validateTipStep2(HttpServletRequest
      request, HttpSession session) throws IOException{
String gRecaptchaResponse = request
.getParameter("g-recaptcha-response");
if(!VerifyRecaptcha.verify(gRecaptchaResponse)){
StringBuilder sb = new StringBuilder();
sb.append("<div class=\"alert alert-danger\" role=\"alert\">")
.append("<i class=\"fa fa-exclamation-circle\"></i>")
.append("<span class=\"sr-only\">Error:</span>")
.append("Please answer the captcha.")
.append("</div>");
return sb.toString();
}
if(request.getParameter("accept") == null){
StringBuilder sb = new StringBuilder();
sb.append("<div class=\"alert alert-danger\" role=\"alert\">")
.append("<i class=\"fa fa-exclamation-circle\"></i>")
.append("<span class=\"sr-only\">Error:</span>")
.append("Please check the agreement.")
.append("</div>");
return sb.toString();
}
TipDTO tipOnCreate = (TipDTO) session.getAttribute("tipOnCreate");
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
tipOnCreate.setPictures(pictures);
tipService.createTip(tipOnCreate);
return "success";
}
@RequestMapping(value = "/create/uploadPicture",method=
      RequestMethod.POST, headers = "content-type=multipart/*")
public ModelAndView testPageSubmit(MultipartHttpServletRequest
      request, HttpServletResponse response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO pictureDTO = new PictureDTO(file.getOriginalFilename(),
      file.getBytes());
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
if(!pictures.contains(pictureDTO)){
pictures.add(pictureDTO);
}
else{
throw new DuplicateImageException("Duplicate filename.");
}
}catch(DuplicateImageException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/create/deletePicture")
public @ResponseBody void deletePicture(@RequestParam("fileName")
      String fileName, HttpSession session){
PictureDTO imageToDelete = new PictureDTO();
imageToDelete.setFileName(fileName);
List<PictureDTO> validImages = (List<PictureDTO>) session.
      getAttribute("pictures");
validImages.remove(imageToDelete);
}
private MappingJackson2JsonView setErrorMessage(
      HttpServletResponse response, String message){
response.reset();
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
response.setCharacterEncoding("UTF-8");
response.setContentType("text/json");
MappingJackson2JsonView view = new MappingJackson2JsonView();
Map<String, String> asd = new HashMap<String, String>();
asd.put("error", message);
view.setAttributesMap(asd);
return view;
}
@RequestMapping("/view/{id}")
public String viewTips(HttpServletResponse response, Model model,
      HttpSession session,
@PathVariable("id") long id) throws IOException{
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
WantedDTO wantedDTO = null;
MissingDTO missingDTO = null;
session.removeAttribute("wanted");
session.removeAttribute("missing");
List<TipDTO> tips = new ArrayList<TipDTO>();
try{
wantedDTO = wantedProfileService.findById(id);
model.addAttribute("wanted", wantedDTO);
if(loggedInUser.canViewTips(wantedDTO)){
tips = tipService.viewTipsFor(wantedDTO);
}
session.setAttribute("tips",tips);
}catch(RecordNotFoundException e){
try{
missingDTO = missingProfileService.findById(id);
model.addAttribute("missing", missingDTO);
if(loggedInUser.canViewTips(missingDTO)){
tips = tipService.viewTipsFor(missingDTO);
}
session.setAttribute("tips",tips);
}catch(RecordNotFoundException ex){
response.sendRedirect("/mwirs/404");
}
}
return "view_tips";
}
@RequestMapping("/view/picture/{tipId}/{pictureId}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("tipId") long tipId,
@PathVariable("pictureId") long pictureId){
List<TipDTO> tips = (List<TipDTO>) session.getAttribute("tips");
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
byte[] data = null;
for(TipDTO tip:tips){
if(tip.getId() == tipId){
pictures = tip.getPictures();
break;
}
}
for(PictureDTO picture:pictures){
if(picture.getId() == pictureId){
data = picture.getContent();
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/viewAll/picture/{tipId}/{pictureId}")
public void getAllImage(HttpSession session, HttpServletResponse
      response, @PathVariable("tipId") long tipId,
@PathVariable("pictureId") long pictureId){
List<TipDTO> tips = new ArrayList<TipDTO>(((Map<TipDTO,String>)
      session.getAttribute("tips")).keySet());
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
byte[] data = null;
for(TipDTO tip:tips){
if(tip.getId() == tipId){
pictures = tip.getPictures();
break;
}
}
for(PictureDTO picture:pictures){
if(picture.getId() == pictureId){
data = picture.getContent();
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/viewAll/setToSeen")
public @ResponseBody String setToSeenTipAll(HttpServletRequest
      request, HttpSession session){
long id = Long.parseLong(request.getParameter("id"));
List<TipDTO> tips = new ArrayList<TipDTO>(((Map<TipDTO,String>)
      session.getAttribute("tips")).keySet());
List<TipDTO> newTips = (List<TipDTO>) session.getAttribute("
      newTips");
Map<Long,String> newTipToCaseMap= (Map<Long, String>) session.
      getAttribute("newTipToCaseMap");
Map<Long, Long> newTipToCaseId = (Map<Long, Long>) session.
      getAttribute("newTipToCaseId");
for(TipDTO tip:tips){
if(!tip.isSeen() && tip.getId() == id){
tip.setSeen(true);
tipService.updateTip(tip);
newTips.remove(tip);
StringBuilder sb = new StringBuilder();
sb.append(Integer.toString(newTips.size())).append("//");
sb.append("<div class=\"notify-arrow notify-arrow-blue\"></div>");
for(TipDTO newTip:newTips){
sb.append("<li><a href=\"/mwirs/tip/view/").append(newTipToCaseId.
      get(tip.getId())).append("\">");
sb.append("<span class=\"label label-primary\"><i class=\"fa fa-
      eye\"></i></span> ");
sb.append("New tip about ").append(newTipToCaseMap.get(newTip.
      getId()));
sb.append("<span class=\"small italic pull-right\">")
.append(newTip.getDateCreatedString()).append("</span></a></li>");
}
return sb.toString();
}
}
return "";
}
@RequestMapping("/view/setToSeen")
public @ResponseBody String setToSeenTip(HttpServletRequest
      request, HttpSession session){
long id = Long.parseLong(request.getParameter("id"));
List<TipDTO> tips = (List<TipDTO>) session.getAttribute("tips");
List<TipDTO> newTips = (List<TipDTO>) session.getAttribute("
      newTips");
Map<Long,String> newTipToCaseMap= (Map<Long, String>) session.
      getAttribute("newTipToCaseMap");
Map<Long, Long> newTipToCaseId = (Map<Long, Long>) session.
      getAttribute("newTipToCaseId");
for(TipDTO tip:tips){
if(!tip.isSeen() && tip.getId() == id){
tip.setSeen(true);
tipService.updateTip(tip);
newTips.remove(tip);
StringBuilder sb = new StringBuilder();
sb.append(Integer.toString(newTips.size())).append("//");
sb.append("<div class=\"notify-arrow notify-arrow-blue\"></div>");
for(TipDTO newTip:newTips){
sb.append("<li><a href=\"/mwirs/tip/view/").append(newTipToCaseId.
      get(tip.getId())).append("\">");
sb.append("<span class=\"label label-primary\"><i class=\"fa fa-
      eye\"></i></span> ");
sb.append("New tip about ").append(newTipToCaseMap.get(newTip.
      getId()));
sb.append("<span class=\"small italic pull-right\">")
.append(newTip.getDateCreatedString()).append("</span></a></li>");
}
return sb.toString();
}
}
return "";
}
@RequestMapping("/view/delete")
public @ResponseBody String deleteTip(HttpServletRequest request,
      HttpSession session
,HttpServletResponse response) throws IOException{
long id = Long.parseLong(request.getParameter("id"));
try{
tipService.deleteTip(id);
return "successful";
}catch(RecordNotFoundException e){
return "error";
}
}
@RequestMapping("/viewAll")
public String viewTips(HttpSession session, Model model){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
session.setAttribute("tips", tipService.getAllTips(loggedInUser));
return "view_all_tips";
}
}
```

Source Code 24:

UploadPictureController.java

```
package gov.pnp.mwirs.controller;
import java.util.HashMap;
import java.util.Iterator;
import java.util.List;
import java.util.Map;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
      MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import org.springframework.web.servlet.view.json.
      MappingJackson2JsonView;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.image.FaceDetectionException;
import gov.pnp.mwirs.service.FaceDetectorService;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping(value={"/wanted/picture","/missing/picture"})
public class UploadPictureController {
@Autowired
private FaceDetectorService faceDetectorService;
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private MissingProfileService missingProfileService;
@RequestMapping(value = "/validateProfilePicture",method=
      RequestMethod.POST, headers = "content-type=multipart/*")
public ModelAndView validateProfilePicture(
      MultipartHttpServletRequest request, HttpServletResponse
      response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO facePictureDTO = faceDetectorService.
      createFacePictureDTO(file);
session.setAttribute("profilePicture", facePictureDTO);
}catch(FaceDetectionException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/deleteProfilePic")
public @ResponseBody void deleteProfilePicture(@RequestParam("
      fileName") String fileName, HttpSession session){
session.removeAttribute("profilePicture");
}
@RequestMapping(value="/changeWantedProfilePicture/{id}")
public String changeWantedProfilePicture(HttpServletRequest
      request,HttpSession session,
@PathVariable("id") long id){
WantedDTO wanted = wantedProfileService.findById(id);
PictureDTO profilePicture = (PictureDTO) session.getAttribute("
      profilePicture");
wanted.setPrimaryPictureDTO(profilePicture);
wantedProfileService.updateRecord(wanted);
return "redirect:/wanted/"+Long.toString(id);
}
@RequestMapping(value="/changeMissingProfilePicture/{id}")
public String changeMissingProfilePicture(HttpServletRequest
      request,HttpSession session,
@PathVariable("id") long id){
try{
MissingDTO missing = missingProfileService.findById(id);
PictureDTO profilePicture = (PictureDTO) session.getAttribute("
      profilePicture");
missing.setPrimaryPictureDTO(profilePicture);
missingProfileService.updateRecord(missing);
return "redirect:/missing/"+Long.toString(id);
}catch(RuntimeException e){
return "redirect:/denied";
}
}
private MappingJackson2JsonView setErrorMessage(
      HttpServletResponse response, String message){
response.reset();
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
response.setCharacterEncoding("UTF-8");
response.setContentType("text/json");
MappingJackson2JsonView view = new MappingJackson2JsonView();
Map<String, String> asd = new HashMap<String, String>();
asd.put("error", message);
view.setAttributesMap(asd);
return view;
}
@RequestMapping(value = "/validatePictures",method=RequestMethod.
      POST, headers = "content-type=multipart/*")
public ModelAndView validatePictures(MultipartHttpServletRequest
      request, HttpServletResponse response,
HttpSession session){
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
try{
PictureDTO facePictureDTO = faceDetectorService.
      createFacePictureDTO(file);
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
if(!pictures.contains(facePictureDTO)){
pictures.add(facePictureDTO);
}
else{
throw new DuplicateImageException("Duplicate filename.");
}
}catch(DuplicateImageException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(FaceDetectionException e){
return new ModelAndView(setErrorMessage(response, e.getMessage()))
      ;
}catch(Exception e){
return new ModelAndView(setErrorMessage(response, "Image
      processing failed. Please try to reupload."));
}
}
return null;
}
@RequestMapping(value = "/deletePicture")
public @ResponseBody void deletePicture(@RequestParam("fileName")
      String fileName, HttpSession session){
PictureDTO imageToDelete = new PictureDTO();
imageToDelete.setFileName(fileName);
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
pictures.remove(imageToDelete);
}
@RequestMapping(value="/saveWantedPictures/{id}")
public String saveWantedPictures(HttpSession session,
      @PathVariable("id") long id){
try{
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
WantedDTO wanted = wantedProfileService.findById(id);
wanted.setPictures(pictures);
wantedProfileService.updateRecord(wanted);
return "redirect:/wanted/"+Long.toString(id);
}catch(RuntimeException e){
return "redirect:/denied";
}
}
@RequestMapping(value="/saveMissingPictures/{id}")
public String saveMissingPictures(HttpSession session,
      @PathVariable("id") long id){
try{
List<PictureDTO> pictures = (List<PictureDTO>) session.
      getAttribute("pictures");
MissingDTO missing = missingProfileService.findById(id);
missing.setPictures(pictures);
missingProfileService.updateRecord(missing);
return "redirect:/missing/"+Long.toString(id);
}catch(RuntimeException e){
return "redirect:/denied";
}
}
}
```

Source Code 25: UserController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.Iterator;
import java.util.List;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.RequestMethod;
import org.springframework.web.bind.annotation.RequestParam;
import org.springframework.web.bind.annotation.ResponseBody;
import org.springframework.web.multipart.MultipartFile;
import org.springframework.web.multipart.
      MultipartHttpServletRequest;
import org.springframework.web.servlet.ModelAndView;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.MissingProfileService;
import gov.pnp.mwirs.service.TipService;
import gov.pnp.mwirs.service.UserService;
import gov.pnp.mwirs.service.WantedProfileService;
@Controller
@RequestMapping("/user")
public class UserController {
@Autowired
private UserService userProfileService;
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private MissingProfileService missingProfileService;
@Autowired
private TipService tipService;
@RequestMapping("/welcome")
public String welcome(HttpSession session,Model model) {
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
model.addAttribute("wantedCount",wantedProfileService.getCount(
      loggedInUser.getOfficeDTO()));
model.addAttribute("missingCount",missingProfileService.getCount(
      loggedInUser.getOfficeDTO()));
model.addAttribute("tipCount", tipService.getAllTips(loggedInUser)
      .size());
session.setAttribute("recentWanted",wantedProfileService.getRecent
      ());
session.setAttribute("recentMissing", missingProfileService.
      getRecent());
return "user_welcome";
}
@RequestMapping("/wanted/picture/{id}")
public void getWantedImage(HttpSession session,
      HttpServletResponse response, @PathVariable("id") int id){
List<WantedDTO> recentWanted = (List<WantedDTO>) session.
      getAttribute("recentWanted");
byte[] data = null;
for(WantedDTO wanted:recentWanted){
if(wanted.getId() == id){
data = wanted.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/missing/picture/{id}")
public void getMissingImage(HttpSession session,
      HttpServletResponse response, @PathVariable("id") int id){
List<MissingDTO> recentMissing = (List<MissingDTO>) session.
      getAttribute("recentMissing");
byte[] data = null;
for(MissingDTO missing:recentMissing){
if(missing.getId() == id){
data = missing.getPrimaryPictureDTO().getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/logout")
public String logout(HttpSession session, Model model){
String message = "Logged out successfully";
model.addAttribute("successMessage", message);
session.invalidate();
return "login";
}
@RequestMapping("/viewProfile")
public String viewProfile(){
return "user_profile";
}
@RequestMapping("/picture")
public void getImage(HttpSession session, HttpServletResponse
      response){
UserDTO user = (UserDTO) session.getAttribute("loggedInUser");
PictureDTO picture= user.getPictureDTO();
try {
InputStream inputStream = new ByteArrayInputStream(picture.
      getContent());
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping(value="/verifyPicture",method=RequestMethod.POST,
      headers = "content-type=multipart/*")
public ModelAndView verifyPicture(HttpSession session,
      MultipartHttpServletRequest request) throws IOException{
Iterator<String> itr = request.getFileNames();
while (itr.hasNext()) {
String uploadedFile = itr.next();
MultipartFile file = request.getFile(uploadedFile);
PictureDTO picture = new PictureDTO(file.getOriginalFilename(),
      file.getBytes());
session.setAttribute("picture", picture);
}
return null;
}
@RequestMapping(value = "/deletePicture")
public @ResponseBody void deleteProfilePicture(@RequestParam("
      fileName") String fileName, HttpSession session){
session.removeAttribute("picture");
}
@RequestMapping("/uploadPicture")
public String uploadPicture(HttpSession session){
UserDTO user = (UserDTO) session.getAttribute("loggedInUser");
PictureDTO picture = (PictureDTO) session.getAttribute("picture");
user.setPictureDTO(picture);
userProfileService.updateUserProfile(user);
return "redirect:viewProfile";
}
@RequestMapping(value="/changePassword",method=RequestMethod.POST)
public String changePassword(HttpServletRequest request,
      HttpSession session,Model model){
UserDTO userDTO = (UserDTO) session.getAttribute("loggedInUser");
String currPass = request.getParameter("currPass");
String verifyPass = request.getParameter("verifyPass");
String newPass = request.getParameter("newPass");
if(currPass.equals(verifyPass) && userProfileService.
      verifyPassword(userDTO, currPass)){
userProfileService.changePassword(userDTO, newPass);
model.addAttribute("successful",true);
model.addAttribute("message","Password changed successfully.");
}
else{
model.addAttribute("successful",false);
model.addAttribute("message","Password not changed. Please try
      again.");
}
return "user_profile";
}
}
```

Source Code 26:

VerifyRecaptcha.java

```
package gov.pnp.mwirs.controller;
import java.io.BufferedReader;
import java.io.DataOutputStream;
import java.io.IOException;
import java.io.InputStreamReader;
import java.io.StringReader;
import java.net.URL;
import javax.json.Json;
import javax.json.JsonObject;
import javax.json.JsonReader;
import javax.net.ssl.HttpsURLConnection;
public class VerifyRecaptcha {
private static final String URL = "https://www.google.com/
      recaptcha/api/siteverify";
private static final String SECRET = "6
      LdbtBoTAAAAAJg2G0shPoyQVzyZEka3kAat7Ze2";
public static boolean verify(String gRecaptchaResponse) throws
      IOException {
if (gRecaptchaResponse == null || "".equals(gRecaptchaResponse)) {
return false;
}
try{
URL obj = new URL(URL);
HttpsURLConnection con = (HttpsURLConnection) obj.openConnection()
      ;
con.setRequestMethod("POST");
con.setRequestProperty("Accept-Language", "en-US,en;q=0.5");
String postParams = "secret=" + SECRET + "&response="
+ gRecaptchaResponse;
con.setDoOutput(true);
DataOutputStream wr = new DataOutputStream(con.getOutputStream());
wr.writeBytes(postParams);
wr.flush();
wr.close();
BufferedReader in = new BufferedReader(new InputStreamReader(
con.getInputStream()));
String inputLine;
StringBuffer response = new StringBuffer();
while ((inputLine = in.readLine()) != null) {
response.append(inputLine);
}
in.close();
JsonReader jsonReader = Json.createReader(new StringReader(
      response.toString()));
JsonObject jsonObject = jsonReader.readObject();
jsonReader.close();
return jsonObject.getBoolean("success");
}catch(Exception e){
e.printStackTrace();
return false;
}
}
}
```

Source Code 27: WantedProfileController.java

```
package gov.pnp.mwirs.controller;
import java.io.ByteArrayInputStream;
import java.io.IOException;
import java.io.InputStream;
import java.util.List;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.apache.commons.io.IOUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Controller;
import org.springframework.ui.Model;
import org.springframework.web.bind.annotation.PathVariable;
import org.springframework.web.bind.annotation.RequestMapping;
import org.springframework.web.bind.annotation.ResponseBody;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.service.RecordNotFoundException;
import gov.pnp.mwirs.service.TipService;
import gov.pnp.mwirs.service.WantedProfileService;
import gov.pnp.mwirs.service.WantedSortingCriteria;
@Controller
@RequestMapping("/wanted")
public class WantedProfileController {
@Autowired
private WantedProfileService wantedProfileService;
@Autowired
private TipService tipService;
@RequestMapping("/{id}")
public String viewProfile(HttpSession session, Model model,
@PathVariable("id") long id){
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
try{
WantedDTO wantedDTO = wantedProfileService.findById(id);
if(loggedInUser == null && (!wantedDTO.getStatus().equals("Wanted"
      ))){
return "redirect:/denied";
}
session.setAttribute("wanted",wantedDTO);
session.setAttribute("pictures", wantedDTO.getPictures());
if(loggedInUser!=null){
model.addAttribute("newTipCount", tipService.countNewTips(
      wantedDTO));
}
if(wantedDTO.getPrimaryPictureDTO()!=null){
model.addAttribute("hasPrimaryPic", true);
}
return "wanted_profile";
}catch(RecordNotFoundException e){
return "redirect:/404";
}
}
@RequestMapping("/picture/{id}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("id") int id){
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("wanted");
byte[] data = null;
List<PictureDTO> pictureDTOs = wantedDTO.getPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == id){
data = pictureDTO.getContent();
break;
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping("/picture/primary")
public void getPrimaryImage(HttpSession session,
      HttpServletResponse response){
WantedDTO wantedDTO = (WantedDTO) session.getAttribute("wanted");
byte[] data = wantedDTO.getPrimaryPictureDTO().getContent();
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
@RequestMapping(value = "/delete/case")
public @ResponseBody void deleteCase(HttpSession session,
      HttpServletResponse response,
HttpServletRequest request) throws IOException{
long id = Long.parseLong(request.getParameter("id"));
UserDTO loggedInUser = (UserDTO) session.getAttribute("
      loggedInUser");
try{
WantedDTO wantedDTO = wantedProfileService.findById(id);
if(loggedInUser.canUpdate(wantedDTO)){
wantedProfileService.deleteRecord(wantedDTO);
session.removeAttribute("wanted");
}
else{
response.sendRedirect("/mwirs/denied");
}
}catch (RecordNotFoundException e){
response.sendRedirect("/mwirs/404");
}
}
@RequestMapping("/view_all/{criterion}")
public String viewAllWanted(HttpSession session,@PathVariable("
      criterion")String criterion,
Model model,HttpServletResponse response) throws IOException{
try{
List<WantedDTO> allWanted = null;
model.addAttribute("criterion",WantedSortingCriteria.valueOf(
      criterion));
model.addAttribute("sortingCriteria",WantedSortingCriteria.values
      ());
if(session.getAttribute("loggedInUser") == null){
allWanted = wantedProfileService.getAllCurrent(
      WantedSortingCriteria.valueOf(criterion));
}else{
allWanted = wantedProfileService.getAll(WantedSortingCriteria.
      valueOf(criterion));
}
session.setAttribute("allWanted", allWanted);
return "view_all_wanted";
}catch(IllegalArgumentException e){
return "redirect:/404";
}
}
@RequestMapping("/picture/{caseId}/{pictureId}")
public void getImage(HttpSession session, HttpServletResponse
      response, @PathVariable("caseId") int caseId,
@PathVariable("pictureId") int pictureId){
byte[] data = null;
List<WantedDTO> wantedResult = (List<WantedDTO>) session.
      getAttribute("allWanted");
mainloop:
for(WantedDTO wantedDTO:wantedResult){
if(wantedDTO.getId() == caseId){
List<PictureDTO> pictureDTOs = wantedDTO.getAllPictures();
for(PictureDTO pictureDTO:pictureDTOs){
if(pictureDTO.getId() == pictureId){
data = pictureDTO.getContent();
break mainloop;
}
}
}
}
InputStream inputStream = new ByteArrayInputStream(data);
try {
IOUtils.copy(inputStream, response.getOutputStream());
} catch (IOException e) {
response.setStatus(HttpServletResponse.SC_INTERNAL_SERVER_ERROR);
}
}
}
```

Source Code 28: MissingDao.java

```
package gov.pnp.mwirs.dao;
import java.util.Collection;
import org.joda.time.DateTime;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
public interface MissingDao {
public Missing findById(long id);
public void insert(Missing missing);
public void update(Missing missing);
public Collection<Missing> findAll();
public Collection<Missing> findAllWithPicture();
public Collection<Missing> findAllCurrent();
public Collection<Missing> findAllCurrentWithPicture();
public Collection<Missing> findByFirstName(String firstName);
public Collection<Missing> findByMiddleName(String middleName);
public Collection<Missing> findByLastName(String lastName);
public Collection<Missing> findByAgeRange(int lowerBound, int
       upperBound);
public Collection<Missing> findByAlias(String alias);
public Collection<Missing> findByHeightRange(float lowerBound,
       float upperBound);
public Collection<Missing> findByEyeColor(String eyeColor);
public Collection<Missing> findBySex(Sex sex);
public Collection<Missing> findByNationality(String nationality);
public Collection<Missing> findByUser(User user);
public Collection<Missing> findByStatus(MissingStatus status);
public Collection<Missing> findByPlaceLastSeen(String place);
public Collection<Missing> findByDateLastSeen(DateTime date);
public void delete(Missing missing);
public Collection<Missing> findAllSortedByFirstName();
public Collection<Missing> findAllSortedByLastName();
public Collection<Missing> findAllSortedByAge();
public Collection<Missing> findAllSortedByDateReported();
public Collection<Missing> findAllSortedByDateLastSeen();
public Collection<Missing> findAllRecent();
public long countAllFromOffice(Office office);
public Collection<Missing> findByInvestigator(String investigator)
       ;
}
```

Source Code 29: TipDao.java

```
package gov.pnp.mwirs.dao;
import java.util.Collection;
import gov.pnp.mwirs.domain.Tip;
public interface TipDao {
public Tip findById(long id);
public Collection<Tip> findAll();
public Collection<Tip> findAllNew();
public Collection<Tip> findByCase(long caseId);
public long countNew(long caseId);
public void insert(Tip tip);
public void delete(Tip tip);
public void update(Tip tip);
public long countAll();
}
```

Source Code 30: UserDao.java

```
package gov.pnp.mwirs.dao;
import java.util.Collection;
import org.springframework.stereotype.Repository;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.domain.User;
@Repository
public interface UserDao {
public User findById(long id);
public User findByUsername(String userName);
public User findByEmail(String email);
public void insert(User user);
public void update(User user);
public Collection<User> findByStatus(AccountStatus accountStatus);
public Collection<User> findAll();
public void delete(User user);
public long countByStatus(AccountStatus accountStatus);
public Collection<User> findRecent();
}
```

Source Code 31: WantedDao.java

```
package gov.pnp.mwirs.dao;
import java.util.Collection;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.domain.WantedStatus;
public interface WantedDao {
public Wanted findById(long id);
public Collection<Wanted> findByFirstName(String firstName);
public Collection<Wanted> findByMiddleName(String middleName);
public Collection<Wanted> findByLastName(String lastName);
public Collection<Wanted> findByAgeRange(int lowerBound, int
       upperBound);
public Collection<Wanted> findByAlias(String alias);
public Collection<Wanted> findByHeightRange(float lowerBound,
       float upperBound);
public Collection<Wanted> findByEyeColor(String eyeColor);
public Collection<Wanted> findBySex(Sex sex);
public Collection<Wanted> findByNationality(String nationality);
public Collection<Wanted> findByOffense(Offense offense);
public Collection<Wanted> findByUser(User user);
public Collection<Wanted> findByStatus(WantedStatus status);
public Collection<Wanted> findAllWithPicture();
public Collection<Wanted> findAll();
public Collection<Wanted> findAllSortedByFirstName();
public Collection<Wanted> findAllSortedByLastName();
public Collection<Wanted> findAllSortedByAge();
public Collection<Wanted> findAllSortedByDateReported();
public void insert(Wanted wanted);
public void update(Wanted wanted);
public void delete(Wanted wanted);
public Collection<Wanted> findAllCurrentWithPicture();
public Collection<Wanted> findAllRecent();
public long countAllFromOffice(Office office);
public Collection<Wanted> findByInvestigator(String investigator);
}
```

Source Code 32:

DuplicateEmailException.java

```
package gov.pnp.mwirs.dao.jpa;
public class DuplicateEmailException extends RuntimeException {
public DuplicateEmailException() {
}
public DuplicateEmailException(String message) {
super(message);
}
public DuplicateEmailException(Throwable cause) {
super(cause);
}
public DuplicateEmailException(String message, Throwable cause) {
super(message, cause);
}
public DuplicateEmailException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 33: DuplicateUsernameException.java

```
package gov.pnp.mwirs.dao.jpa;
public class DuplicateUsernameException extends RuntimeException {
public DuplicateUsernameException() {
}
public DuplicateUsernameException(String message) {
super(message);
}
public DuplicateUsernameException(Throwable cause) {
super(cause);
}
public DuplicateUsernameException(String message, Throwable cause)
       {
super(message, cause);
}
public DuplicateUsernameException(String message, Throwable cause,
       boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 34: MissingDaoImpl.java

```
package gov.pnp.mwirs.dao.jpa;
import static org.apache.commons.lang3.Validate.notEmpty;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.ArrayList;
import java.util.Collection;
import java.util.List;
import javax.persistence.EntityManager;
import javax.persistence.EntityManagerFactory;
import javax.persistence.PersistenceUnit;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import org.joda.time.DateTime;
import org.springframework.stereotype.Repository;
import org.springframework.transaction.annotation.Transactional;
import gov.pnp.mwirs.dao.MissingDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.domain.Wanted;
@Repository
@Transactional
public class MissingDaoImpl implements MissingDao {
@PersistenceUnit
private EntityManagerFactory entityManagerFactory;
private EntityManager entityManager;
private void setUp(){
entityManager = entityManagerFactory.createEntityManager();
entityManager.getTransaction().begin();
}
private void tearDown(){
entityManager.clear();
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Missing findById(long id) {
setUp();
Missing missing = entityManager.find(Missing.class, id);
tearDown();
return missing;
}
@Override
public void insert(Missing missing) {
notNull(missing);
setUp();
entityManager.persist(missing);
entityManager.flush();
tearDown();
}
@Override
public void update(Missing missing) {
notNull(missing);
setUp();
@SuppressWarnings("unused")
Missing oldRecord = entityManager.find(Missing.class, missing.
      getId());
oldRecord = entityManager.merge(missing);
entityManager.flush();
tearDown();
}
@Override
public Collection<Missing> findByFirstName(String firstName) {
notEmpty(firstName);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      firstName) = :firstName"
+ " AND e.status=’MISSING’";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("firstName", firstName.toUpperCase());
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findAll() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.
      dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllWithPicture() {
setUp();
String queryString = "SELECT e FROM Missing e WHERE "
+ "e.primaryPicture IS NOT NULL OR e.pictures IS NOT EMPTY";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllCurrent() {
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.status=:
      status";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("status",MissingStatus.MISSING);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllCurrentWithPicture() {
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.status=:
      status AND ("
+ "e.primaryPicture IS NOT NULL OR e.pictures IS NOT EMPTY)";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("status",MissingStatus.MISSING);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findByMiddleName(String middleName) {
notEmpty(middleName);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      middleName) = :middleName"
+ " AND e.status=’MISSING’";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("middleName", middleName.toUpperCase());
```

```
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByLastName(String lastName) {
notEmpty(lastName);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      lastName) = :lastName"
+ " AND e.status=’MISSING’";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("lastName", lastName.toUpperCase());
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByAgeRange(int lowerBound, int
      upperBound) {
setUp();
String queryString = "SELECT e from Missing e";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> result = query.getResultList();
List<Missing> filteredResult = new ArrayList<Missing>();
for(Missing missing:result){
int age = missing.getAge();
if(age>=lowerBound && age <=upperBound){
filteredResult.add(missing);
}
}
tearDown();
return filteredResult;
}
@Override
public Collection<Missing> findByAlias(String alias) {
notEmpty(alias);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.alias)
       LIKE :alias ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("alias","%"+alias.toUpperCase()+"%");
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByHeightRange(float lowerBound,
      float upperBound) {
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.height>=:
      lowerBound AND e.height<=:upperBound";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("lowerBound", lowerBound);
query.setParameter("upperBound", upperBound);
List<Missing> result = query.getResultList();
return result;
}
@Override
public Collection<Missing> findByEyeColor(String eyeColor) {
notEmpty(eyeColor);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      eyeColor) = :eyeColor ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("eyeColor", eyeColor.toUpperCase());
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findBySex(Sex sex) {
notNull(sex);
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.sex = :sex "
      ;
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("sex", sex);
List<Missing> result = query.getResultList();
tearDown();
```

```
return result;
}
@Override
public Collection<Missing> findByNationality(String nationality) {
notEmpty(nationality);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      nationality) = :nationality ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("nationality", nationality.toUpperCase());
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByUser(User user) {
notNull(user);
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.user = :user
      ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("user", user);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findByStatus(MissingStatus status) {
notNull(status);
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.status = :
      status";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("status", status);
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByPlaceLastSeen(String place) {
notEmpty(place);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      placeLastSeen) LIKE :place ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("place", "%"+place.toUpperCase()+"%");
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Missing> findByDateLastSeen(DateTime date) {
notNull(date);
setUp();
String queryString = "SELECT e FROM Missing e WHERE e.dateLastSeen
       = :date ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("date", date);
List<Missing> result = query.getResultList();
tearDown();
return result;
}
@Override
public void delete(Missing missing) {
notNull(missing);
setUp();
Missing missingFromDB = entityManager.find(Missing.class, missing.
      getId());
entityManager.remove(missingFromDB);
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Collection<Missing> findAllSortedByFirstName() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.firstName
       ASC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
```

```
return results;
}
@Override
public Collection<Missing> findAllSortedByLastName() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.lastName
      ASC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllSortedByAge() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.birthDate
       DESC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllSortedByDateReported() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.
      dateCreated ASC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllSortedByDateLastSeen() {
setUp();
String queryString = "SELECT e FROM Missing e ORDER BY e.
      dateLastSeen DESC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Missing> findAllRecent() {
setUp();
int maxResult = 20;
String queryString = "SELECT e FROM Missing e WHERE e.status = :
      status ORDER BY e.dateLastSeen ASC";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("status", MissingStatus.MISSING);
query.setMaxResults(maxResult);
List<Missing> results = query.getResultList();
tearDown();
return results;
}
@Override
public long countAllFromOffice(Office office) {
setUp();
String queryString = "SELECT COUNT(e.id) FROM Missing e WHERE e.
      office = :office";
Query query = entityManager.createQuery(queryString);
query.setParameter("office", office);
long count = (long) query.getSingleResult();
tearDown();
return count;
}
@Override
public Collection<Missing> findByInvestigator(String investigator)
       {
notEmpty(investigator);
setUp();
String queryString = "SELECT e FROM Missing e WHERE UPPER(e.
      investigator) LIKE :investigator ";
@SuppressWarnings("unchecked")
TypedQuery<Missing> query = (TypedQuery<Missing>) entityManager.
      createQuery(queryString);
query.setParameter("investigator","%"+investigator.toUpperCase()+"
      %");
List<Missing> result = query.getResultList();
tearDown();
return result;
}
```

```
}
```

Source Code 35: TipDaoImpl.java

```
package gov.pnp.mwirs.dao.jpa;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.Collection;
import java.util.List;
import javax.persistence.EntityManager;
import javax.persistence.EntityManagerFactory;
import javax.persistence.PersistenceUnit;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import org.springframework.stereotype.Repository;
import org.springframework.transaction.annotation.Transactional;
import gov.pnp.mwirs.dao.TipDao;
import gov.pnp.mwirs.domain.Tip;
@Repository
@Transactional
public class TipDaoImpl implements TipDao{
@PersistenceUnit
private EntityManagerFactory entityManagerFactory;
private EntityManager entityManager;
private void setUp(){
entityManager = entityManagerFactory.createEntityManager();
entityManager.getTransaction().begin();
}
private void tearDown(){
entityManager.clear();
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Tip findById(long id) {
setUp();
Tip tip = entityManager.find(Tip.class, id);
tearDown();
return tip;
}
@Override
public Collection<Tip> findAll() {
setUp();
String queryString = "SELECT e FROM Tip e ORDER BY e.dateCreated
      DESC";
@SuppressWarnings("unchecked")
TypedQuery<Tip> query = (TypedQuery<Tip>) entityManager.
      createQuery(queryString);
List<Tip> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Tip> findByCase(long caseId) {
setUp();
String queryString = "SELECT e FROM Tip e WHERE e.caseId = :caseId
       ORDER BY e.dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<Tip> query = (TypedQuery<Tip>) entityManager.
      createQuery(queryString);
query.setParameter("caseId", caseId);
List<Tip> result = query.getResultList();
tearDown();
return result;
}
@Override
public void insert(Tip tip) {
notNull(tip);
setUp();
entityManager.persist(tip);
entityManager.flush();
tearDown();
}
@Override
public void delete(Tip tip) {
notNull(tip);
setUp();
Tip tipFromDB = entityManager.find(Tip.class, tip.getId());
entityManager.remove(tipFromDB);
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Collection<Tip> findAllNew() {
setUp();
String queryString = "SELECT e FROM Tip e where e.seen = false
      ORDER BY e.dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<Tip> query = (TypedQuery<Tip>) entityManager.
      createQuery(queryString);
List<Tip> result = query.getResultList();
tearDown();
return result;
}
@Override
public long countNew(long caseId) {
setUp();
String queryString = "SELECT COUNT(e) FROM Tip e where e.seen =
      false AND e.caseId = :caseId";
Query query = entityManager.createQuery(queryString);
query.setParameter("caseId", caseId);
long count = (long) query.getSingleResult();
tearDown();
return count;
}
@Override
public void update(Tip tip) {
notNull(tip);
setUp();
@SuppressWarnings("unused")
Tip oldTip = entityManager.find(Tip.class, tip.getId());
oldTip = entityManager.merge(tip);
entityManager.flush();
tearDown();
}
@Override
public long countAll() {
setUp();
String queryString = "SELECT COUNT(e.id) FROM Tip e";
Query query = entityManager.createQuery(queryString);
long count = (long) query.getSingleResult();
tearDown();
return count;
}
}
```

Source Code 36: UserDaoImpl.java

```
package gov.pnp.mwirs.dao.jpa;
import static org.apache.commons.lang3.Validate.notEmpty;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.Collection;
import java.util.List;
import javax.persistence.EntityManager;
import javax.persistence.EntityManagerFactory;
import javax.persistence.NoResultException;
import javax.persistence.PersistenceUnit;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import org.joda.time.DateTime;
import org.joda.time.Days;
import org.joda.time.Period;
import org.springframework.stereotype.Repository;
import org.springframework.transaction.annotation.Transactional;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.domain.User;
@Repository
@Transactional
public class UserDaoImpl implements UserDao {
@PersistenceUnit
private EntityManagerFactory entityManagerFactory;
private EntityManager entityManager;
private void setUp(){
entityManager = entityManagerFactory.createEntityManager();
entityManager.getTransaction().begin();
}
private void tearDown(){
entityManager.clear();
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public User findById(long id) {
notNull(id);
setUp();
User user = entityManager.find(User.class, id);
tearDown();
return user;
}
@Override
public User findByUsername(String username) {
notEmpty(username);
setUp();
String queryString = "SELECT i FROM User i WHERE i.username = :
      username";
Query query = entityManager.createQuery(queryString);
query.setParameter("username", username);
User user = (User) query.getSingleResult();
tearDown();
return user;
}
@Override
public User findByEmail(String email){
notEmpty(email);
setUp();
String queryString = "SELECT i FROM User i WHERE i.email = :email"
      ;
Query query = entityManager.createQuery(queryString);
query.setParameter("email", email);
User user = (User) query.getSingleResult();
tearDown();
return user;
}
@Override
public void insert(User user) {
notNull(user);
try{
findByUsername(user.getUsername());
throw new DuplicateUsernameException("Username \""+user.
      getUsername()+"\" already exists.");
}
catch(NoResultException e){
try{
findByEmail(user.getEmail());
throw new DuplicateEmailException("Email \""+user.getEmail()+"\"
      already exists.");
}catch(NoResultException f){
setUp();
entityManager.persist(user);
entityManager.flush();
tearDown();
}
}
}
@Override
public void update(User user) {
notNull(user);
setUp();
@SuppressWarnings("unused")
User oldUser = entityManager.find(User.class, user.getId());
oldUser = entityManager.merge(user);
entityManager.flush();
tearDown();
}
@Override
public Collection<User> findByStatus(AccountStatus accountStatus)
      {
notNull(accountStatus);
setUp();
String queryString = "SELECT i FROM User i WHERE i.accountStatus =
       :accountStatus "
+ "ORDER BY i.dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<User> query = (TypedQuery<User>) entityManager.
      createQuery(queryString);
query.setParameter("accountStatus", accountStatus);
List<User> users = query.getResultList();
tearDown();
return users;
}
@Override
public Collection<User> findAll() {
setUp();
String queryString = "SELECT i FROM User i ORDER BY i.dateCreated
      DESC";
TypedQuery<User> query = (TypedQuery<User>) entityManager.
      createQuery(queryString);
List<User> users = query.getResultList();
tearDown();
return users;
}
@Override
public void delete(User user) {
notNull(user);
setUp();
User userFromDB = entityManager.find(User.class, user.getId());
entityManager.remove(userFromDB);
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public long countByStatus(AccountStatus accountStatus) {
setUp();
String queryString = "SELECT COUNT(e.id) FROM User e WHERE e.
      accountStatus = :accountStatus";
Query query = entityManager.createQuery(queryString);
query.setParameter("accountStatus", accountStatus);
long count = (long) query.getSingleResult();
tearDown();
return count;
}
@Override
public Collection<User> findRecent() {
setUp();
String queryString = "SELECT i FROM User i ORDER BY i.dateCreated
      DESC";
TypedQuery<User> query = (TypedQuery<User>) entityManager.
      createQuery(queryString);
List<User> users = query.getResultList();
DateTime dateToday = new DateTime();
for(int i = 0; i<users.size();i++){
User user = users.get(i);
Period period = new Period(user.getDateCreated(),dateToday);
Days days = period.toStandardDays();
if(days.compareTo(Days.ONE) == 1 ){
users.remove(i);
i--;
}
}
tearDown();
return users;
}
}
```

Source Code 37: WantedDaoImpl.java

```
package gov.pnp.mwirs.dao.jpa;
import static org.apache.commons.lang3.Validate.notEmpty;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.ArrayList;
import java.util.Collection;
import java.util.List;
import javax.persistence.EntityManager;
import javax.persistence.EntityManagerFactory;
import javax.persistence.PersistenceUnit;
import javax.persistence.Query;
import javax.persistence.TypedQuery;
import org.springframework.stereotype.Repository;
import org.springframework.transaction.annotation.Transactional;
import gov.pnp.mwirs.dao.WantedDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.domain.WantedStatus;
@Repository
@Transactional
public class WantedDaoImpl implements WantedDao {
@PersistenceUnit
private EntityManagerFactory entityManagerFactory;
private EntityManager entityManager;
private void setUp(){
entityManager = entityManagerFactory.createEntityManager();
entityManager.getTransaction().begin();
}
private void tearDown(){
entityManager.clear();
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Wanted findById(long id) {
setUp();
Wanted wanted = entityManager.find(Wanted.class, id);
tearDown();
return wanted;
}
@Override
public Collection<Wanted> findByFirstName(String firstName) {
notEmpty(firstName);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
      firstName) = :firstName";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("firstName", firstName.toUpperCase());
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findByMiddleName(String middleName) {
notEmpty(middleName);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
      middleName) = :middleName ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("middleName", middleName.toUpperCase());
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findByLastName(String lastName) {
notEmpty(lastName);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
      lastName) = :lastName ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("lastName", lastName.toUpperCase());
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findByAgeRange(int lowerBound, int
      upperBound) {
setUp();
String queryString = "SELECT e from Wanted e";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
List<Wanted> result = query.getResultList();
List<Wanted> filteredResult = new ArrayList<Wanted>();
for(Wanted wanted:result){
int age = wanted.getAge();
if(age>=lowerBound && age <=upperBound){
filteredResult.add(wanted);
}
}
tearDown();
return filteredResult;
}
@Override
public Collection<Wanted> findByAlias(String alias) {
notEmpty(alias);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.alias)
      LIKE :alias ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("alias","%"+alias.toUpperCase()+"%");
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findByHeightRange(float lowerBound,
      float upperBound) {
setUp();
String queryString = "SELECT e FROM Wanted e WHERE e.height>=:
      lowerBound AND e.height<=:upperBound";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("lowerBound", lowerBound);
query.setParameter("upperBound", upperBound);
List<Wanted> result = query.getResultList();
return result;
}
@Override
public Collection<Wanted> findByEyeColor(String eyeColor) {
notEmpty(eyeColor);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
      eyeColor) = :eyeColor ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("eyeColor", eyeColor.toUpperCase());
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findBySex(Sex sex) {
```

```
notNull(sex);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE e.sex = :sex ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("sex", sex);
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findByNationality(String nationality) {
notEmpty(nationality);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
       nationality) = :nationality ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("nationality", nationality.toUpperCase());
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findByOffense(Offense offense) {
notNull(offense);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE :offense MEMBER
        OF e.offense";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("offense", offense);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findByStatus(WantedStatus status) {
notNull(status);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE e.status = :
       status";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("status", status);
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
@Override
public Collection<Wanted> findAll() {
setUp();
String queryString = "SELECT e FROM Wanted e ORDER BY e.
       dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findByUser(User user) {
notNull(user);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE e.user = :user"
       ;
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("user", user);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public void insert(Wanted wanted) {
notNull(wanted);
setUp();
entityManager.persist(wanted);
entityManager.flush();
tearDown();
}
@Override
public void update(Wanted wanted) {
notNull(wanted);
setUp();
@SuppressWarnings("unused")
```

```
Wanted oldRecord = entityManager.find(Wanted.class, wanted.getId()
       );
oldRecord = entityManager.merge(wanted);
entityManager.flush();
tearDown();
}
@Override
public Collection<Wanted> findAllWithPicture() {
setUp();
String queryString = "SELECT e FROM Wanted e WHERE "
+ "e.primaryPicture IS NOT NULL OR e.pictures IS NOT EMPTY";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findAllCurrentWithPicture() {
setUp();
String queryString = "SELECT e FROM Wanted e WHERE e.status=:
       status AND ("
+ "e.primaryPicture IS NOT NULL OR e.pictures IS NOT EMPTY)";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
query.setParameter("status", WantedStatus.WANTED);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public void delete(Wanted wanted) {
notNull(wanted);
setUp();
Wanted wantedFromDB = entityManager.find(Wanted.class, wanted.
       getId());
entityManager.remove(wantedFromDB);
entityManager.getTransaction().commit();
entityManager.close();
}
@Override
public Collection<Wanted> findAllSortedByFirstName() {
setUp();
String queryString = "SELECT e FROM Wanted e ORDER BY e.firstName
       ASC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findAllSortedByLastName() {
setUp();
String queryString = "SELECT e FROM Wanted e ORDER BY e.lastName
       ASC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findAllSortedByAge() {
setUp();
String queryString = "SELECT e FROM Wanted e ORDER BY e.birthDate
       DESC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findAllSortedByDateReported() {
setUp();
String queryString = "SELECT e FROM Wanted e ORDER BY e.
       dateCreated ASC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
       createQuery(queryString);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public Collection<Wanted> findAllRecent() {
```

```
setUp();
int maxResults = 20;
String queryString = "SELECT e FROM Wanted e WHERE e.status = :
      status ORDER BY e.dateCreated DESC";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("status", WantedStatus.WANTED);
query.setMaxResults(maxResults);
List<Wanted> results = query.getResultList();
tearDown();
return results;
}
@Override
public long countAllFromOffice(Office office) {
setUp();
String queryString = "SELECT COUNT(e.id) FROM Wanted e WHERE e.
      office = :office";
Query query = entityManager.createQuery(queryString);
query.setParameter("office", office);
long count = (long) query.getSingleResult();
tearDown();
return count;
}
@Override
public Collection<Wanted> findByInvestigator(String investigator)
      {
notEmpty(investigator);
setUp();
String queryString = "SELECT e FROM Wanted e WHERE UPPER(e.
      investigator) LIKE :investigator ";
@SuppressWarnings("unchecked")
TypedQuery<Wanted> query = (TypedQuery<Wanted>) entityManager.
      createQuery(queryString);
query.setParameter("investigator","%"+investigator.toUpperCase()+"
      %");
List<Wanted> result = query.getResultList();
tearDown();
return result;
}
}
```

Source Code 38: AccountStatus.java

```
package gov.pnp.mwirs.domain;
import java.util.ArrayList;
import java.util.List;
public enum AccountStatus {
APPROVED("approved"),
LOCKED("locked"),
PENDING("pending");
private String value;
private AccountStatus(String value){
this.value = value;
}
@Override
public String toString(){
return this.value;
}
public static AccountStatus fromString(String value){
for(AccountStatus status:AccountStatus.values()){
if(value.equals(status.value)){
return status;
}
}
throw new IllegalArgumentException("Invalid AccountStatus Value: "
      + value);
}
public static List<String> toStringAll(){
List<String> values = new ArrayList<String>();
for(AccountStatus status:AccountStatus.values()){
values.add(status.toString());
}
return values;
}
}
```

Source Code 39: CrimeRegistrar.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Embedded;
import javax.persistence.Entity;
@Entity
@DiscriminatorValue("cr")
public class CrimeRegistrar extends User{
@Embedded
private Office office;
protected CrimeRegistrar(){
super();
}
public CrimeRegistrar(String username, String password, String
      firstName,
String middleName, String lastName, String email,Office office){
super(username,password,firstName,middleName,lastName,email);
notBlank(office.getPRO());
this.office = office;
}
public CrimeRegistrar(String username, String password, String
      firstName,
String middleName, String lastName, String email,
String pRO, String pPO, String cityMunicipalPS, String pCP) {
super(username,password,firstName,middleName,lastName,email);
notBlank(pRO);
office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public void setOffice(String pRO, String pPO, String
      cityMunicipalPS, String pCP){
office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public Office getOffice(){
return office;
}
@Override
public boolean isSameOffice(User user){
if(user instanceof CrimeRegistrar){
CrimeRegistrar cr = (CrimeRegistrar) user;
return office.equals(cr.getOffice());
}
return false;
}
}
```

Source Code 40: Missing.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.ArrayList;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.Embedded;
import javax.persistence.Entity;
import javax.persistence.EnumType;
import javax.persistence.Enumerated;
import javax.persistence.FetchType;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Lob;
import javax.persistence.ManyToOne;
import javax.persistence.OneToMany;
import javax.persistence.OneToOne;
import org.hibernate.annotations.Type;
import org.joda.time.DateTime;
import org.joda.time.Period;
@Entity
public class Missing {
@Id
@GeneratedValue
private long id;
@Column(nullable=false)
private String firstName;
private String middleName;
@Column(nullable=false)
private String lastName;
private String alias;
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime birthDate;
@Column(nullable=false)
private Sex sex;
private float height;
private String eyeColor;
private String nationality;
@Column(nullable=false)
```

```
@Enumerated(EnumType.STRING)
private MissingStatus status;
@Lob
private String narrative;
private String placeLastSeen;
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime dateLastSeen;
@OneToOne(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private Person contactPerson;
@OneToOne(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private Picture primaryPicture;
@OneToMany(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private List<Picture> pictures = new ArrayList<Picture>();
@ManyToOne(fetch=FetchType.EAGER,optional=false)
private User user;
@Column(nullable=false)
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime dateCreated;
@Embedded
private Office office;
private String investigator;
protected Missing(){}
public Missing(String firstName, String middleName, String
      lastName,
Sex sex, MissingStatus status, Person contactPerson, User user) {
notBlank(firstName);
notBlank(lastName);
notNull(sex);
notNull(status);
notNull(user);
this.firstName = firstName;
this.middleName = middleName;
this.lastName = lastName;
this.sex = sex;
this.status = status;
this.contactPerson = contactPerson;
if(!(user instanceof CrimeRegistrar)){
throw new PrivilegeDeniedException("User "+ user.getUsername() + "
       is denied of creating a new case.");
}
this.user = user;
dateCreated = new DateTime();
dateCreated = new DateTime();
if(user instanceof CrimeRegistrar){
CrimeRegistrar cr = (CrimeRegistrar) user;
this.office = Office.buildNew(cr.getOffice());
}else if(user instanceof PoliceOfficer){
PoliceOfficer po = (PoliceOfficer) user;
this.office = Office.buildNew(po.getOffice());
}
}
public long getId(){
return id;
}
public void setId(long id){
this.id = id;
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public Picture getPrimaryPicture() {
return primaryPicture;
}
public void setPrimaryPicture(Picture primaryPicture) {
this.primaryPicture = primaryPicture;
}
public List<Picture> getPictures() {
return this.pictures;
}
public Set<Picture> getPicturesSet(){
return new HashSet<Picture>(this.pictures);
}
public void setPictures(List<Picture> pictures){
this.pictures.clear();
this.pictures.addAll(pictures);
}
public DateTime getDateCreated(){
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated){
this.dateCreated = new DateTime(dateCreated);
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public DateTime getBirthDate(){
if(birthDate == null){
return null;
}
return new DateTime(birthDate);
}
public void setBirthDate(DateTime birthDate){
if(birthDate != null){
this.birthDate = new DateTime(birthDate);
}
}
public void setHeight(float height){
this.height = height;
}
public float getHeight(){
return height;
}
public String getEyeColor() {
return eyeColor;
}
public void setEyeColor(String eyeColor) {
this.eyeColor = eyeColor;
}
public void setSex(Sex sex){
this.sex = sex;
}
public Sex getSex(){
return sex;
}
public String getNationality() {
return nationality;
}
public void setNationality(String nationality) {
this.nationality = nationality;
}
public MissingStatus getStatus() {
return status;
}
public void setStatus(MissingStatus status) {
this.status = status;
}
public String getAlias() {
return alias;
}
public void setAlias(String alias) {
this.alias = alias;
}
public String getPlaceLastSeen() {
return placeLastSeen;
}
public void setPlaceLastSeen(String placeLastSeen) {
this.placeLastSeen = placeLastSeen;
}
public DateTime getDateLastSeen(){
return new DateTime(dateLastSeen);
}
public void setDateLastSeen(DateTime dateLastSeen){
if(dateLastSeen!=null){
this.dateLastSeen = new DateTime(dateLastSeen);
}
}
public Person getContactPerson() {
return contactPerson;
}
public void setContactPerson(Person contactPerson) {
this.contactPerson = contactPerson;
}
public boolean hasPicture(Picture picture){
if(primaryPicture.equals(picture) || pictures.contains(picture)){
return true;
}
return false;
}
public List<Picture> getAllPictures(){
List<Picture> allPictures = new ArrayList<Picture>(pictures);
allPictures.add(primaryPicture);
return allPictures;
}
public User getUser(){
return user;
}
public int getAge(){
DateTime dateToday = new DateTime();
Period period = new Period(birthDate,dateToday);
return period.getYears();
}
public void setOffice(String pRO, String pPO, String
      cityMunicipalPS, String pCP){
this.office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public void setOffice(Office office){
this.office = office;
}
public Office getOffice(){
return office;
}
public String getFullname(){
return firstName+" "+middleName+" "+lastName;
}
public String getInvestigator() {
return investigator;
}
public void setInvestigator(String investigator) {
this.investigator = investigator;
}
@Override
public String toString() {
return "Missing [id=" + id + ", firstName=" + firstName + ",
      middleName=" + middleName + ", lastName="
+ lastName + "]";
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
Missing other = (Missing) obj;
if (id != other.id)
return false;
return true;
}
}
```

Source Code 41: MissingStatus.java

```
package gov.pnp.mwirs.domain;
import java.util.ArrayList;
import java.util.List;
public enum MissingStatus{
MISSING("Missing"),
FOUND("Found");
private String value;
private MissingStatus(String value){
this.value = value;
}
@Override
public String toString(){
return this.value;
}
public static MissingStatus fromString(String value){
for(MissingStatus status:MissingStatus.values()){
if(value.equals(status.value)){
return status;
}
}
throw new IllegalArgumentException("Invalid MissingStatus Value: "
      + value);
}
public static List<String> toStringAll(){
List<String> values = new ArrayList<String>();
for(MissingStatus status:MissingStatus.values()){
values.add(status.toString());
}
return values;
}
}
```

Source Code 42: Offense.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import java.util.ArrayList;
import java.util.List;
public enum Offense {
TERRORISM("Terrorism"),
CYBER_CRIME("Cyber Crime"),
MURDER_VIOLENT_CRIME("Murder/Violent Crime"),
ROBBERY("Robbery"),
KIDNAPPING_MISSING_PERSON("Kidnapping/Missing Person"),
CRIMES_AGAINST_CHILDREN("Crimes Against Children"),
PARENTAL_KIDNAPPINGS("Parental Kidnappings"),
FRAUD_WHITE_COLLAR_CRIME("Fraud/White-Collar Crime"),
CRIMINAL_ENTERPRISES_DRUGS("Criminal Enterprises/Drugs");
private String value;
private Offense(String value){
this.value = value;
}
@Override
public String toString(){
return value;
}
public static Offense fromString(String value){
notBlank(value);
for(Offense offense:Offense.values()){
if(value.equals(offense.value)){
return offense;
}
}
throw new IllegalArgumentException("Invalid Offense Value: "+
      value);
}
public static List<String> toStringAll(){
List<String> values = new ArrayList<String>();
for(Offense offense:Offense.values()){
values.add(offense.toString());
}
return values;
}
}
```

Source Code 43: Office.java

```
package gov.pnp.mwirs.domain;
import javax.persistence.Embeddable;
@Embeddable
public class Office {
private String PRO;
private String PPO;
private String cityMunicipalPS;
private String PCP;
protected Office(){}
public Office(String pRO, String pPO, String cityMunicipalPS,
      String pCP) {
super();
PRO = pRO;
PPO = pPO;
this.cityMunicipalPS = cityMunicipalPS;
PCP = pCP;
}
public String getPRO() {
return PRO;
}
public void setPRO(String pRO) {
PRO = pRO;
}
public String getPPO() {
return PPO;
}
public void setPPO(String pPO) {
PPO = pPO;
}
public static Office buildNew(Office office){
return new Office(office.getPRO(), office.getPPO(), office.
      getCityMunicipalPS(), office.getPCP());
}
public String getCityMunicipalPS() {
return cityMunicipalPS;
}
public void setCityMunicipalPS(String cityMunicipalPS) {
this.cityMunicipalPS = cityMunicipalPS;
}
public String getPCP() {
return PCP;
}
public void setPCP(String pCP) {
PCP = pCP;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + ((PCP == null) ? 0 : PCP.hashCode());
result = prime * result + ((PPO == null) ? 0 : PPO.hashCode());
result = prime * result + ((PRO == null) ? 0 : PRO.hashCode());
result = prime * result + ((cityMunicipalPS == null) ? 0 :
      cityMunicipalPS.hashCode());
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
Office other = (Office) obj;
if (PCP == null) {
if (other.PCP != null)
return false;
} else if (!PCP.toUpperCase().equals(other.PCP.toUpperCase()))
return false;
if (PPO == null) {
if (other.PPO != null)
return false;
} else if (!PPO.toUpperCase().equals(other.PPO.toUpperCase()))
return false;
if (PRO == null) {
if (other.PRO != null)
return false;
} else if (!PRO.toUpperCase().equals(other.PRO.toUpperCase()))
return false;
if (cityMunicipalPS == null) {
if (other.cityMunicipalPS != null)
return false;
} else if (!cityMunicipalPS.toUpperCase().equals(other.
      cityMunicipalPS.toUpperCase()))
return false;
return true;
}
}
```

Source Code 44: Person.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
@Entity
public class Person {
@Id
@GeneratedValue
private long id;
@Column(nullable=false)
private String name;
private String telNumber;
private String cellNumber;
private String email;
private String address;
protected Person(){}
public Person(String name) {
notBlank(name);
this.name = name;
}
public String getName() {
return name;
}
public void setName(String name) {
this.name = name;
}
public String getTelNumber() {
return telNumber;
}
public void setTelNumber(String telNumber) {
this.telNumber = telNumber;
}
public String getCellNumber() {
return cellNumber;
}
public void setCellNumber(String cellNumber) {
this.cellNumber = cellNumber;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public String getAddress() {
return address;
}
public void setAddress(String address) {
this.address = address;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
result = prime * result + ((name == null) ? 0 : name.hashCode());
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
Person other = (Person) obj;
if (id != other.id)
return false;
if (name == null) {
if (other.name != null)
return false;
} else if (!name.equals(other.name))
return false;
return true;
}
}
```

Source Code 45: Picture.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import static org.apache.commons.lang3.Validate.notEmpty;
import static org.apache.commons.lang3.Validate.notNull;
import java.util.Arrays;
import javax.persistence.Entity;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Lob;
@Entity
public class Picture {
@Id
@GeneratedValue
private int id;
private String fileName;
@Lob
private byte[] content;
protected Picture(){}
public Picture(String fileName, byte[] content) {
notBlank(fileName);
notNull(content);
notEmpty(Arrays.asList(content));
this.fileName = fileName;
this.content = Arrays.copyOf(content, content.length);
}
public int getId(){
return id;
}
public void setFileName(String fileName){
notBlank(fileName);
this.fileName = fileName;
}
public String getFileName(){
```

```
return fileName;
}
public void setContent(byte[] content){
notNull(content);
notEmpty(Arrays.asList(content));
this.content = Arrays.copyOf(content, content.length);
}
public byte[] getContent(){
return Arrays.copyOf(content, content.length);
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + id;
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
   return true;
if (obj == null)
   return false;
if (getClass() != obj.getClass())
   return false;
Picture other = (Picture) obj;
if (id != other.id)
   return false;
return true;
}
}
```

Source Code 46: PoliceOfficer.java

```
package gov.pnp.mwirs.domain;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Embedded;
import javax.persistence.Entity;
@Entity
@DiscriminatorValue("po")
public class PoliceOfficer extends User{
@Embedded
private Office office;
public PoliceOfficer() {
super();
}
public PoliceOfficer(String username, String password, String
      firstName,
String middleName, String lastName, String email,Office office) {
super(username,password,firstName,middleName,lastName,email);
this.office = office;
}
public PoliceOfficer(String username, String password, String
      firstName,
String middleName, String lastName, String email,
String pRO, String pPO, String cityMunicipalPS, String pCP) {
super(username,password,firstName,middleName,lastName,email);
this.office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public void setOffice(String pRO, String pPO, String
      cityMunicipalPS, String pCP){
this.office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public Office getOffice(){
return office;
}
@Override
public boolean isSameOffice(User user) {
if(user instanceof PoliceOfficer){
PoliceOfficer po = (PoliceOfficer) user;
return office.equals(po.getOffice());
}
return false;
}
}
```

Source Code 47: PrivilegeDeniedException.java

```
package gov.pnp.mwirs.domain;
public class PrivilegeDeniedException extends RuntimeException {
public PrivilegeDeniedException() {
}
public PrivilegeDeniedException(String message) {
super(message);
}
public PrivilegeDeniedException(Throwable cause) {
super(cause);
}
public PrivilegeDeniedException(String message, Throwable cause) {
super(message, cause);
}
public PrivilegeDeniedException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 48: Sex.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
public enum Sex {
M ("Male"),
F ("Female");
private String value;
private Sex(String value){
this.value = value;
}
@Override
public String toString(){
return value;
}
public static Sex fromString(String value){
notBlank(value);
for(Sex sex:Sex.values()){
if(value.equals(sex.value)){
return sex;
}
}
throw new IllegalArgumentException("Illegal Sex Value: " + value);
}
}
```

Source Code 49: SystemAdmin.java

```
package gov.pnp.mwirs.domain;
import javax.persistence.DiscriminatorValue;
import javax.persistence.Entity;
@Entity
@DiscriminatorValue("sa")
public class SystemAdmin extends User{
public SystemAdmin() {
super();
}
public SystemAdmin(String username, String password, String
      firstName,
String middleName, String lastName, String email) {
super(username,password,firstName,middleName,lastName,email);
super.setAccountStatus(AccountStatus.APPROVED);
}
@Override
public boolean isSameOffice(User user) {
return true;
}
}
```

Source Code 50: Tip.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import java.util.ArrayList;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.Entity;
import javax.persistence.FetchType;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Lob;
import javax.persistence.OneToMany;
import org.hibernate.annotations.Type;
import org.joda.time.DateTime;
@Entity
public class Tip{
@Id
@GeneratedValue
private long id;
@Column(nullable=false)
private long caseId;
@Column(nullable=false)
private String firstName;
private String middleName;
@Column(nullable=false)
private String lastName;
@Column(nullable=false)
private String email;
@Column(nullable=false)
private String phoneNumber;
@Column(nullable=false)
private String address;
@Lob
private String narrative;
@OneToMany(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private List<Picture> pictures = new ArrayList<Picture>();
@Column(nullable=false)
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime dateCreated;
@Column(nullable=false)
private boolean seen;
protected Tip() {}
public Tip(long caseId, String firstName, String middleName,
      String lastName, String email, String phoneNumber,
String address, String narrative) {
notBlank(firstName);
notBlank(lastName);
notBlank(email);
notBlank(phoneNumber);
notBlank(address);
notBlank(narrative);
this.caseId = caseId;
this.firstName = firstName;
this.middleName = middleName;
this.lastName = lastName;
this.email = email;
this.phoneNumber = phoneNumber;
this.address = address;
this.narrative = narrative;
seen = false;
dateCreated = new DateTime();
}
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public long getCaseId() {
return caseId;
}
public void setCaseId(long caseId) {
this.caseId = caseId;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public String getPhoneNumber() {
return phoneNumber;
}
public void setPhoneNumber(String phoneNumber) {
this.phoneNumber = phoneNumber;
}
public String getAddress() {
return address;
}
public void setAddress(String address) {
this.address = address;
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public List<Picture> getPictures() {
return pictures;
}
public void setPictures(List<Picture> pictures) {
this.pictures.clear();
this.pictures.addAll(pictures);
}
public Set<Picture> getPicturesSet() {
return new HashSet<Picture>(pictures);
}
public DateTime getDateCreated() {
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated){
this.dateCreated = new DateTime(dateCreated);
}
public boolean isSeen() {
return seen;
}
public void setSeen(boolean seen) {
this.seen = seen;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
Tip other = (Tip) obj;
if (id != other.id)
return false;
return true;
}
}
```

Source Code 51: User.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.Validate.notBlank;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.DiscriminatorColumn;
import javax.persistence.Entity;
import javax.persistence.EnumType;
import javax.persistence.Enumerated;
import javax.persistence.FetchType;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Inheritance;
import javax.persistence.InheritanceType;
import javax.persistence.OneToOne;
import org.hibernate.annotations.Type;
import org.joda.time.DateTime;
@Entity
@Inheritance(strategy=InheritanceType.JOINED)
@DiscriminatorColumn(name="TYPE")
public abstract class User {
@Id
@GeneratedValue
private long id;
@Column(nullable=false)
private String username;
@Column(nullable=false)
private String password;
@Column(nullable=false)
private String firstName;
private String middleName;
@Column(nullable=false)
private String lastName;
@Column(nullable=false)
private String email;
@Column(nullable=false)
@Enumerated(EnumType.STRING)
private AccountStatus accountStatus;
@Column(nullable=false)
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime dateCreated;
@OneToOne(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private Picture picture;
protected User(){}
public User(String username, String password, String firstName,
  String middleName, String lastName, String email) {
notBlank(username); notBlank(password);
notBlank(firstName); notBlank(lastName);
notBlank(email);
this.username = username;
this.password = password;
this.firstName = firstName;
this.middleName = middleName;
this.lastName = lastName;
this.email = email;
this.accountStatus = AccountStatus.PENDING;
dateCreated = new DateTime();
}
public long getId() {
return id;
}
public void setId(long id){
this.id = id;
}
public String getUsername() {
return username;
}
public void setUsername(String username) {
notBlank(username);
this.username = username;
}
public String getPassword() {
return password;
}
public void setPassword(String password) {
notBlank(username);
this.password = password;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
notBlank(firstName);
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
notBlank(lastName);
this.lastName = lastName;
}
public String getEmail() {
return email;
}
public AccountStatus getAccountStatus() {
return accountStatus;
}
public void setAccountStatus(AccountStatus accountStatus) {
this.accountStatus = accountStatus;
}
public boolean isApproved(){
return (accountStatus.equals(AccountStatus.APPROVED));
}
public DateTime getDateCreated(){
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated){
this.dateCreated = new DateTime(dateCreated);
}
public abstract boolean isSameOffice(User user);
public Picture getPicture() {
return picture;
}
public void setPicture(Picture picture) {
this.picture = picture;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + ((email == null) ? 0 : email.hashCode())
      ;
result = prime * result + (int) (id ^ (id >>> 32));
result = prime * result + ((username == null) ? 0 : username.
      hashCode());
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
  return true;
if (obj == null)
  return false;
if (getClass() != obj.getClass())
  return false;
User other = (User) obj;
if (email == null) {
  if (other.email != null)
    return false;
} else if (!email.equals(other.email))
  return false;
if (id != other.id)
  return false;
if (username == null) {
  if (other.username != null)
    return false;
} else if (!username.equals(other.username))
  return false;
return true;
}
}
```

Source Code 52: Wanted.java

```
package gov.pnp.mwirs.domain;
import static org.apache.commons.lang3.StringUtils.isNotBlank;
import static org.apache.commons.lang3.Validate.notBlank;
import static org.apache.commons.lang3.Validate.notEmpty;
import static org.apache.commons.lang3.Validate.notNull;
import java.math.BigDecimal;
import java.math.MathContext;
import java.util.ArrayList;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import javax.persistence.CascadeType;
import javax.persistence.Column;
import javax.persistence.ElementCollection;
import javax.persistence.Embedded;
import javax.persistence.Entity;
import javax.persistence.EnumType;
import javax.persistence.Enumerated;
import javax.persistence.FetchType;
import javax.persistence.GeneratedValue;
import javax.persistence.Id;
import javax.persistence.Lob;
import javax.persistence.ManyToOne;
import javax.persistence.OneToMany;
import javax.persistence.OneToOne;
import org.hibernate.annotations.Type;
import org.joda.time.DateTime;
import org.joda.time.Period;
@Entity
public class Wanted{
@Id
@GeneratedValue
private long id;
@Column(nullable=false)
private String firstName;
private String middleName;
@Column(nullable=false)
private String lastName;
private String alias;
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime birthDate;
private float height;
private String eyeColor;
@Column(nullable=false)
private Sex sex;
private String nationality;
private String reward;
@Column(nullable=false)
@Enumerated(EnumType.STRING)
private WantedStatus status;
@Column(nullable=false)
@ElementCollection(targetClass=Offense.class,fetch=FetchType.EAGER
      )
@Enumerated(EnumType.STRING)
private Set<Offense> offense;
@Lob
private String narrative;
@OneToOne(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private Picture primaryPicture;
@OneToMany(fetch=FetchType.EAGER,orphanRemoval=true,cascade=
      CascadeType.ALL)
private List<Picture> pictures = new ArrayList<Picture>();
@ManyToOne(fetch=FetchType.EAGER,optional=false)
private User user;
@Column(nullable=false)
@Type(type="org.jadira.usertype.dateandtime.joda.
      PersistentDateTime")
private DateTime dateCreated;
@Embedded
private Office office;
private String investigator;
protected Wanted(){}
public Wanted(String firstName, String middleName, String lastName
      ,
Sex sex, WantedStatus status, Set<Offense> offense, User user) {
notBlank(firstName);
notBlank(lastName);
notNull(sex);
notNull(status);
notEmpty(offense);
notNull(user);
this.firstName = firstName;
this.middleName = middleName;
this.lastName = lastName;
this.sex = sex;
this.status = status;
this.offense = new HashSet<Offense>(offense);
if(!(user instanceof CrimeRegistrar)){
throw new PrivilegeDeniedException("User "+ user.getUsername() + "
       is denied of creating a new case.");
}
this.user = user;
dateCreated = new DateTime();
if(user instanceof CrimeRegistrar){
CrimeRegistrar cr = (CrimeRegistrar) user;
this.office = Office.buildNew(cr.getOffice());
}else if(user instanceof PoliceOfficer){
PoliceOfficer po = (PoliceOfficer) user;
this.office = Office.buildNew(po.getOffice());
}
}
public long getId(){
return id;
}
public void setId(long id){
this.id = id;
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public Picture getPrimaryPicture() {
return primaryPicture;
}
public void setPrimaryPicture(Picture primaryPicture) {
if(primaryPicture!=null){
this.primaryPicture = primaryPicture;
}
}
public List<Picture> getPictures() {
return this.pictures;
}
public void setPictures(List<Picture> pictures){
this.pictures.clear();
this.pictures.addAll(pictures);
}
```

```
public DateTime getDateCreated(){
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated){
this.dateCreated = new DateTime(dateCreated);
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
notBlank(firstName);
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
notBlank(middleName);
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
notBlank(lastName);
this.lastName = lastName;
}
public DateTime getBirthDate(){
if(birthDate == null){
return null;
}
return new DateTime(birthDate);
}
public void setBirthDate(DateTime birthDate){
if(birthDate!=null){
this.birthDate = new DateTime(birthDate);
}
}
public void setHeight(float height){
this.height = height;
}
public float getHeight(){
return height;
}
public String getEyeColor() {
return eyeColor;
}
public void setEyeColor(String eyeColor) {
this.eyeColor = eyeColor;
}
public void setSex(Sex sex){
this.sex = sex;
}
public Sex getSex(){
return sex;
}
public String getNationality() {
return nationality;
}
public void setNationality(String nationality) {
this.nationality = nationality;
}
public String getReward(){
if(isNotBlank(reward)){
BigDecimal rewardNumeric = new BigDecimal(reward, new MathContext
      (2));
return rewardNumeric.toPlainString();
}
return null;
}
public void setReward(BigDecimal reward) {
BigDecimal rewardNumeric = new BigDecimal(reward.toString(), new
      MathContext(2));
this.reward = rewardNumeric.toPlainString();
}
public void setReward(String reward) {
if(isNotBlank(reward)){
BigDecimal rewardNumeric = new BigDecimal(reward, new MathContext
      (2));
this.reward = rewardNumeric.toPlainString();
}
}
public void setOffense(Set<Offense> offense){
this.offense = new HashSet<Offense>(offense);
}
public void addOffense(Set<Offense> offense){
this.offense.addAll(offense);
}
public Set<Offense> getOffense(){
return new HashSet<Offense>(offense);
}
public WantedStatus getStatus() {
```

```
return status;
}
public void setStatus(WantedStatus status) {
this.status = status;
}
public String getAlias() {
return alias;
}
public void setAlias(String alias) {
this.alias = alias;
}
public int getAge(){
DateTime dateToday = new DateTime();
Period period = new Period(birthDate,dateToday);
return period.getYears();
}
public boolean hasPicture(Picture picture){
if(primaryPicture.equals(picture) || pictures.contains(picture)){
return true;
}
return false;
}
public List<Picture> getAllPictures(){
List<Picture> allPictures = new ArrayList<Picture>(pictures);
if(primaryPicture != null){
allPictures.add(primaryPicture);
}
return allPictures;
}
public User getUser(){
return user;
}
public Set<Picture> getPicturesSet(){
return new HashSet<Picture>(this.pictures);
}
public void setOffice(String pRO, String pPO, String
       cityMunicipalPS, String pCP){
this.office = new Office(pRO, pPO, cityMunicipalPS, pCP);
}
public void setOffice(Office office){
this.office = office;
}
public Office getOffice(){
return office;
}
public String getFullname(){
return firstName+" "+middleName+" "+lastName;
}
public String getInvestigator() {
return investigator;
}
public void setInvestigator(String investigator) {
this.investigator = investigator;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
Wanted other = (Wanted) obj;
if (id != other.id)
return false;
return true;
}
}
```

Source Code 53: WantedStatus.java

```
package gov.pnp.mwirs.domain;
import java.util.ArrayList;
import java.util.List;
public enum WantedStatus{
WANTED("Wanted"),
CAPTURED("Captured"),
RELEASED("Released");
private String value;
private WantedStatus(String value){
   this.value = value;
}
@Override
public String toString(){
   return this.value;
}
public static WantedStatus fromString(String value){
   for(WantedStatus status:WantedStatus.values()){
      if(value.equals(status.value)){
         return status;
      }
   }
   throw new IllegalArgumentException("Invalid WantedStatus Value:
         "+ value);
}
public static List<String> toStringAll(){
   List<String> values = new ArrayList<String>();
   for(WantedStatus status:WantedStatus.values()){
      values.add(status.toString());
   }
   return values;
}
}
```

Source Code 54: MissingDTO.java

```
package gov.pnp.mwirs.dto;
import static org.apache.commons.lang3.StringUtils.isNotBlank;
import java.util.ArrayList;
import java.util.List;
import org.joda.time.DateTime;
import org.joda.time.format.DateTimeFormat;
import org.joda.time.format.DateTimeFormatter;
public class MissingDTO {
private long id;
private String firstName;
private String middleName;
private String lastName;
private String alias;
private String sex;
private DateTime birthDate;
private float height;
private String eyeColor;
private String nationality;
private String status;
private String narrative;
private String placeLastSeen;
private DateTime dateLastSeen;
private PersonDTO contactPerson;
private DateTime dateCreated;
private UserDTO userDTO;
private PictureDTO primaryPictureDTO;
private List<PictureDTO> pictures = new ArrayList<PictureDTO>();
private OfficeDTO officeDTO;
private String investigator;
public MissingDTO(){
}
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public String getAlias() {
return alias;
}
public void setAlias(String alias) {
this.alias = alias;
}
```

```
public String getSex() {
return sex;
}
public void setSex(String sex) {
this.sex = sex;
}
public DateTime getBirthDate() {
if(birthDate!=null){
return new DateTime(birthDate);
}
return null;
}
public String getBirthDateString(){
if(birthDate!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("MMM dd, yyyy
      ");
return format.print(birthDate.getMillis());
}
return null;
}
public String getBirthDateInputValue(){
if(birthDate!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("yyyy-MM-dd")
      ;
return format.print(birthDate.getMillis());
}
return null;
}
public String getDateLastSeenInputValue(){
if(dateLastSeen!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("yyyy-MM-dd")
      ;
return format.print(dateLastSeen.getMillis());
}
return null;
}
public void setBirthDate(DateTime birthDate){
if(birthDate!=null){
this.birthDate = new DateTime(birthDate);
}
}
public void setBirthDate(String birthDate){
if(isNotBlank(birthDate)){
DateTime date = DateTime.parse(birthDate, DateTimeFormat.
      forPattern("yyyy-MM-dd"));
this.birthDate = date;
}
}
public float getHeight() {
return height;
}
public void setHeight(float height) {
this.height = height;
}
public void setHeight(String height) {
if(isNotBlank(height)){
this.height = Float.parseFloat(height);
}
}
public String getEyeColor() {
return eyeColor;
}
public void setEyeColor(String eyeColor) {
this.eyeColor = eyeColor;
}
public String getNationality() {
return nationality;
}
public void setNationality(String nationality) {
this.nationality = nationality;
}
public String getStatus() {
return status;
}
public void setStatus(String status) {
this.status = status;
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public String getPlaceLastSeen() {
return placeLastSeen;
}
public void setPlaceLastSeen(String placeLastSeen) {
this.placeLastSeen = placeLastSeen;
}
public DateTime getDateLastSeen() {
if(dateLastSeen!=null){
return new DateTime(dateLastSeen);
}
return null;
}
public String getDateLastSeenString(){
if(dateLastSeen!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("MMM dd, yyyy
      ");
return format.print(dateLastSeen.getMillis());
}
return null;
}
public String getDateCreatedString(){
if(dateCreated!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("MMM dd, yyyy
      ");
return format.print(dateCreated.getMillis());
}
return null;
}
public void setDateLastSeen(DateTime dateLastSeen) {
this.dateLastSeen = new DateTime(dateLastSeen);
}
public void setDateLastSeen(String dateLastSeen){
if(isNotBlank(dateLastSeen)){
DateTime date = DateTime.parse(dateLastSeen, DateTimeFormat.
      forPattern("yyyy-MM-dd"));
this.dateLastSeen = date;
}
}
public PersonDTO getContactPerson() {
return contactPerson;
}
public void setContactPerson(PersonDTO contactPerson) {
this.contactPerson = contactPerson;
}
public DateTime getDateCreated() {
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated) {
this.dateCreated = new DateTime(dateCreated);
}
public UserDTO getUserDTO() {
return userDTO;
}
public void setUserDTO(UserDTO userDTO) {
this.userDTO = userDTO;
}
public PictureDTO getPrimaryPictureDTO() {
return primaryPictureDTO;
}
public void setPrimaryPictureDTO(PictureDTO primaryPictureDTO) {
this.primaryPictureDTO = primaryPictureDTO;
}
public List<PictureDTO> getPictures() {
return new ArrayList<PictureDTO>(pictures);
}
public List<PictureDTO> getAllPictures() {
List<PictureDTO> allPictures = new ArrayList<PictureDTO>(pictures)
      ;
allPictures.add(primaryPictureDTO);
return allPictures;
}
public void setPictures(List<PictureDTO> pictures) {
this.pictures = new ArrayList<PictureDTO>(pictures);
}
public int getPrimaryPictureId(){
return primaryPictureDTO.getId();
}
public void removeFromPictures(PictureDTO picture){
pictures.remove(picture);
}
public void addPictures(List<PictureDTO> pictures){
this.pictures.addAll(pictures);
}
public OfficeDTO getOfficeDTO() {
return officeDTO;
}
public void setOfficeDTO(OfficeDTO officeDTO) {
this.officeDTO = officeDTO;
}
public String getInvestigator() {
return investigator;
}
public void setInvestigator(String investigator) {
this.investigator = investigator;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
MissingDTO other = (MissingDTO) obj;
if (id != other.id)
return false;
return true;
}
}
```

Source Code 55: OfficeDTO.java

```
package gov.pnp.mwirs.dto;
public class OfficeDTO {
private String PRO;
private String PPO;
private String cityMunicipalPS;
private String PCP;
public OfficeDTO(){
}
public OfficeDTO(String pRO, String pPO, String cityMunicipalPS,
      String pCP) {
super();
PRO = pRO;
PPO = pPO;
this.cityMunicipalPS = cityMunicipalPS;
PCP = pCP;
}
public String getPRO() {
return PRO;
}
public void setPRO(String pRO) {
PRO = pRO;
}
public String getPPO() {
return PPO;
}
public void setPPO(String pPO) {
PPO = pPO;
}
public String getCityMunicipalPS() {
return cityMunicipalPS;
}
public void setCityMunicipalPS(String cityMunicipalPS) {
this.cityMunicipalPS = cityMunicipalPS;
}
public String getPCP() {
return PCP;
}
public void setPCP(String pCP) {
PCP = pCP;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + ((PCP == null) ? 0 : PCP.hashCode());
result = prime * result + ((PPO == null) ? 0 : PPO.hashCode());
result = prime * result + ((PRO == null) ? 0 : PRO.hashCode());
result = prime * result + ((cityMunicipalPS == null) ? 0 :
      cityMunicipalPS.hashCode());
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
OfficeDTO other = (OfficeDTO) obj;
if (PCP == null) {
if (other.PCP != null)
return false;
} else if (!PCP.toUpperCase().equals(other.PCP.toUpperCase()))
return false;
if (PPO == null) {
if (other.PPO != null)
return false;
} else if (!PPO.toUpperCase().equals(other.PPO.toUpperCase()))
return false;
if (PRO == null) {
if (other.PRO != null)
return false;
} else if (!PRO.toUpperCase().equals(other.PRO.toUpperCase()))
return false;
if (cityMunicipalPS == null) {
if (other.cityMunicipalPS != null)
return false;
} else if (!cityMunicipalPS.toUpperCase().equals(other.
      cityMunicipalPS.toUpperCase()))
return false;
return true;
}
@Override
public String toString() {
return "OfficeDTO [PRO=" + PRO + ", PPO=" + PPO + ",
      cityMunicipalPS=" + cityMunicipalPS + ", PCP=" + PCP + "]";
}
}
```

Source Code 56: PersonDTO.java

```
package gov.pnp.mwirs.dto;
import static org.apache.commons.lang3.StringUtils.isNotBlank;
public class PersonDTO {
private int id;
private String name;
private String telNumber;
private String cellNumber;
private String email;
private String address;
public PersonDTO(){
}
public int getId() {
return id;
}
public void setId(int id) {
this.id = id;
}
public String getName() {
return name;
}
public void setName(String name) {
this.name = name;
}
public String getTelNumber() {
return telNumber;
}
public void setTelNumber(String telNumber) {
this.telNumber = telNumber;
}
public String getCellNumber() {
return cellNumber;
}
public void setCellNumber(String cellNumber) {
this.cellNumber = cellNumber;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public String getAddress() {
return address;
}
public void setAddress(String address) {
this.address = address;
}
public boolean isEmpty(){
if(isNotBlank(name)||isNotBlank(telNumber)
||isNotBlank(cellNumber)||isNotBlank(address)){
return false;
}
return true;
}
}
```

Source Code 57: PictureDTO.java

```
package gov.pnp.mwirs.dto;
```

```java
import java.util.Arrays;
public class PictureDTO {
private int id;
private String fileName;
private byte[] content;
private int size;
public PictureDTO(){
}
public PictureDTO(String fileName, byte[] content){
this.fileName = fileName;
this.content = Arrays.copyOf(content, content.length);
}
public int getId() {
return id;
}
public void setId(int id) {
this.id = id;
}
public String getFileName() {
return fileName;
}
public void setFileName(String fileName) {
this.fileName = fileName;
}
public byte[] getContent() {
return content;
}
public void setContent(byte[] content) {
this.content = Arrays.copyOf(content, content.length);
this.size = content.length;
}
public int getSize(){
return size;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + ((fileName == null) ? 0 : fileName.
      hashCode());
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
PictureDTO other = (PictureDTO) obj;
if (fileName == null) {
if (other.fileName != null)
return false;
} else if (!fileName.equals(other.fileName))
return false;
return true;
}
@Override
public String toString() {
return Long.toString(id);
}
}
```

Source Code 58: TipDTO.java

```java
package gov.pnp.mwirs.dto;
import static org.apache.commons.lang3.Validate.notBlank;
import java.util.ArrayList;
import java.util.List;
import org.joda.time.DateTime;
import org.ocpsoft.prettytime.PrettyTime;
public class TipDTO {
private long id;
private long caseId;
private String firstName;
private String middleName;
private String lastName;
private String email;
private String phoneNumber;
private String address;
private String narrative;
private List<PictureDTO> pictures = new ArrayList<PictureDTO>();
private DateTime dateCreated;
private boolean seen;
public TipDTO() {
}
public TipDTO(long caseId, String firstName, String middleName,
      String lastName, String email, String phoneNumber,
String address, String narrative) {
notBlank(firstName);
notBlank(lastName);
notBlank(email);
notBlank(phoneNumber);
notBlank(address);
notBlank(narrative);
this.caseId = caseId;
this.firstName = firstName;
this.middleName = middleName;
this.lastName = lastName;
this.email = email;
this.phoneNumber = phoneNumber;
this.address = address;
this.narrative = narrative;
dateCreated = new DateTime();
}
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public long getCaseId() {
return caseId;
}
public void setCaseId(long caseId) {
this.caseId = caseId;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public String getPhoneNumber() {
return phoneNumber;
}
public void setPhoneNumber(String phoneNumber) {
this.phoneNumber = phoneNumber;
}
public String getAddress() {
return address;
}
public void setAddress(String address) {
this.address = address;
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public List<PictureDTO> getPictures() {
return new ArrayList<PictureDTO>(pictures);
}
public void setPictures(List<PictureDTO> pictures) {
this.pictures = new ArrayList<PictureDTO>(pictures);
}
public DateTime getDateCreated() {
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated){
this.dateCreated = new DateTime(dateCreated);
}
public String getDateCreatedString(){
PrettyTime time = new PrettyTime();
return time.format(dateCreated.toDate());
}
public boolean isSeen() {
return seen;
}
public void setSeen(boolean seen) {
this.seen = seen;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
TipDTO other = (TipDTO) obj;
if (id != other.id)
return false;
return true;
}
@Override
public String toString() {
return "TipDTO [id=" + id + ", caseId=" + caseId + ", firstName="
      + firstName + ", middleName=" + middleName
+ ", lastName=" + lastName + ", email=" + email + ", phoneNumber="
         + phoneNumber + ", address="
+ address + ", narrative=" + narrative + ", dateCreated=" +
      dateCreated + "]";
}
}
```

Source Code 59: UserDTO.java

```
package gov.pnp.mwirs.dto;
import org.joda.time.DateTime;
import org.ocpsoft.prettytime.PrettyTime;
public class UserDTO {
public enum UserType{
CRIME_REGISTRAR("Crime Registrar"),
POLICE_OFFICER("Police Officer"),
SYSTEM_ADMIN("System Administrator");
private String value;
private UserType(String value){
this.value = value;
}
@Override
public String toString(){
return value;
}
};
public UserDTO() {
}
private long id;
private String firstName;
private String middleName;
private String lastName;
private String username;
private String password;
private String email;
private OfficeDTO officeDTO;
private String status;
private UserType userType;
private DateTime dateCreated;
private PictureDTO pictureDTO;
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public String getUsername() {
return username;
}
public void setUsername(String username) {
this.username = username;
}
public String getPassword() {
return password;
}
public void setPassword(String password) {
this.password = password;
}
public String getEmail() {
return email;
}
public void setEmail(String email) {
this.email = email;
}
public String getStatus() {
return status;
}
public void setStatus(String status) {
this.status = status;
}
public UserType getUserType() {
return userType;
}
public void setUserType(UserType userType) {
this.userType = userType;
}
public DateTime getDateCreated() {
return new DateTime(dateCreated);
}
public void setDateCreated(DateTime dateCreated) {
this.dateCreated = new DateTime(dateCreated);
}
@Override
public String toString() {
StringBuilder sb = new StringBuilder();
sb.append("UserDTO:").append("\n")
.append("Name = ").append(firstName).append(" ");
if(middleName != null){
sb.append(middleName).append(" ");
}
sb.append(lastName).append("\n");
sb.append("Username = ").append(username);
return sb.toString();
}
public boolean canViewTips(MissingDTO missingDTO) {
return officeDTO.equals(missingDTO.getOfficeDTO())&&
!userType.equals(UserType.SYSTEM_ADMIN);
}
public boolean canViewTips(WantedDTO wantedDTO) {
return officeDTO.equals(wantedDTO.getOfficeDTO()) &&
!userType.equals(UserType.SYSTEM_ADMIN);
}
public boolean canUpdate(MissingDTO missingDTO) {
return officeDTO.equals(missingDTO.getOfficeDTO())&&
userType.equals(UserType.CRIME_REGISTRAR);
}
public boolean canUpdate(WantedDTO wantedDTO) {
return officeDTO.equals(wantedDTO.getOfficeDTO()) &&
userType.equals(UserType.CRIME_REGISTRAR);
}
public String getDateCreatedString(){
PrettyTime time = new PrettyTime();
return time.format(dateCreated.toDate());
}
public PictureDTO getPictureDTO() {
return pictureDTO;
}
public void setPictureDTO(PictureDTO pictureDTO) {
this.pictureDTO = pictureDTO;
}
public OfficeDTO getOfficeDTO() {
return officeDTO;
}
public void setOfficeDTO(OfficeDTO officeDTO) {
this.officeDTO = officeDTO;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
UserDTO other = (UserDTO) obj;
if (id != other.id)
return false;
return true;
}
}
```

Source Code 60: WantedDTO.java

```
package gov.pnp.mwirs.dto;
import static org.apache.commons.lang3.StringUtils.isNotBlank;
import java.util.ArrayList;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import org.joda.time.DateTime;
import org.joda.time.format.DateTimeFormat;
import org.joda.time.format.DateTimeFormatter;
import gov.pnp.mwirs.domain.Offense;
public class WantedDTO {
private long id;
private String firstName;
private String middleName;
private String lastName;
private String alias;
private DateTime birthDate;
private float height;
private String eyeColor;
private String sex;
private String nationality;
private String reward;
private String status;
private Set<String> offense;
private String narrative;
private DateTime dateCreated;
private UserDTO userDTO;
private PictureDTO primaryPictureDTO;
private OfficeDTO officeDTO;
private List<PictureDTO> pictures = new ArrayList<PictureDTO>();
private String investigator;
public WantedDTO(long id) {
this.id = id;
}
public WantedDTO() {
}
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public String getFirstName() {
return firstName;
}
public void setFirstName(String firstName) {
this.firstName = firstName;
}
public String getMiddleName() {
return middleName;
}
public void setMiddleName(String middleName) {
this.middleName = middleName;
}
public String getLastName() {
return lastName;
}
public void setLastName(String lastName) {
this.lastName = lastName;
}
public String getAlias() {
return alias;
}
public void setAlias(String alias) {
this.alias = alias;
}
public float getHeight() {
return height;
}
public void setHeight(float height) {
this.height = height;
}
public void setHeight(String height){
if(isNotBlank(height)){
this.height = Float.parseFloat(height);
}
}
public String getEyeColor() {
return eyeColor;
}
public void setEyeColor(String eyeColor) {
this.eyeColor = eyeColor;
}
public String getSex() {
return sex;
}
public void setSex(String sex) {
this.sex = sex;
}
public String getNationality() {
return nationality;
}
public void setNationality(String nationality) {
this.nationality = nationality;
}
public String getReward() {
return reward;
}
public void setReward(String reward) {
if(isNotBlank(reward)){
this.reward = reward;
}
}
public String getStatus() {
return status;
}
public void setStatus(String status) {
this.status = status;
}
public Set<String> getOffense() {
return offense;
}
public void setOffense(Set<String> offense) {
this.offense = offense;
}
public void setOffenseFromOffenseSet(Set<Offense> offense){
this.offense = new HashSet<String>();
for(Offense o:offense){
this.offense.add(o.toString());
}
}
public String getNarrative() {
return narrative;
}
public void setNarrative(String narrative) {
this.narrative = narrative;
}
public DateTime getDateCreated() {
return new DateTime(dateCreated);
}
public String getDateCreatedString(){
if(dateCreated!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("MMM dd, yyyy
      ");
return format.print(dateCreated.getMillis());
}
return null;
}
public void setDateCreated(DateTime dateCreated) {
this.dateCreated = new DateTime(dateCreated);
}
public UserDTO getUserDTO() {
return userDTO;
}
public void setUserDTO(UserDTO userDTO) {
this.userDTO = userDTO;
}
public PictureDTO getPrimaryPictureDTO() {
return primaryPictureDTO;
}
public void setPrimaryPictureDTO(PictureDTO primaryPictureDTO) {
this.primaryPictureDTO = primaryPictureDTO;
}
public List<PictureDTO> getPictures() {
return new ArrayList<PictureDTO>(pictures);
}
public List<PictureDTO> getAllPictures() {
List<PictureDTO> allPictures = new ArrayList<PictureDTO>(pictures)
      ;
if(primaryPictureDTO!=null){
allPictures.add(primaryPictureDTO);
}
return allPictures;
}
public void setPictures(List<PictureDTO> pictures) {
this.pictures = new ArrayList<PictureDTO>(pictures);
}
public void removeFromPictures(PictureDTO picture){
pictures.remove(picture);
}
public void addPictures(List<PictureDTO> pictures){
this.pictures.addAll(pictures);
}
public DateTime getBirthDate() {
if(birthDate!=null){
return new DateTime(birthDate);
}
return null;
}
public String getBirthDateString(){
if(birthDate!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("MMM dd, yyyy
       ");
return format.print(birthDate.getMillis());
}
return null;
}
public String getBirthDateInputValue(){
if(birthDate!=null){
DateTimeFormatter format = DateTimeFormat.forPattern("yyyy-MM-dd")
       ;
return format.print(birthDate.getMillis());
}
return null;
}
public void setBirthDate(DateTime birthDate){
if(birthDate!=null){
this.birthDate = new DateTime(birthDate);
}
}
public void setBirthDate(String birthDate){
if(isNotBlank(birthDate)){
DateTime date = DateTime.parse(birthDate, DateTimeFormat.
       forPattern("yyyy-MM-dd"));
this.birthDate = date;
}
}
public int getPrimaryPictureId(){
return primaryPictureDTO.getId();
}
public OfficeDTO getOfficeDTO() {
return officeDTO;
}
public void setOfficeDTO(OfficeDTO officeDTO) {
this.officeDTO = officeDTO;
}
public String getInvestigator() {
return investigator;
}
public void setInvestigator(String investigator) {
this.investigator = investigator;
}
@Override
public int hashCode() {
final int prime = 31;
int result = 1;
result = prime * result + (int) (id ^ (id >>> 32));
return result;
}
@Override
public boolean equals(Object obj) {
if (this == obj)
return true;
if (obj == null)
return false;
if (getClass() != obj.getClass())
return false;
WantedDTO other = (WantedDTO) obj;
if (id != other.id)
return false;
return true;
}
@Override
public String toString() {
StringBuilder sb = new StringBuilder();
sb.append("WantedDTO:").append("\n")
.append("id = ").append(id).append("\n")
.append("firstName = ").append(firstName).append("\n")
.append("middleName = ").append(middleName).append("\n")
.append("lastName = ").append(lastName).append("\n")
.append("alias = ").append(alias).append("\n")
.append("birthDate = ").append(birthDate).append("\n")
.append("height = ").append(height).append("\n")
.append("eyeColor = ").append(eyeColor).append("\n")
.append("sex = ").append(sex).append("\n")
.append("nationality = ").append(nationality).append("\n")
.append("reward = ").append(reward).append("\n")
.append("status = ").append(status).append("\n")
.append("offenses = ").append(offense).append("\n")
.append("narrative = ").append(narrative).append("\n")
.append("dateCreated = ").append(dateCreated).append("\n")
.append("userDTO = ").append(userDTO.toString());
return sb.toString();
}
}
```

Source Code 61: MissingMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import java.util.ArrayList;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.domain.Person;
import gov.pnp.mwirs.domain.Picture;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PersonDTO;
import gov.pnp.mwirs.dto.PictureDTO;
@Component
@Scope("singleton")
public class MissingMapper {
@Autowired
private UserDao userDao;
@Autowired
private UserMapper userMapper;
@Autowired
private PictureMapper pictureMapper;
@Autowired
private OfficeMapper officeMapper;
public Missing createOldObject(MissingDTO missingDTO){
User user = userDao.findByUsername(missingDTO.getUserDTO().
       getUsername());
Missing missing = new Missing(missingDTO.getFirstName(),
missingDTO.getMiddleName(), missingDTO.getLastName(),
Sex.fromString(missingDTO.getSex()), MissingStatus.fromString(
       missingDTO.getStatus()),
createPersonFromDTO(missingDTO.getContactPerson()), user);
missing.setId(missingDTO.getId());
missing.setAlias(missingDTO.getAlias());
missing.setBirthDate(missingDTO.getBirthDate());
missing.setHeight(missingDTO.getHeight());
missing.setEyeColor(missingDTO.getEyeColor());
missing.setNationality(missingDTO.getNationality());
missing.setNarrative(missingDTO.getNarrative());
missing.setPlaceLastSeen(missingDTO.getPlaceLastSeen());
missing.setDateLastSeen(missingDTO.getDateLastSeen());
missing.setPrimaryPicture(pictureMapper.createObject(missingDTO.
       getPrimaryPictureDTO()));
missing.setInvestigator(missingDTO.getInvestigator());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:missingDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
missing.setPictures(pictures);
missing.setDateCreated(missingDTO.getDateCreated());
missing.setOffice(officeMapper.createObject(missingDTO.
       getOfficeDTO()));
return missing;
}
public Missing createNewObject(MissingDTO missingDTO){
User user = userDao.findByUsername(missingDTO.getUserDTO().
       getUsername());
Missing missing = new Missing(missingDTO.getFirstName(),
missingDTO.getMiddleName(), missingDTO.getLastName(),
Sex.fromString(missingDTO.getSex()), MissingStatus.fromString("
       Missing"),
createPersonFromDTO(missingDTO.getContactPerson()), user);
missing.setAlias(missingDTO.getAlias());
missing.setBirthDate(missingDTO.getBirthDate());
missing.setHeight(missingDTO.getHeight());
missing.setEyeColor(missingDTO.getEyeColor());
missing.setNationality(missingDTO.getNationality());
missing.setNarrative(missingDTO.getNarrative());
missing.setPlaceLastSeen(missingDTO.getPlaceLastSeen());
missing.setDateLastSeen(missingDTO.getDateLastSeen());
missing.setPrimaryPicture(pictureMapper.createObject(missingDTO.
      getPrimaryPictureDTO()));
missing.setInvestigator(missingDTO.getInvestigator());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:missingDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
missing.setPictures(pictures);
return missing;
}
public MissingDTO createDTO(Missing missing) {
MissingDTO missingDTO = new MissingDTO();
missingDTO.setId(missing.getId());
missingDTO.setFirstName(missing.getFirstName());
missingDTO.setMiddleName(missing.getMiddleName());
missingDTO.setLastName(missing.getLastName());
missingDTO.setAlias(missing.getAlias());
missingDTO.setSex(missing.getSex().toString());
missingDTO.setBirthDate(missing.getBirthDate());
missingDTO.setHeight(missing.getHeight());
missingDTO.setEyeColor(missing.getEyeColor());
missingDTO.setNationality(missing.getNationality());
missingDTO.setStatus(missing.getStatus().toString());
missingDTO.setNarrative(missing.getNarrative());
missingDTO.setPlaceLastSeen(missing.getPlaceLastSeen());
missingDTO.setDateLastSeen(missing.getDateLastSeen());
missingDTO.setContactPerson(createPersonDTO(missing.
      getContactPerson()));
missingDTO.setDateCreated(missing.getDateCreated());
missingDTO.setUserDTO(userMapper.createDTO(missing.getUser()));
missingDTO.setPrimaryPictureDTO(pictureMapper.createDTO(missing.
      getPrimaryPicture()));
missingDTO.setInvestigator(missing.getInvestigator());
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
for(Picture picture:missing.getPicturesSet()){
pictures.add(pictureMapper.createDTO(picture));
}
missingDTO.setPictures(pictures);
missingDTO.setOfficeDTO(officeMapper.createDTO(missing.getOffice()
      ));
return missingDTO;
}
private Person createPersonFromDTO(PersonDTO personDTO){
if(personDTO!=null && !personDTO.isEmpty() ){
Person person = new Person(personDTO.getName());
person.setTelNumber(personDTO.getTelNumber());
person.setCellNumber(personDTO.getCellNumber());
person.setAddress(personDTO.getAddress());
person.setEmail(personDTO.getEmail());
return person;
}
return null;
}
private PersonDTO createPersonDTO(Person person){
if(person!=null){
PersonDTO personDTO = new PersonDTO();
personDTO.setName(person.getName());
personDTO.setTelNumber(person.getTelNumber());
personDTO.setCellNumber(person.getTelNumber());
personDTO.setAddress(person.getAddress());
personDTO.setEmail(person.getEmail());
return personDTO;
}
return null;
}
public List<MissingDTO> createDTOList(List<Missing> missingList){
List<MissingDTO> dtoList = new ArrayList<MissingDTO>();
for(Missing missing:missingList){
dtoList.add(createDTO(missing));
}
return dtoList;
}
}
```

Source Code 62: OfficeMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.dto.OfficeDTO;
@Component
@Scope("singleton")
public class OfficeMapper {
public Office createObject(OfficeDTO officeDTO){
if(officeDTO == null)
return null;
return new Office(officeDTO.getPRO(), officeDTO.getPPO(),
officeDTO.getCityMunicipalPS(), officeDTO.getPCP());
}
public OfficeDTO createDTO(Office office){
return new OfficeDTO(office.getPRO(), office.getPPO(), office.
      getCityMunicipalPS(), office.getPCP());
}
}
```

Source Code 63: PictureMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.domain.Picture;
import gov.pnp.mwirs.dto.PictureDTO;
@Component
@Scope("singleton")
public class PictureMapper {
public Picture createObject(PictureDTO pictureDTO) {
if(pictureDTO!=null){
return new Picture(pictureDTO.getFileName(), pictureDTO.getContent
      ());
}
return null;
}
public PictureDTO createDTO(Picture picture){
if(picture!=null){
PictureDTO pictureDTO = new PictureDTO();
pictureDTO.setId(picture.getId());
pictureDTO.setFileName(picture.getFileName());
pictureDTO.setContent(picture.getContent());
return pictureDTO;
}
return null;
}
}
```

Source Code 64: TipMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import java.util.ArrayList;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.domain.Picture;
import gov.pnp.mwirs.domain.Tip;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.TipDTO;
@Component
@Scope("singleton")
public class TipMapper {
@Autowired
private PictureMapper pictureMapper;
public Tip createOldObject(TipDTO tipDTO){
Tip tip = new Tip(tipDTO.getCaseId(), tipDTO.getFirstName(),
      tipDTO.getMiddleName(),
tipDTO.getLastName(), tipDTO.getEmail(), tipDTO.getPhoneNumber(),
tipDTO.getAddress(), tipDTO.getNarrative());
tip.setId(tipDTO.getId());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:tipDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
tip.setPictures(pictures);
tip.setDateCreated(tipDTO.getDateCreated());
tip.setSeen(tipDTO.isSeen());
return tip;
}
public Tip createNewObject(TipDTO tipDTO){
Tip tip = new Tip(tipDTO.getCaseId(), tipDTO.getFirstName(),
      tipDTO.getMiddleName(),
tipDTO.getLastName(), tipDTO.getEmail(), tipDTO.getPhoneNumber(),
tipDTO.getAddress(), tipDTO.getNarrative());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:tipDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
tip.setPictures(pictures);
return tip;
}
public TipDTO createDTO(Tip tip){
```

```
TipDTO tipDTO = new TipDTO(tip.getCaseId(), tip.getFirstName(),
       tip.getMiddleName(),
tip.getLastName(), tip.getEmail(), tip.getPhoneNumber(),
tip.getAddress(), tip.getNarrative());
tipDTO.setId(tip.getId());
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
for(Picture picture:tip.getPicturesSet()){
pictures.add(pictureMapper.createDTO(picture));
}
tipDTO.setPictures(pictures);
tipDTO.setDateCreated(tip.getDateCreated());
tipDTO.setSeen(tip.isSeen());
return tipDTO;
}
public List<TipDTO> createDTOList(List<Tip> tips) {
List<TipDTO> tipDTOs = new ArrayList<TipDTO>();
for(Tip tip:tips){
tipDTOs.add(createDTO(tip));
}
return tipDTOs;
}
}
```

Source Code 65: UserMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import static gov.pnp.mwirs.dto.UserDTO.UserType.CRIME_REGISTRAR;
import static gov.pnp.mwirs.dto.UserDTO.UserType.POLICE_OFFICER;
import static gov.pnp.mwirs.dto.UserDTO.UserType.SYSTEM_ADMIN;
import java.util.ArrayList;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.domain.CrimeRegistrar;
import gov.pnp.mwirs.domain.Office;
import gov.pnp.mwirs.domain.PoliceOfficer;
import gov.pnp.mwirs.domain.SystemAdmin;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
@Component
@Scope("singleton")
public class UserMapper {
@Autowired
private PictureMapper pictureMapper;
@Autowired
private OfficeMapper officeMapper;
public UserDTO createDTO(User user){
UserDTO userDTO = new UserDTO();
userDTO.setId(user.getId());
userDTO.setFirstName(user.getFirstName());
userDTO.setMiddleName(user.getMiddleName());
userDTO.setLastName(user.getLastName());
userDTO.setUsername(user.getUsername());
userDTO.setEmail(user.getEmail());
userDTO.setDateCreated(user.getDateCreated());
userDTO.setPictureDTO(pictureMapper.createDTO(user.getPicture()));
userDTO.setPassword(user.getPassword());
userDTO.setStatus(user.getAccountStatus().toString());
if(user instanceof CrimeRegistrar){
userDTO.setUserType(CRIME_REGISTRAR);
Office office = ((CrimeRegistrar) user).getOffice();
if(office!=null){
userDTO.setOfficeDTO(officeMapper.createDTO(office));
}
}
else if(user instanceof PoliceOfficer){
userDTO.setUserType(POLICE_OFFICER);
Office office = ((PoliceOfficer) user).getOffice();
if(office!=null){
userDTO.setOfficeDTO(officeMapper.createDTO(office));
}
}
else if(user instanceof SystemAdmin){
userDTO.setUserType(SYSTEM_ADMIN);
}
return userDTO;
}
public User createOldObject(UserDTO userDTO) {
UserType userType = userDTO.getUserType();
User user = null;
if(userType.equals(CRIME_REGISTRAR)){
user = new CrimeRegistrar(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail(), officeMapper.createObject(userDTO.getOfficeDTO
       ()));
}
else if(userType.equals(POLICE_OFFICER)){
user = new PoliceOfficer(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail(), officeMapper.createObject(userDTO.getOfficeDTO
       ()));
}
else if(userType.equals(SYSTEM_ADMIN)){
user = new SystemAdmin(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail());
}
user.setId(userDTO.getId());
user.setDateCreated(userDTO.getDateCreated());
user.setPicture(pictureMapper.createObject(userDTO.getPictureDTO()
       ));
user.setAccountStatus(AccountStatus.fromString(userDTO.getStatus()
       ));
return user;
}
public User createNewObject(UserDTO userDTO) {
UserType userType = userDTO.getUserType();
User user = null;
if(userType.equals(CRIME_REGISTRAR)){
user = new CrimeRegistrar(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail(), officeMapper.createObject(userDTO.getOfficeDTO
       ()));
}
else if(userType.equals(POLICE_OFFICER)){
user = new PoliceOfficer(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail(), officeMapper.createObject(userDTO.getOfficeDTO
       ()));
}
else if(userType.equals(SYSTEM_ADMIN)){
user = new SystemAdmin(userDTO.getUsername(),
userDTO.getPassword(), userDTO.getFirstName(),
userDTO.getMiddleName(), userDTO.getLastName(),
userDTO.getEmail());
}
return user;
}
public List<UserDTO> createDTOList(List<User> users) {
List<UserDTO> userDTOs = new ArrayList<UserDTO>();
for(User user:users){
userDTOs.add(createDTO(user));
}
return userDTOs;
}
}
```

Source Code 66: WantedMapper.java

```
package gov.pnp.mwirs.dto.mapper;
import java.util.ArrayList;
import java.util.HashSet;
import java.util.List;
import java.util.Set;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.Picture;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.WantedDTO;
@Component
@Scope("singleton")
public class WantedMapper {
@Autowired
private UserDao userDao;
@Autowired
private UserMapper userMapper;
@Autowired
private PictureMapper pictureMapper;
@Autowired
private OfficeMapper officeMapper;
public Wanted createNewObject(WantedDTO wantedDTO){
User user = userDao.findByUsername(wantedDTO.getUserDTO().
      getUsername());
Set<Offense> offenses = new HashSet<Offense>();
for(String offenseStr:wantedDTO.getOffense()){
offenses.add(Offense.fromString(offenseStr));
}
Wanted wanted = new Wanted(wantedDTO.getFirstName(),
wantedDTO.getMiddleName(), wantedDTO.getLastName(),
Sex.fromString(wantedDTO.getSex()),
WantedStatus.fromString(wantedDTO.getStatus()),
offenses, user);
wanted.setAlias(wantedDTO.getAlias());
wanted.setHeight(wantedDTO.getHeight());
wanted.setEyeColor(wantedDTO.getEyeColor());
wanted.setNationality(wantedDTO.getNationality());
wanted.setNarrative(wantedDTO.getNarrative());
wanted.setBirthDate(wantedDTO.getBirthDate());
wanted.setPrimaryPicture(pictureMapper.createObject(wantedDTO.
      getPrimaryPictureDTO()));
wanted.setReward(wantedDTO.getReward());
wanted.setInvestigator(wantedDTO.getInvestigator());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:wantedDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
wanted.setPictures(pictures);
return wanted;
}
public Wanted createOldObject(WantedDTO wantedDTO){
User user = userDao.findByUsername(wantedDTO.getUserDTO().
      getUsername());
Set<Offense> offenses = new HashSet<Offense>();
for(String offenseStr:wantedDTO.getOffense()){
offenses.add(Offense.fromString(offenseStr));
}
Wanted wanted = new Wanted(wantedDTO.getFirstName(),
wantedDTO.getMiddleName(), wantedDTO.getLastName(),
Sex.fromString(wantedDTO.getSex()),
WantedStatus.fromString(wantedDTO.getStatus()),
offenses, user);
wanted.setId(wantedDTO.getId());
wanted.setAlias(wantedDTO.getAlias());
wanted.setHeight(wantedDTO.getHeight());
wanted.setEyeColor(wantedDTO.getEyeColor());
wanted.setNationality(wantedDTO.getNationality());
wanted.setNarrative(wantedDTO.getNarrative());
wanted.setBirthDate(wantedDTO.getBirthDate());
wanted.setPrimaryPicture(pictureMapper.createObject(wantedDTO.
      getPrimaryPictureDTO()));
wanted.setReward(wantedDTO.getReward());
List<Picture> pictures = new ArrayList<Picture>();
for(PictureDTO pictureDTO:wantedDTO.getPictures()){
pictures.add(pictureMapper.createObject(pictureDTO));
}
wanted.setPictures(pictures);
wanted.setDateCreated(wantedDTO.getDateCreated());
wanted.setOffice(officeMapper.createObject(wantedDTO.getOfficeDTO
      ()));
wanted.setInvestigator(wantedDTO.getInvestigator());
return wanted;
}
public WantedDTO createDTO(Wanted wanted) {
WantedDTO wantedDTO = new WantedDTO();
wantedDTO.setId(wanted.getId());
wantedDTO.setFirstName(wanted.getFirstName());
wantedDTO.setMiddleName(wanted.getMiddleName());
wantedDTO.setLastName(wanted.getLastName());
wantedDTO.setAlias(wanted.getAlias());
wantedDTO.setBirthDate(wanted.getBirthDate());
wantedDTO.setHeight(wanted.getHeight());
wantedDTO.setEyeColor(wanted.getEyeColor());
wantedDTO.setSex(wanted.getSex().toString());
wantedDTO.setNationality(wanted.getNationality());
wantedDTO.setReward(wanted.getReward());
wantedDTO.setStatus(wanted.getStatus().toString());
wantedDTO.setOffenseFromOffenseSet(wanted.getOffense());
wantedDTO.setNarrative(wanted.getNarrative());
wantedDTO.setDateCreated(wanted.getDateCreated());
wantedDTO.setUserDTO(userMapper.createDTO(wanted.getUser()));
wantedDTO.setPrimaryPictureDTO(pictureMapper.createDTO(wanted.
      getPrimaryPicture()));
List<PictureDTO> pictures = new ArrayList<PictureDTO>();
wantedDTO.setInvestigator(wanted.getInvestigator());
for(Picture picture:wanted.getPicturesSet()){
pictures.add(pictureMapper.createDTO(picture));
}
wantedDTO.setPictures(pictures);
wantedDTO.setOfficeDTO(officeMapper.createDTO(wanted.getOffice()))
      ;
return wantedDTO;
}
public List<WantedDTO> createDTOList(List<Wanted> wantedList){
List<WantedDTO> wantedDTOList = new ArrayList<WantedDTO>();
for(Wanted wanted:wantedList){
wantedDTOList.add(createDTO(wanted));
}
return wantedDTOList;
}
}
```

Source Code 67: DectectedFaceCoordinate.java

```
package gov.pnp.mwirs.image;
public class DectectedFaceCoordinate {
private final int x1;
private final int x2;
private final int y1;
private final int y2;
public DectectedFaceCoordinate(int x1, int x2, int y1, int y2) {
this.x1 = x1;
this.x2 = x2;
this.y1 = y1;
this.y2 = y2;
}
public int getX1() {
return x1;
}
public int getX2() {
return x2;
}
public int getY1() {
return y1;
}
public int getY2() {
return y2;
}
}
```

Source Code 68: FaceDetectionException.java

```
package gov.pnp.mwirs.image;
public class FaceDetectionException extends RuntimeException {
public FaceDetectionException() {
super();
}
public FaceDetectionException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
public FaceDetectionException(String message, Throwable cause) {
super(message, cause);
}
public FaceDetectionException(String message) {
super(message);
}
public FaceDetectionException(Throwable cause) {
super(cause);
}
}
```

Source Code 69: FaceDetector.java

```
package gov.pnp.mwirs.image;
import static org.bytedeco.javacpp.opencv_imgcodecs.
      CV_LOAD_IMAGE_UNCHANGED;
import static org.bytedeco.javacpp.opencv_imgcodecs.imdecode;
import javax.annotation.PostConstruct;
import org.bytedeco.javacpp.opencv_core.Mat;
import org.bytedeco.javacpp.opencv_core.Rect;
import org.bytedeco.javacpp.opencv_core.RectVector;
import org.bytedeco.javacpp.opencv_objdetect.CascadeClassifier;
import org.springframework.context.annotation.Scope;
import org.springframework.stereotype.Component;
```

```
@Component
@Scope("singleton")
public class FaceDetector {
private static final String XML_FILE = FaceDetector.class.
      getResource("/lbpcascade_frontalface.xml").getPath();
private static CascadeClassifier faceDetector;
@PostConstruct
public void init(){
faceDetector = new CascadeClassifier(XML_FILE);
}
public void detectFace(byte[] content){
Mat image = imdecode(new Mat(content), CV_LOAD_IMAGE_UNCHANGED);
RectVector faceDetections = new RectVector();
faceDetector.detectMultiScale(image, faceDetections);
int faceDetected = (int) faceDetections.size();
isValid(faceDetected);
}
public DectectedFaceCoordinate cropFaceDetected(byte[] content){
Mat image = imdecode(new Mat(content), CV_LOAD_IMAGE_UNCHANGED);
RectVector faceDetections = new RectVector();
faceDetector.detectMultiScale(image, faceDetections);
int faceDetected = (int) faceDetections.size();
if(isValid(faceDetected)){
Rect rect = faceDetections.get(0);
return new DectectedFaceCoordinate(rect.x(), rect.x() + rect.width
      (),
rect.y(),rect.y() + rect.height());
}
return null;
}
private boolean isValid(int faceDetected){
if(faceDetected<1){
throw new FaceDetectionException("No face detected. Please upload
      another picture.");
}
else if(faceDetected>1){
throw new FaceDetectionException("More than one face detected.
      Please upload specific face image of subject.");
}
return true;
}
}
```

Source Code 70: FaceRecognitionResult.java

```
package gov.pnp.mwirs.image;
public class FaceRecognitionResult {
private final double similarity;
private final float[] histogram;
public FaceRecognitionResult(double similarity, float[] histogram)
       {
super();
this.similarity = similarity;
this.histogram = histogram;
}
public double getSimilarity() {
return similarity;
}
public float[] getHistogram() {
return histogram;
}
}
```

Source Code 71: FaceRecognizer.java

```
package gov.pnp.mwirs.image;
import static org.bytedeco.javacpp.opencv_core.CV_32SC1;
import static org.bytedeco.javacpp.opencv_face.
      createLBPHFaceRecognizer;
import static org.bytedeco.javacpp.opencv_imgcodecs.
      CV_LOAD_IMAGE_GRAYSCALE;
import static org.bytedeco.javacpp.opencv_imgcodecs.imdecode;
import java.math.BigDecimal;
import java.math.MathContext;
import java.nio.IntBuffer;
import java.util.ArrayList;
import java.util.List;
import org.bytedeco.javacpp.opencv_core.Mat;
import org.bytedeco.javacpp.opencv_core.MatVector;
import org.bytedeco.javacpp.opencv_core.Rect;
import org.bytedeco.javacpp.opencv_face.LBPHFaceRecognizer;
import org.bytedeco.javacpp.indexer.FloatBufferIndexer;
import org.bytedeco.javacpp.indexer.FloatIndexer;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Component;
@Component
public class FaceRecognizer {
private static final double MAX_DISTANCE = 400;
@Autowired
private FaceDetector faceDetector;
private Mat alignFace(byte[] content){
Mat uncropped = imdecode(new Mat(content), CV_LOAD_IMAGE_GRAYSCALE
      );
DectectedFaceCoordinate fc = faceDetector.cropFaceDetected(content
      );
Rect roi = new Rect(fc.getX1(), fc.getY1(), fc.getX2()-fc.getX1(),
       fc.getY2()-fc.getY1());
return new Mat(uncropped,roi);
}
public double getSimilarity(byte[] image1, byte[] image2){
Mat testImage = alignFace(image1);
MatVector images = new MatVector(1);
Mat labels = new Mat(1, 1, CV_32SC1);
IntBuffer labelsBuf = labels.createBuffer(0);
Mat img = alignFace(image2);
images.put(0,img);
labelsBuf.put(0);
LBPHFaceRecognizer faceRecognizer = createLBPHFaceRecognizer(2, 8,
       11, 13, Double.MAX_VALUE);
faceRecognizer.train(images, labels);
int[] predictedLabel = new int[1];
double[] confidenceLevel = new double[1];
faceRecognizer.predict(testImage, predictedLabel, confidenceLevel)
      ;
double distance;
if(confidenceLevel[0]>MAX_DISTANCE){
distance = MAX_DISTANCE;
}else{
distance = confidenceLevel[0];
}
BigDecimal similarity = new BigDecimal(100 - (distance/
      MAX_DISTANCE)*100, new MathContext(2));
return similarity.doubleValue();
}
public FaceRecognitionResult getFaceRecognitionResult(byte[]
      image1, byte[] image2){
Mat testImage = alignFace(image1);
MatVector images = new MatVector(1);
Mat labels = new Mat(1, 1, CV_32SC1);
IntBuffer labelsBuf = labels.createBuffer(0);
Mat img = alignFace(image2);
images.put(0,img);
labelsBuf.put(0);
LBPHFaceRecognizer faceRecognizer = createLBPHFaceRecognizer(2, 8,
       11, 13, Double.MAX_VALUE);
faceRecognizer.train(images, labels);
Mat histogram = faceRecognizer.getHistograms().get(0);
FloatIndexer sI = histogram.createIndexer();
float[] hist = new float[histogram.rows()*histogram.cols()];
for (int y = 0; y < histogram.cols(); y++) {
hist[y] = sI.get(0,y);
}
int[] predictedLabel = new int[1];
double[] confidenceLevel = new double[1];
faceRecognizer.predict(testImage, predictedLabel, confidenceLevel)
      ;
double distance;
if(confidenceLevel[0]>MAX_DISTANCE){
distance = MAX_DISTANCE;
}else{
distance = confidenceLevel[0];
}
BigDecimal similarity = new BigDecimal(100 - (distance/
      MAX_DISTANCE)*100, new MathContext(2));
return new FaceRecognitionResult(similarity.doubleValue(), hist);
}
public List<Float> getHistogram(byte[] image){
MatVector images = new MatVector(1);
Mat labels = new Mat(1, 1, CV_32SC1);
IntBuffer labelsBuf = labels.createBuffer(0);
Mat img = alignFace(image);
images.put(0,img);
labelsBuf.put(0);
LBPHFaceRecognizer faceRecognizer = createLBPHFaceRecognizer(2, 8,
       11, 13, Double.MAX_VALUE);
faceRecognizer.train(images, labels);
Mat mat = faceRecognizer.getHistograms().get(0);
FloatBufferIndexer indexer = mat.createIndexer();
List<Float> histogram = new ArrayList<Float>();
for(int row = 0; row < mat.rows();row++){
for(int col = 0; col<100;col++){
histogram.add(indexer.get(row,col));
}
}
return new ArrayList<Float>(histogram);
}
}
```

Source Code 72: AdvancedSearchService.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.List;
import java.util.Map;
import org.apache.commons.collections.CollectionUtils;
import org.joda.time.DateTime;
import org.joda.time.format.DateTimeFormat;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.MissingDao;
import gov.pnp.mwirs.dao.WantedDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.domain.Offense;
import gov.pnp.mwirs.domain.Sex;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.dto.mapper.MissingMapper;
import gov.pnp.mwirs.dto.mapper.WantedMapper;
@Service
public class AdvancedSearchService {
@Autowired
private WantedDao wantedDao;
@Autowired
private WantedMapper wantedMapper;
@Autowired
private MissingDao missingDao;
@Autowired
private MissingMapper missingMapper;
@SuppressWarnings("unchecked")
public List<WantedDTO> searchWanted(Map<String, String[]> criteria
      ){
List<Wanted> result = (List<Wanted>) wantedDao.findAll();
for(Map.Entry<String, String[]> entry:criteria.entrySet()){
String[] value = entry.getValue();
switch(entry.getKey()){
case "name":
List<Wanted> resultFromName = new ArrayList<Wanted>();
String[] nameArr = value[0].split(" ");
for(String name:nameArr){
resultFromName.addAll(wantedDao.findByFirstName(name));
resultFromName.addAll(wantedDao.findByMiddleName(name));
resultFromName.addAll(wantedDao.findByLastName(name));
}
result = (List<Wanted>) CollectionUtils.intersection(result,
      resultFromName);
break;
case "alias":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByAlias(value[0]));
break;
case "age[]":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByAgeRange(Integer.parseInt(value[0]), Integer.
      parseInt(value[1])));
break;
case "height[]":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByHeightRange(Float.parseFloat(value[0]), Float.
      parseFloat(value[1])));
break;
case "eyeColor":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByEyeColor(value[0]));
break;
case "sex[]":
List<Wanted> resultFromSex = new ArrayList<Wanted>();
for(String sex:value){
resultFromSex.addAll(wantedDao.findBySex(Sex.fromString(sex)));
}
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
resultFromSex);
break;
case "nationality":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByNationality(value[0]));
break;
case "offense[]":
List<Wanted> resultFromOffense = new ArrayList<Wanted>();
for(String offense:value){
resultFromOffense.addAll(wantedDao.findByOffense(Offense.
      fromString(offense)));
}
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
resultFromOffense);
break;
case "status[]":
List<Wanted> resultFromStatus = new ArrayList<Wanted>();
for(String status:value){
resultFromStatus.addAll(wantedDao.findByStatus(WantedStatus.
      fromString(status)));
}
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
resultFromStatus);
break;
case "investigator":
result = (List<Wanted>) CollectionUtils.intersection(new ArrayList
      <Wanted>(result),
wantedDao.findByInvestigator(value[0]));
break;
default:
throw new IllegalCriteriaException(entry.getKey()+" is not a valid
       criterion.");
}
}
return wantedMapper.createDTOList(result);
}
@SuppressWarnings("unchecked")
public List<MissingDTO> searchMissing(Map<String, String[]>
      criteria){
List<Missing> result = (List<Missing>) missingDao.findAll();
for(Map.Entry<String, String[]> entry:criteria.entrySet()){
String[] value = entry.getValue();
switch(entry.getKey()){
case "name":
List<Missing> resultFromName = new ArrayList<Missing>();
String[] nameArr = value[0].split(" ");
for(String name:nameArr){
resultFromName.addAll(missingDao.findByFirstName(name));
resultFromName.addAll(missingDao.findByMiddleName(name));
resultFromName.addAll(missingDao.findByLastName(name));
}
result = (List<Missing>) CollectionUtils.intersection(result,
      resultFromName);
break;
case "alias":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByAlias(value[0]));
break;
case "age[]":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByAgeRange(Integer.parseInt(value[0]), Integer.
      parseInt(value[1])));
break;
case "height[]":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByHeightRange(Float.parseFloat(value[0]), Float.
      parseFloat(value[1])));
break;
case "eyeColor":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByEyeColor(value[0]));
break;
case "sex[]":
List<Missing> resultFromSex = new ArrayList<Missing>();
for(String sex:value){
resultFromSex.addAll(missingDao.findBySex(Sex.fromString(sex)));
}
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
resultFromSex);
break;
case "nationality":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByNationality(value[0]));
```

```java
break;
case "status[]":
List<Missing> resultFromStatus = new ArrayList<Missing>();
for(String status:value){
resultFromStatus.addAll(missingDao.findByStatus(MissingStatus.
      fromString(status)));
}
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
resultFromStatus);
break;
case "placeLastSeen":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByPlaceLastSeen(value[0]));
break;
case "dateLastSeen":
DateTime date = DateTime.parse(value[0], DateTimeFormat.forPattern
      ("yyyy-MM-dd"));
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByDateLastSeen(date));
break;
case "investigator":
result = (List<Missing>) CollectionUtils.intersection(new
      ArrayList<Missing>(result),
missingDao.findByInvestigator(value[0]));
break;
default:
throw new IllegalCriteriaException(entry.getKey()+" is not a valid
       criterion.");
}
}
return missingMapper.createDTOList(result);
}
}
```

Source Code 73:

FaceDetectorService.java

```java
package gov.pnp.mwirs.service;
import java.io.IOException;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import org.springframework.web.multipart.MultipartFile;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.image.FaceDetector;
@Service
public class FaceDetectorService {
@Autowired
private FaceDetector faceDetector;
public PictureDTO createFacePictureDTO(MultipartFile file){
PictureDTO facePictureDTO = new PictureDTO();
facePictureDTO.setFileName(file.getOriginalFilename());
try {
faceDetector.detectFace(file.getBytes());
facePictureDTO.setContent(file.getBytes());
} catch (IOException e) {
throw new FileDiscoveryException("File can't be discovered.");
}
return facePictureDTO;
}
}
```

Source Code 74:

FaceRecognitionDetails.java

```java
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.List;
public class FaceRecognitionDetails {
private long id;
private String similarity;
private List<Float> histogram;
public long getId() {
return id;
}
public void setId(long id) {
this.id = id;
}
public String getSimilarity() {
return similarity;
}
public void setSimilarity(String similaty) {
this.similarity = similaty;
}
public List<Float> getHistogram() {
return new ArrayList<>(histogram);
}
public void setHistogram(List<Float> histogram) {
this.histogram = new ArrayList<>(histogram);
}
}
```

Source Code 75:

FaceRecognizerService.java

```java
package gov.pnp.mwirs.service;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.MissingDao;
import gov.pnp.mwirs.dao.WantedDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.Picture;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.PictureDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.dto.mapper.MissingMapper;
import gov.pnp.mwirs.dto.mapper.WantedMapper;
import gov.pnp.mwirs.image.FaceRecognizer;
@Service
public class FaceRecognizerService {
@Autowired
private FaceRecognizer faceRecognizer;
@Autowired
private WantedDao wantedDao;
@Autowired
private MissingDao missingDao;
@Autowired
private WantedMapper wantedMapper;
@Autowired
private MissingMapper missingMapper;
public double getSimilatiry(PictureDTO image1, PictureDTO image2){
return faceRecognizer.getSimilarity(image1.getContent(), image2.
      getContent());
}
public List<Float> getHistogram(PictureDTO picture){
return faceRecognizer.getHistogram(picture.getContent());
}
public Map<WantedDTO, Double> findTopMatchesInCurrentWanted(
      PictureDTO pictureDTO){
Map<WantedDTO, Double> matches = new HashMap<WantedDTO, Double>();
List<Wanted> allWanted = (List<Wanted>) wantedDao.
      findAllCurrentWithPicture();
while(!allWanted.isEmpty()){
double largest = 0;
for(Wanted wanted:allWanted){
List<Picture> pictures = wanted.getAllPictures();
largest = faceRecognizer.getSimilarity(pictureDTO.getContent(),
      pictures.get(0).getContent());
for(Picture picture:pictures){
double similarity = faceRecognizer.getSimilarity(pictureDTO.
      getContent(), picture.getContent());
if(largest<similarity){
largest = similarity;
}
}
matches.put(wantedMapper.createDTO(wanted), largest);
allWanted.remove(wanted);
break;
}
if(largest==100){
break;
}
}
return matches;
}
public Map<MissingDTO,Double> findTopMatchesInCurrentMissing(
      PictureDTO pictureDTO){
Map<MissingDTO, Double> matches = new HashMap<MissingDTO, Double
      >();
List<Missing> allMissing = (List<Missing>) missingDao.
      findAllCurrentWithPicture();
while(!allMissing.isEmpty()){
```

```
double largest = 0;
for(Missing missing:allMissing){
List<Picture> pictures = missing.getAllPictures();
largest = faceRecognizer.getSimilarity(pictureDTO.getContent(),
      pictures.get(0).getContent());
for(Picture picture:pictures){
double similarity = faceRecognizer.getSimilarity(pictureDTO.
      getContent(), picture.getContent());
if(largest<similarity){
largest = similarity;
}
}
matches.put(missingMapper.createDTO(missing), largest);
allMissing.remove(missing);
break;
}
if(largest==100){
break;
}
}
return matches;
}
public Map<WantedDTO,Double> findTopMatchesInAllWanted(PictureDTO
      pictureDTO){
Map<WantedDTO, Double> matches = new HashMap<WantedDTO, Double>();
List<Wanted> allWanted = (List<Wanted>) wantedDao.
      findAllWithPicture();
while(!allWanted.isEmpty()){
double largest = 0;
for(Wanted wanted:allWanted){
List<Picture> pictures = wanted.getAllPictures();
largest = faceRecognizer.getSimilarity(pictureDTO.getContent(),
      pictures.get(0).getContent());
for(Picture picture:pictures){
double similarity = faceRecognizer.getSimilarity(pictureDTO.
      getContent(), picture.getContent());
if(largest<similarity){
largest = similarity;
}
}
matches.put(wantedMapper.createDTO(wanted), largest);
allWanted.remove(wanted);
break;
}
if(largest==100){
break;
}
}
return matches;
}
public Map<MissingDTO,Double> findTopMatchesInAllMissing(
      PictureDTO pictureDTO){
Map<MissingDTO, Double> matches = new HashMap<MissingDTO, Double
      >();
List<Missing> allMissing = (List<Missing>) missingDao.
      findAllWithPicture();
while(!allMissing.isEmpty()){
double largest = 0;
for(Missing missing:allMissing){
List<Picture> pictures = missing.getAllPictures();
largest = faceRecognizer.getSimilarity(pictureDTO.getContent(),
      pictures.get(0).getContent());
for(Picture picture:pictures){
double similarity = faceRecognizer.getSimilarity(pictureDTO.
      getContent(), picture.getContent());
if(largest<similarity){
largest = similarity;
}
}
matches.put(missingMapper.createDTO(missing), largest);
allMissing.remove(missing);
break;
}
if(largest==100){
break;
}
}
return matches;
}
}
```

Source Code 76: FileDiscoveryException.java

```
package gov.pnp.mwirs.service;
public class FileDiscoveryException extends RuntimeException {
public FileDiscoveryException() {
}
public FileDiscoveryException(String message) {
super(message);
}
public FileDiscoveryException(Throwable cause) {
super(cause);
}
public FileDiscoveryException(String message, Throwable cause) {
super(message, cause);
}
public FileDiscoveryException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 77: IllegalCriteriaException.java

```
package gov.pnp.mwirs.service;
public class IllegalCriteriaException extends RuntimeException {
public IllegalCriteriaException() {
super();
}
public IllegalCriteriaException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
public IllegalCriteriaException(String message, Throwable cause) {
super(message, cause);
}
public IllegalCriteriaException(String message) {
super(message);
}
public IllegalCriteriaException(Throwable cause) {
super(cause);
}
}
```

Source Code 78: LoginFailedException.java

```
package gov.pnp.mwirs.service;
public class LoginFailedException extends RuntimeException {
public LoginFailedException() {
}
public LoginFailedException(String message) {
super(message);
}
public LoginFailedException(Throwable cause) {
super(cause);
}
public LoginFailedException(String message, Throwable cause) {
super(message, cause);
}
public LoginFailedException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 79: LoginService.java

```
package gov.pnp.mwirs.service;
import static gov.pnp.mwirs.domain.AccountStatus.APPROVED;
import static gov.pnp.mwirs.domain.AccountStatus.LOCKED;
import static gov.pnp.mwirs.domain.AccountStatus.PENDING;
import javax.persistence.NoResultException;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.dao.EmptyResultDataAccessException;
import org.springframework.security.crypto.password.
      PasswordEncoder;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.mapper.UserMapper;
@Service
public class LoginService {
@Autowired
private UserDao userDao;
@Autowired
private PasswordEncoder passwordEncoder;
@Autowired
private UserMapper userMapper;
public UserDTO login(String username, String password){
try{
User user = userDao.findByUsername(username);
if(passwordEncoder.matches(password, user.getPassword())){
UserDTO userDTO = null;
if(user.getAccountStatus().equals(APPROVED)){
userDTO = userMapper.createDTO(user);
}
else if(user.getAccountStatus().equals(PENDING)){
throw new LoginFailedException("Account is still for verification
      and approval.");
}
else if(user.getAccountStatus().equals(LOCKED)){
throw new LoginFailedException("Account is locked.");
}
return userDTO;
}
else{
throw new LoginFailedException("Username and password do not match
      ");
}
}catch(NoResultException e){
throw new LoginFailedException("Username does not exist.");
}catch(EmptyResultDataAccessException e){
throw new LoginFailedException("Username does not exist.");
}
}
}
```

Source Code 80:

MissingProfileService.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.MissingDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.MissingStatus;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.OfficeDTO;
import gov.pnp.mwirs.dto.mapper.MissingMapper;
import gov.pnp.mwirs.dto.mapper.OfficeMapper;
@Service
public class MissingProfileService {
@Autowired
private MissingDao missingDao;
@Autowired
private MissingMapper missingMapper;
@Autowired
private OfficeMapper officeMapper;
public void createNewRecord(MissingDTO missingDTO){
Missing missing = missingMapper.createNewObject(missingDTO);
missingDao.insert(missing);
}
public MissingDTO findById(long id){
Missing missing = missingDao.findById(id);
if(missing == null){
throw new RecordNotFoundException("Record not found.");
}
return missingMapper.createDTO(missing);
}
public void deleteRecord(MissingDTO missingDTO){
missingDao.delete(missingMapper.createOldObject(missingDTO));
}
public void updateRecord(MissingDTO missingDTO){
missingDao.update(missingMapper.createOldObject(missingDTO));
}
public List<MissingDTO> getAllCurrent(MissingSortingCriteria
      criterion){
List<Missing> results = new ArrayList<Missing>();
switch(criterion){
case FIRST_NAME:
results = (List<Missing>) missingDao.findAllSortedByFirstName();
break;
case LAST_NAME:
results = (List<Missing>) missingDao.findAllSortedByLastName();
break;
case AGE_ASC:
results = (List<Missing>) missingDao.findAllSortedByAge();
break;
case AGE_DESC:
results = (List<Missing>) missingDao.findAllSortedByAge();
Collections.reverse(results);
break;
case REPORT_DATE_OLD_TO_NEW:
results = (List<Missing>) missingDao.findAllSortedByDateReported()
      ;
break;
case REPORT_DATE_NEW_TO_OLD:
results = (List<Missing>) missingDao.findAllSortedByDateReported()
      ;
Collections.reverse(results);
break;
case DATE_LAST_SEEN_OLD_TO_NEW:
results = (List<Missing>) missingDao.findAllSortedByDateLastSeen()
      ;
break;
case DATE_LAST_SEEN_NEW_TO_OLD:
results = (List<Missing>) missingDao.findAllSortedByDateLastSeen()
      ;
Collections.reverse(results);
break;
}
for(int i = 0; i<results.size();i++){
MissingStatus status = results.get(i).getStatus();
if(!status.equals(MissingStatus.MISSING)){
results.remove(i);
i--;
}
}
return missingMapper.createDTOList(results);
}
public List<MissingDTO> getAll(MissingSortingCriteria criterion){
List<Missing> results = new ArrayList<Missing>();
switch(criterion){
case FIRST_NAME:
results = (List<Missing>) missingDao.findAllSortedByFirstName();
break;
case LAST_NAME:
results = (List<Missing>) missingDao.findAllSortedByLastName();
break;
case AGE_ASC:
results = (List<Missing>) missingDao.findAllSortedByAge();
break;
case AGE_DESC:
results = (List<Missing>) missingDao.findAllSortedByAge();
Collections.reverse(results);
break;
case REPORT_DATE_OLD_TO_NEW:
results = (List<Missing>) missingDao.findAllSortedByDateReported()
      ;
break;
case REPORT_DATE_NEW_TO_OLD:
results = (List<Missing>) missingDao.findAllSortedByDateReported()
      ;
Collections.reverse(results);
break;
case DATE_LAST_SEEN_OLD_TO_NEW:
results = (List<Missing>) missingDao.findAllSortedByDateLastSeen()
      ;
break;
case DATE_LAST_SEEN_NEW_TO_OLD:
results = (List<Missing>) missingDao.findAllSortedByDateLastSeen()
      ;
Collections.reverse(results);
break;
}
return missingMapper.createDTOList(results);
}
public List<MissingDTO> getRecent(){
List<Missing> results = (List<Missing>) missingDao.findAllRecent()
      ;
return missingMapper.createDTOList(results);
}
public long getCount(OfficeDTO officeDTO){
return missingDao.countAllFromOffice(officeMapper.createObject(
      officeDTO));
}
}
```

Source Code 81: MissingSortingCriteria.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.List;
public enum MissingSortingCriteria {
FIRST_NAME("first name"),
LAST_NAME("last name"),
AGE_ASC("age (youngest first)"),
AGE_DESC("age (oldest first)"),
REPORT_DATE_NEW_TO_OLD("report date (newest first)"),
REPORT_DATE_OLD_TO_NEW("report date (oldest first)"),
DATE_LAST_SEEN_NEW_TO_OLD("date last seen (newest first)"),
DATE_LAST_SEEN_OLD_TO_NEW("date last seen (oldest first)");
private String value;
private MissingSortingCriteria(String value){
this.value = value;
}
@Override
public String toString(){
return this.value;
}
public static MissingSortingCriteria fromString(String value){
for(MissingSortingCriteria criteria:MissingSortingCriteria.values
      ()){
if(value.equals(criteria.value)){
return criteria;
}
}
throw new IllegalArgumentException("Invalid MissingCriteria Value:
       "+ value);
}
public static List<String> toStringAll(){
List<String> values = new ArrayList<String>();
for(MissingSortingCriteria criteria:MissingSortingCriteria.values
      ()){
values.add(criteria.toString());
}
return values;
}
}
```

Source Code 82: NoFaceRecogniztionMatchFoundException.java

```
package gov.pnp.mwirs.service;
public class NoFaceRecogniztionMatchFoundException extends
      RuntimeException {
public NoFaceRecogniztionMatchFoundException() {
}
public NoFaceRecogniztionMatchFoundException(String message) {
super(message);
}
public NoFaceRecogniztionMatchFoundException(Throwable cause) {
super(cause);
}
public NoFaceRecogniztionMatchFoundException(String message,
      Throwable cause) {
super(message, cause);
}
public NoFaceRecogniztionMatchFoundException(String message,
      Throwable cause, boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 83: RecordNotFoundException.java

```
package gov.pnp.mwirs.service;
public class RecordNotFoundException extends RuntimeException {
public RecordNotFoundException() {
}
public RecordNotFoundException(String message) {
super(message);
}
public RecordNotFoundException(Throwable cause) {
super(cause);
}
public RecordNotFoundException(String message, Throwable cause) {
super(message, cause);
}
public RecordNotFoundException(String message, Throwable cause,
      boolean enableSuppression,
boolean writableStackTrace) {
super(message, cause, enableSuppression, writableStackTrace);
}
}
```

Source Code 84: RegistrationService.java

```
package gov.pnp.mwirs.service;
import javax.persistence.NoResultException;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.dao.EmptyResultDataAccessException;
import org.springframework.security.crypto.password.
      PasswordEncoder;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.mapper.UserMapper;
@Service
public class RegistrationService {
@Autowired
private UserDao userDao;
@Autowired
private PasswordEncoder passwordEncoder;
@Autowired
private UserMapper userMapper;
public boolean isUsernameAvailable(String username){
try{
userDao.findByUsername(username);
}catch(NoResultException e){
return true;
}catch(EmptyResultDataAccessException e){
return true;
}
return false;
}
public boolean isEmailAvailable(String email){
try{
userDao.findByEmail(email);
}catch(NoResultException e){
return true;
}
catch(EmptyResultDataAccessException e){
return true;
}
return false;
}
public void registerAccount(UserDTO userDTO) {
User user = userMapper.createNewObject(userDTO);
user.setPassword(passwordEncoder.encode(userDTO.getPassword()));
userDao.insert(user);
}
}
```

Source Code 85: SystemAdminService.java

```
package gov.pnp.mwirs.service;
import java.security.SecureRandom;
import org.apache.commons.lang3.RandomStringUtils;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.crypto.password.
      PasswordEncoder;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.PrivilegeDeniedException;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.dto.mapper.UserMapper;
@Service
public class SystemAdminService {
```

```
@Autowired
private UserDao userDao;
@Autowired
private UserMapper userMapper;
@Autowired
private PasswordEncoder passwordEncoder;
public void createSysAd(UserDTO userDTO){
if(!userDTO.getUserType().equals(UserType.SYSTEM_ADMIN)){
throw new PrivilegeDeniedException("You do not have privelege to
      create "
+userDTO.getUserType().toString()+ " account.");
}
User user = userMapper.createNewObject(userDTO);
user.setPassword(passwordEncoder.encode(userDTO.getPassword()));
userDao.insert(user);
}
public String generatePassword(){
String characters = "
      ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789
      ";
String password = RandomStringUtils.random( 7, 0, 0, false, false,
       characters.toCharArray(), new SecureRandom() );
return password;
}
public void updatePassword(UserDTO userDTO) {
User user = userMapper.createOldObject(userDTO);
user.setPassword(passwordEncoder.encode(userDTO.getPassword()));
userDao.update(user);
}
public void deleteAccount(UserDTO userDTO){
userDao.delete(userMapper.createOldObject(userDTO));
}
}
```

Source Code 86: TipService.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.HashMap;
import java.util.List;
import java.util.Map;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.MissingDao;
import gov.pnp.mwirs.dao.TipDao;
import gov.pnp.mwirs.dao.WantedDao;
import gov.pnp.mwirs.domain.Missing;
import gov.pnp.mwirs.domain.Tip;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.dto.MissingDTO;
import gov.pnp.mwirs.dto.TipDTO;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.dto.mapper.MissingMapper;
import gov.pnp.mwirs.dto.mapper.TipMapper;
import gov.pnp.mwirs.dto.mapper.WantedMapper;
@Service
public class TipService {
@Autowired
private TipDao tipDao;
@Autowired
private TipMapper tipMapper;
@Autowired
private WantedDao wantedDao;
@Autowired
private MissingDao missingDao;
@Autowired
private MissingMapper missingMapper;
@Autowired
private WantedMapper wantedMapper;
public void createTip(TipDTO tipDTO){
Tip tip = tipMapper.createNewObject(tipDTO);
tipDao.insert(tip);
}
public long countNewTips(WantedDTO wantedDTO){
return tipDao.countNew(wantedDTO.getId());
}
public long countNewTips(MissingDTO missingDTO){
return tipDao.countNew(missingDTO.getId());
}
public List<TipDTO> getAllNewTips(UserDTO userDTO){
List<Tip> tips = (List<Tip>) tipDao.findAllNew();
List<TipDTO> tipDTOs = new ArrayList<TipDTO>();
for(Tip tip:tips){
Missing missing = missingDao.findById(tip.getCaseId());
Wanted wanted = wantedDao.findById(tip.getCaseId());
if(missing != null){
if(userDTO.canViewTips(missingMapper.createDTO(missing))){
tipDTOs.add(tipMapper.createDTO(tip));
}
}else if(wanted!=null){
if(userDTO.canViewTips(wantedMapper.createDTO(wanted))){
tipDTOs.add(tipMapper.createDTO(tip));
}
}
}
return tipDTOs;
}
public void updateTip(TipDTO tipDTO){
tipDao.update(tipMapper.createOldObject(tipDTO));
}
public List<TipDTO> viewTipsFor(WantedDTO wantedDTO){
List<Tip> tips = (List<Tip>) tipDao.findByCase(wantedDTO.getId());
return tipMapper.createDTOList(tips);
}
public List<TipDTO> viewTipsFor(MissingDTO missingDTO){
List<Tip> tips = (List<Tip>) tipDao.findByCase(missingDTO.getId())
      ;
return tipMapper.createDTOList(tips);
}
public Map<TipDTO,String> getAllTips(UserDTO userDTO){
List<Tip> tips = (List<Tip>) tipDao.findAll();
Map<TipDTO,String> tipDTOs = new HashMap<TipDTO,String>();
for(Tip tip:tips){
Missing missing = missingDao.findById(tip.getCaseId());
Wanted wanted = wantedDao.findById(tip.getCaseId());
if(missing != null){
if(userDTO.canViewTips(missingMapper.createDTO(missing))){
tipDTOs.put(tipMapper.createDTO(tip), missing.getFullname());
}
}else if(wanted!=null){
if(userDTO.canViewTips(wantedMapper.createDTO(wanted))){
tipDTOs.put(tipMapper.createDTO(tip), wanted.getFullname());
}
}
}
return tipDTOs;
}
public void deleteTip(long id){
Tip tip = tipDao.findById(id);
if(tip == null){
throw new RecordNotFoundException("Record not found.");
}
tipDao.delete(tip);
}
public long getCount(){
return tipDao.countAll();
}
}
```

Source Code 87: UserService.java

```
package gov.pnp.mwirs.service;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.security.crypto.password.
      PasswordEncoder;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.UserDao;
import gov.pnp.mwirs.domain.AccountStatus;
import gov.pnp.mwirs.domain.User;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.mapper.UserMapper;
@Service
public class UserService {
@Autowired
private UserDao userDao;
@Autowired
private UserMapper userMapper;
@Autowired
private PasswordEncoder passwordEncoder;
public void updateUserProfile(UserDTO userDTO){
userDao.update(userMapper.createOldObject(userDTO));
}
public void changePassword(UserDTO userDTO, String password){
User user = userMapper.createOldObject(userDTO);
user.setPassword(passwordEncoder.encode(password));
userDao.update(user);
}
public boolean verifyPassword(UserDTO userDTO, String password){
User user = userDao.findByUsername(userDTO.getUsername());
if(passwordEncoder.matches(password, user.getPassword())){
return true;
}
return false;
}
public List<UserDTO> getUsersByStatus(String status){
List<User> users = (List<User>) userDao.findByStatus(AccountStatus
      .fromString(status));
return userMapper.createDTOList(users);
}
public List<UserDTO> getAllUsers(){
List<User> users = (List<User>) userDao.findAll();
return userMapper.createDTOList(users);
}
public void updateUser(UserDTO userDTO){
userDao.update(userMapper.createOldObject(userDTO));
}
public UserDTO findById(long id){
User user = userDao.findById(id);
if(user == null){
throw new RecordNotFoundException("User with id: "+id+" not found.
      ");
}
return userMapper.createDTO(user);
}
public long getCountByStatus(String status){
return userDao.countByStatus(AccountStatus.fromString(status));
}
public List<UserDTO> getRecentRegistrations(){
List<User> users = (List<User>) userDao.findRecent();
return userMapper.createDTOList(users);
}
public UserDTO findByEmail(String email){
return userMapper.createDTO(userDao.findByEmail(email));
}
}
```

Source Code 88:

WantedProfileService.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.Collections;
import java.util.List;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.stereotype.Service;
import gov.pnp.mwirs.dao.WantedDao;
import gov.pnp.mwirs.domain.Wanted;
import gov.pnp.mwirs.domain.WantedStatus;
import gov.pnp.mwirs.dto.OfficeDTO;
import gov.pnp.mwirs.dto.WantedDTO;
import gov.pnp.mwirs.dto.mapper.OfficeMapper;
import gov.pnp.mwirs.dto.mapper.WantedMapper;
@Service
public class WantedProfileService {
@Autowired
private WantedDao wantedDao;
@Autowired
private WantedMapper wantedMapper;
@Autowired
private OfficeMapper officeMapper;
public void createNewRecord(WantedDTO wantedDTO){
Wanted wanted = wantedMapper.createNewObject(wantedDTO);
wantedDao.insert(wanted);
}
public WantedDTO findById(long id){
Wanted wanted = wantedDao.findById(id);
if(wanted == null){
throw new RecordNotFoundException("Record not found.");
}
return wantedMapper.createDTO(wanted);
}
public void deleteRecord(WantedDTO wantedDTO){
wantedDao.delete(wantedMapper.createOldObject(wantedDTO));
}
public void updateRecord(WantedDTO wantedDTO){
wantedDao.update(wantedMapper.createOldObject(wantedDTO));
}
public List<WantedDTO> getAllCurrent(WantedSortingCriteria
      criterion){
List<Wanted> results = new ArrayList<Wanted>();
switch(criterion){
case FIRST_NAME:
results = (List<Wanted>) wantedDao.findAllSortedByFirstName();
break;
case LAST_NAME:
results = (List<Wanted>) wantedDao.findAllSortedByLastName();
break;
case AGE_ASC:
results = (List<Wanted>) wantedDao.findAllSortedByAge();
break;
case AGE_DESC:
results = (List<Wanted>) wantedDao.findAllSortedByAge();
Collections.reverse(results);
break;
case REPORT_DATE_OLD_TO_NEW:
results = (List<Wanted>) wantedDao.findAllSortedByDateReported();
break;
case REPORT_DATE_NEW_TO_OLD:
results = (List<Wanted>) wantedDao.findAllSortedByDateReported();
Collections.reverse(results);
break;
}
for(int i = 0; i<results.size();i++){
WantedStatus status = results.get(i).getStatus();
if(!status.equals(WantedStatus.WANTED)){
results.remove(i);
i--;
}
}
return wantedMapper.createDTOList(results);
}
public List<WantedDTO> getAll(WantedSortingCriteria criterion){
List<Wanted> results = new ArrayList<Wanted>();
switch(criterion){
case FIRST_NAME:
results = (List<Wanted>) wantedDao.findAllSortedByFirstName();
break;
case LAST_NAME:
results = (List<Wanted>) wantedDao.findAllSortedByLastName();
break;
case AGE_ASC:
results = (List<Wanted>) wantedDao.findAllSortedByAge();
break;
case AGE_DESC:
results = (List<Wanted>) wantedDao.findAllSortedByAge();
Collections.reverse(results);
break;
case REPORT_DATE_OLD_TO_NEW:
results = (List<Wanted>) wantedDao.findAllSortedByDateReported();
break;
case REPORT_DATE_NEW_TO_OLD:
results = (List<Wanted>) wantedDao.findAllSortedByDateReported();
Collections.reverse(results);
break;
}
return wantedMapper.createDTOList(results);
}
public List<WantedDTO> getRecent(){
List<Wanted> results = (List<Wanted>) wantedDao.findAllRecent();
return wantedMapper.createDTOList(results);
}
public long getCount(OfficeDTO officeDTO){
return wantedDao.countAllFromOffice(officeMapper.createObject(
      officeDTO));
}
}
```

Source Code 89:

WantedSortingCriteria.java

```
package gov.pnp.mwirs.service;
import java.util.ArrayList;
import java.util.List;
public enum WantedSortingCriteria {
FIRST_NAME("first name"),
LAST_NAME("last name"),
AGE_ASC("age (youngest first)"),
AGE_DESC("age (oldest first)"),
REPORT_DATE_NEW_TO_OLD("report date (newest first)"),
REPORT_DATE_OLD_TO_NEW("report date (oldest first)");
private String value;
private WantedSortingCriteria(String value){
this.value = value;
}
@Override
public String toString(){
return this.value;
}
public static WantedSortingCriteria fromString(String value){
for(WantedSortingCriteria criteria:WantedSortingCriteria.values())
      {
if(value.equals(criteria.value)){
return criteria;
}
}
throw new IllegalArgumentException("Invalid WantedCriteria Value:
      "+ value);
}
public static List<String> toStringAll(){
List<String> values = new ArrayList<String>();
for(WantedSortingCriteria criteria:WantedSortingCriteria.values())
      {
values.add(criteria.toString());
}
return values;
}
}
```

Source Code 90: Sorter.java

```
package gov.pnp.mwirs;
import java.util.Comparator;
import java.util.Map;
import java.util.TreeMap;
public class Sorter {
public static <K, V extends Comparable<V>> Map<K, V> sortByValue(
      final Map<K, V> map) {
Comparator<K> valueComparator = new Comparator<K>() {
public int compare(K k1, K k2) {
int compare = map.get(k2).compareTo(map.get(k1));
if (compare == 0) return 1;
else return compare;
}
};
Map<K, V> sortedByValues = new TreeMap<K, V>(valueComparator);
sortedByValues.putAll(map);
return sortedByValues;
}
}
```

Source Code 91: StartupListener.java

```
package gov.pnp.mwirs;
import org.springframework.beans.factory.annotation.Autowired;
import org.springframework.context.ApplicationListener;
import org.springframework.context.event.ContextRefreshedEvent;
import org.springframework.stereotype.Component;
import gov.pnp.mwirs.dao.jpa.DuplicateUsernameException;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
import gov.pnp.mwirs.service.SystemAdminService;
@Component
public class StartupListener implements ApplicationListener<
      ContextRefreshedEvent>{
@Autowired
private SystemAdminService sysAdService;
@Override
public void onApplicationEvent(final ContextRefreshedEvent event)
      {
try{
UserDTO userDTO = new UserDTO();
userDTO.setUsername("admin");
userDTO.setPassword("admin");
userDTO.setFirstName("System");
userDTO.setLastName("Administrator");
userDTO.setEmail("sysad@gmail.com");
userDTO.setUserType(UserType.SYSTEM_ADMIN);
sysAdService.createSysAd(userDTO);
}catch(DuplicateUsernameException e){
System.out.println(e.getMessage());
}
}
}
```

Source Code 92: UrlInterceptor.java

```
package gov.pnp.mwirs.interceptor;
import java.util.regex.Matcher;
import java.util.regex.Pattern;
import javax.servlet.http.HttpServletRequest;
import javax.servlet.http.HttpServletResponse;
import javax.servlet.http.HttpSession;
import org.springframework.web.servlet.HandlerInterceptor;
import org.springframework.web.servlet.ModelAndView;
import gov.pnp.mwirs.dto.UserDTO;
import gov.pnp.mwirs.dto.UserDTO.UserType;
public class UrlInterceptor implements HandlerInterceptor{
@Override
public boolean preHandle(HttpServletRequest request,
      HttpServletResponse response, Object handler)
throws Exception {
HttpSession session = request.getSession();
UserDTO userDTO = (UserDTO) session.getAttribute("loggedInUser");
Pattern p = Pattern.compile("/mwirs/create/(.*)");
Matcher m = p.matcher(request.getRequestURI());
if(m.matches()){
if(userDTO == null){
response.sendRedirect("/mwirs/login");
return false;
}
else if(!userDTO.getUserType().equals(UserType.CRIME_REGISTRAR)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/user/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if(userDTO == null){
response.sendRedirect("/mwirs/login");
return false;
}
}
p = Pattern.compile("/mwirs/search/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO!= null && userDTO.getUserType().equals(UserType.
      SYSTEM_ADMIN)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/wanted/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO!= null && userDTO.getUserType().equals(UserType.
      SYSTEM_ADMIN)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/missing/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO!= null && userDTO.getUserType().equals(UserType.
      SYSTEM_ADMIN)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/wanted/delete");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO == null || !userDTO.getUserType().equals(UserType.
      CRIME_REGISTRAR)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/missing/delete");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO == null || !userDTO.getUserType().equals(UserType.
      CRIME_REGISTRAR)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/tip/create/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO != null){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/tip/view(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO== null ){
response.sendRedirect("/mwirs/login");
return false;
}
else if( userDTO.getUserType().equals(UserType.SYSTEM_ADMIN)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/wanted/edit/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO== null ){
response.sendRedirect("/mwirs/login");
return false;
}
else if( !userDTO.getUserType().equals(UserType.CRIME_REGISTRAR)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/missing/edit/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO== null ){
response.sendRedirect("/mwirs/login");
return false;
}
else if( !userDTO.getUserType().equals(UserType.CRIME_REGISTRAR)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
p = Pattern.compile("/mwirs/SysAd/(.*)");
m = p.matcher(request.getRequestURI());
if(m.matches()){
if( userDTO == null || !userDTO.getUserType().equals(UserType.
      SYSTEM_ADMIN)){
response.sendRedirect("/mwirs/denied");
return false;
}
}
return true;
}
@Override
public void postHandle(HttpServletRequest request,
      HttpServletResponse response, Object handler,
ModelAndView modelAndView) throws Exception {
}
@Override
public void afterCompletion(HttpServletRequest request,
      HttpServletResponse response, Object handler, Exception ex)
throws Exception {
}
}
```

C. JSP Files

Source Code 93: 404.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MUW-IRS | 404</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet">
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--       DASHBOARD -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<%--            <jsp:include page="header_loggedin.jsp"></jsp:
      include> --%>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
ERROR!
</header>
<div class="panel-body">
Page not found.
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 94: access_denied.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MUW-IRS | Access Denied</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet">
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
ERROR!
</header>
<div class="panel-body">
You do not have rights to access this page.
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 95: advaced_search_missing.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Advanced Search | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- easy pie chart-->
<link href="<c:url value="/resources/assets/jquery-easy-pie-chart/
      jquery.easy-pie-chart.css"/>" rel="stylesheet" type="text/
      css" media="screen"/>
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-search"></i> Advanced
      Search</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-search"></i>Advanced Search</li>
<li><i class="fa fa-users"></i>Missing</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Advanced Search | Missing
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" method="post" id="
      advancedSearch">
<div class="form-group ">
<label for="name" class="control-label col-lg-2">name</label>
<div class="col-lg-10">
<input type="text" class="form-control " id="name" name="name">
</div>
</div>
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-4">
<input type="text" class="form-control " id="alias" name="alias">
</div>
<label for="age" class="control-label col-lg-2">age</label>
<div class="col-lg-4">
<div class="age"></div>
```

```
</div>
</div>
<div class="form-group">
<label for="height" class="control-label col-lg-2">height in cm</
      label>
<div class="col-lg-4">
<div class="height "></div>
</div>
<label for="eyeColor" class="control-label col-lg-2">eye color</
      label>
<div class="col-lg-4">
<input type="text" class="form-control " id="eyeColor" name="
      eyeColor"/>
</div>
</div>
<div class="form-group">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-4">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default">
<input type="checkbox" name="sex" value="Male" id="Male"/>Male
</label>
<label class="btn btn-default">
<input type="checkbox" name="sex" value="Female" id="Female"/>
      Female
</label>
</div>
</div>
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-4">
<input class="form-control " id="nationality" type="text" name="
      nationality"/>
</div>
</div>
<div class="form-group">
<label for="placeLastSeen" class="control-label col-lg-2">place
      last seen</label>
<div class="col-lg-4">
<input type="text" class="form-control " id="placeLastSeen" name="
      placeLastSeen"/>
</div>
<label for="dateLastSeen" class="control-label col-lg-2">date last
       seen</label>
<div class="col-lg-4">
<input type="date" class="form-control " id="dateLastSeen" name="
      dateLastSeen"/>
</div>
</div>
<c:if test="${not empty loggedInUser }">
<div class="form-group ">
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-4">
  <select name="status" class="form-control" id="status" multiple=
        "multiple">
  <c:forEach items="${missingStatus }" var="item">
    <option value="${item }">${item }</option>
  </c:forEach>
  </select>
</div>
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-4">
<input type="text" class="form-control " id="investigator" name="
      investigator"/>
</div>
</div>
</c:if>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit" id="
      submit">Search&nbsp;&nbsp;<i class="fa fa-search"></i></
      button>
</div>
</div>
</form>
</div>
</div>
</section>
<!--                results start -->
<a name="results-anchor"></a>
<div class = "results">
</div>
<!--                results end -->
</div>
</div>
</section>
</section>
<!--main content end-->
```

```
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-slider-pips.js"
      />"></script>
<script src="<c:url value="/resources/js/
      advanced_search_missing_script.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
</body>
</html>
```

Source Code 96: advaced_search_wanted.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Advanced Search | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-search"></i> Advanced
      Search</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-search"></i>Advanced Search</li>
<li><i class="fa fa-users"></i>Wanted</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Advanced Search | Wanted
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" method="post" id="
      advancedSearch">
<div class="form-group ">
<label for="name" class="control-label col-lg-2">name</label>
<div class="col-lg-10">
<input type="text" class="form-control " id="name" name="name">
</div>
</div>
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-4">
<input type="text" class="form-control " id="alias" name="alias">
</div>
<label for="age" class="control-label col-lg-2">age</label>
<div class="col-lg-4">
<div class="age"></div>
</div>
</div>
<div class="form-group">
<label for="height" class="control-label col-lg-2">height in cm</
      label>
<div class="col-lg-4">
<div class="height "></div>
</div>
<label for="eyeColor" class="control-label col-lg-2">eye color</
      label>
<div class="col-lg-4">
<input type="text" class="form-control " id="eyeColor" name="
      eyeColor"/>
</div>
</div>
<div class="form-group">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-4">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default">
<input type="checkbox" name="sex" value="Male" id="Male"/>Male
</label>
<label class="btn btn-default">
<input type="checkbox" name="sex" value="Female" id="Female"/>
      Female
</label>
</div>
</div>
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-4">
<input class="form-control " id="nationality" type="text" name="
      nationality"/>
</div>
</div>
<div class="form-group ">
<label for="offense" class="control-label col-lg-2">offense</label
      >
<div class="col-lg-4">
<select name="offense" class="form-control" multiple="multiple" id
      ="offense">
<c:forEach items="${offenses }" var="item">
<option value="${item }">${item }</option>
</c:forEach>
</select>
</div>
<c:if test="${not empty loggedInUser }">
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-4">
<select name="status" class="form-control" id="status" multiple="
      multiple">
<c:forEach items="${wantedStatus }" var="item">
<option value="${item }">${item }</option>
</c:forEach>
</select>
</div>
</c:if>
```

```
</div>
<c:if test="${not empty loggedInUser }">
<div class="form-group">
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-4">
<input type="text" class="form-control " id="investigator" name="
      investigator"/>
</div>
</div>
</c:if>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit" id="
      submit">Search&nbsp;&nbsp;<i class="fa fa-search"></i></
      button>
</div>
</div>
</form>
</div>
</div>
</section>
<!--                results start -->
<a name="results-anchor"></a>
<div class = "results">
</div>
<!--                results end -->
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-slider-pips.js"
      />"></script>
<script src="<c:url value="/resources/js/
      advanced_search_wanted_script.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
</body>
</html>
```

Source Code 97: advanced_search_missing_results.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:choose>
<c:when test="${not empty results }">
<div class="col-lg-12 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2>Results</h2>
</div>
<div class="panel-body">
<table class="table bootstrap-datatable">
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Place Last Seen</th>
<th>Date Last Seen</th>
<th>Date Last Seen</th>
<th>Status</th>
</tr>
</thead>
<tbody id="myTable">
<c:forEach var="missing" items="${results }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty missing.primaryPictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:100px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img alt="User Pic" src="missing/picture/${missing.id }"
style="height:100px; margin-top:-2px;">
</c:otherwise>
</c:choose>
</td>
<td><a href="/mwirs/missing/${missing.id}">${missing.firstName } $
      {missing.middleName } ${missing.lastName }</a></td>
<td>${missing.placeLastSeen }</td>
<td>${missing.getDateLastSeenString() }</td>
<td>${missing.getDateCreatedString() }</td>
<td>${missing.status }</td>
</tr>
</c:forEach>
</tbody>
</table>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="myPager"></ul>
</div>
</div>
</div>
</div>
</div>
</c:when>
<c:otherwise>
<header class="panel-heading no-results">
No  results found.
</header>
</c:otherwise>
</c:choose>
<script>
$(document).ready(function(){
$('#myTable').pageMe({pagerSelector:'#myPager',showPrevNext:true,
      hidePageNumbers:false,perPage:5});
});
</script>
```

Source Code 98: advanced_search_wanted_results.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:choose>
<c:when test="${not empty results }">
<div class="col-lg-12 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2>Results</h2>
</div>
<div class="panel-body">
<table class="table bootstrap-datatable">
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Offense</th>
<th>Date Reported</th>
<th>Status</th>
</tr>
</thead>
<tbody id="myTable">
<c:forEach var="wanted" items="${results }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty wanted.primaryPictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:100px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img alt="User Pic" src="wanted/picture/${wanted.id }"
style="height:100px; margin-top:-2px;">
</c:otherwise>
```

```
</c:choose>
</td>
<td><a href="/mwirs/wanted/${wanted.id}">${wanted.firstName } ${
      wanted.middleName } ${wanted.lastName }</a></td>
<td>
<c:forEach var="offense" items="${wanted.offense}">
${offense } <br>
</c:forEach>
</td>
<td>${wanted.getDateCreatedString() }</td>
<td>${wanted.status }</td>
</tr>
</c:forEach>
</tbody>
</table>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="myPager"></ul>
</div>
</div>
</div>
</div>
</div>
</c:when>
<c:otherwise>
<header class="panel-heading no-results">
No  results found.
</header>
</c:otherwise>
</c:choose>
<script>
$(document).ready(function(){
$('#myTable').pageMe({pagerSelector:'#myPager',showPrevNext:true,
      hidePageNumbers:false,perPage:5});
});
</script>
```

Source Code 99: create_missing_choose.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Missing</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 5 - Choose primary picture
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" method="post" action="
      reviewDetails">
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">display picture</
      label>
<div class="col-lg-10">
<div class="btn-group" data-toggle="buttons">
<c:forEach items="${validImages }" var="image" varStatus="status">
<c:choose>
<c:when test="${status.index ==0}">
<label class="btn btn-default active" style="border: none;">
<img src="getMissingPicture/${status.index}" id="img-button" style
      ="height:100px;width: auto;">
<input type="radio" name="primary" value="${status.index}" class="
      btn-radio" checked="checked"/>
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default" style="border: none; opacity:0.6;">
<img src="getMissingPicture/${status.index}" id="img-button" style
      ="height:100px;width: auto;">
<input type="radio" name="primary" value="${status.index}" class="
      btn-radio"/>
</label>
</c:otherwise>
</c:choose>
</c:forEach>
</div>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script type="text/javascript">
$('.btn-default').click(function() {
$(this).css('opacity','1');
$('.btn-default').not(this).css('opacity','0.6');
});
</script>
```

```
</body>
</html>
```

Source Code 100: create_missing_review.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<%@ taglib uri="http://java.sun.com/jsp/jstl/functions" prefix="fn
      " %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Missing</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 6 - Review Details
</header>
<div class="panel-body">
<div class="col-md-3 col-lg-3 " align="center">
<c:choose>
<c:when test="${empty validImages }">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModal${primaryIndex}">
<img alt="User Pic" src="getMissingPicture/${primaryIndex }"
class="img-thumbnail img-responsive">
</a>
<div id="myModal${primaryIndex }" class="modal fade" tabindex="-1"
       role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="getMissingPicture/${primaryIndex }" class="img-
      responsive" style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>
<td>first name</td>
<td>${missingOnCreate.firstName }</td>
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty missingOnCreate.middleName}">
<td>${missingOnCreate.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${missingOnCreate.lastName }</td>
</tr>
<tr>
<td>alias</td>
<c:choose>
<c:when test="${not empty missingOnCreate.alias}">
<td>${missingOnCreate.alias }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>sex</td>
<td>${missingOnCreate.sex }</td>
</tr>
<tr>
<td>birth date</td>
<c:choose>
<c:when test="${not empty missingOnCreate.birthDate}">
<td>${missingOnCreate.getBirthDateString() }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>height</td>
<c:choose>
<c:when test="${missingOnCreate.height != 0}">
<td>${missingOnCreate.height } cm</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>eye color</td>
<c:choose>
<c:when test="${not empty missingOnCreate.eyeColor}">
<td>${missingOnCreate.eyeColor }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>nationality</td>
<c:choose>
<c:when test="${not empty missingOnCreate.nationality}">
<td>${missingOnCreate.nationality }</td>
</c:when>
<c:otherwise>
```

```
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
<tr>
<tr>
<td>place last seen</td>
<c:choose>
<c:when test="${not empty missingOnCreate.placeLastSeen}">
<td>${missingOnCreate.placeLastSeen }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>date last seen</td>
<c:choose>
<c:when test="${not empty missingOnCreate.dateLastSeen}">
<td>${missingOnCreate.getDateLastSeenString() }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>narrative</td>
<c:choose>
<c:when test="${not empty missingOnCreate.narrative}">
<td>${missingOnCreate.narrative}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>investigator</td>
<c:choose>
<c:when test="${not empty missingOnCreate.investigator}">
<td>${missingOnCreate.investigator}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<c:if test="${!contactPerson.isEmpty()}">
<tr>
<td>Contact Person</td>
<td  style="white-space: normal;">
<c:if test="${ not empty contactPerson.name }">
${contactPerson.name }<br>
</c:if>
<c:if test="${ not empty contactPerson.email }">
<strong>@</strong> ${contactPerson.email }<br>
</c:if>
<c:if test="${ not empty contactPerson.telNumber }">
<i class="fa fa-phone-square"></i> ${contactPerson.telNumber }<br>
</c:if>
<c:if test="${ not empty contactPerson.cellNumber }">
<i class="fa fa-mobile"></i> ${contactPerson.cellNumber }<br>
</c:if>
<c:if test="${ not empty contactPerson.address }">
<i class="fa fa-home"></i> ${contactPerson.address }
</c:if>
</td>
</tr>
</c:if>
<tr>
<td  style="white-space: normal;" colspan="2">
<c:forEach items="${validImages }" var="picture" varStatus="status
      ">
<c:if test="${status.index!=primaryIndex }">
<a data-toggle="modal" href="#myModal${status.index }">
<img alt="User Pic" src="getMissingPicture/${status.index }"
class="img-responsive pull-left" style="height:70px;">
</a>
<div id="myModal${status.index }" class="modal fade" tabindex="-1"
       role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="getMissingPicture/${status.index }" class="img-
      responsive" style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
```

```
</div>
</div>
</div>
</c:if>
</c:forEach>
</td>
</tr>
</tbody>
</table>
</div>
<div class="form">
<form class="form-horizontal">
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<a class="btn btn-success button-next" type="button" id="finish">
      Finish&nbsp;&nbsp;<i class="fa fa-check"></i></a>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
<!-- Modal -->
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Registration successful</h4>
</div>
<div class="modal-body">
<p>Creation successful! </p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Registration unsuccessful</h4>
</div>
<div class="modal-body">
<p>An error was encountered during creation. Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
```

```
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script type="text/javascript">
$("#finish").click(function(){
$.ajax({
async:  false,
url:  "finish",
success:function(){
$('#successfulModal').modal("show");
},
error:  function(){
$('#failModal').modal("show");
},
});
})
$('#successfulModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/create/missing');
});
$('#failModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/create/missing');
});
</script>
</body>
</html>
```

Source Code 101: create_missing_step2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
    pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-
           scale=1.0">
    <title>MW-IRS | Write a case | Missing</title>
   <link rel="icon" href="<c:url value="/resources/img/pnp-logo.
          png"/>">
    <!-- Bootstrap CSS -->
    <link href="<c:url value="/resources/css/bootstrap.min.css"/>"
            rel="stylesheet" />
    <!-- bootstrap theme -->
    <link href="<c:url value="/resources/css/bootstrap-theme.css"
           />" rel="stylesheet">
    <!--external css-->
    <!-- font icon -->
    <link href="<c:url value="/resources/css/elegant-icons-style.
           css"/>" rel="stylesheet" />
    <link href="<c:url value="/resources/css/font-awesome.min.css"
           />" rel="stylesheet" />
    <!-- Custom styles -->
    <link href="<c:url value="/resources/css/style.css"/>" rel="
           stylesheet">
    <link href="<c:url value="/resources/css/style-responsive.css"
           />" rel="stylesheet"/>
   <link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.
          css"/>" rel="stylesheet">
  </head>
  <body>
  <!-- container section start -->
  <section id="container" class="">
         <!--    HEADER -->
      <jsp:include page="${page_header }"></jsp:include>
      <!--       DASHBOARD -->
      <jsp:include page="${page_sidebar }"></jsp:include>
      <!--main content start-->
      <section id="main-content">
          <section class="wrapper">
              <!--overview start-->
           <div class="row">
            <div class="col-lg-12">
               <h3 class="page-header"><i class="fa fa-pencil-
                     square-o"></i> Write a case</h3>
               <ol class="breadcrumb">
                  <li><i class="fa fa-home"></i><a href="${home }">
                        Home</a></li>
                  <li><i class="fa fa-pencil-square-o"></i>Write a
                        case</li>
                  <li><i class="fa fa-user"></i>Missing</li>
               </ol>
            </div>
         </div>
      <div class="row">
                  <div class="col-lg-12">
                      <section class="panel">
                          <header class="panel-heading">
                           Missing Person Case | Step 2 - Incident
                                  Information
                        </header>
                        <div class="panel-body">
                            <div class="form">
                                <form class="form-validate form-
                                       horizontal" id="
                                       missingStep2Form" method="
                                       post" action="step3">
                                    <div class="form-group ">
                                        <label for="placeLastSeen"
                                               class="control-label
                                               col-lg-2">place last
                                               seen</label>
                                        <div class="col-lg-10">
                                            <input class="form-
                                                  control " id="
                                                  placeLastSeen"
                                                  type="text" name="
                                                  placeLastSeen">
                                        </div>
                                    </div>
                                    <div class="form-group ">
                                        <label for="dateLastSeen"
                                               class="control-label
                                               col-lg-2">date last
                                               seen</label>
                                        <div class="col-lg-10">
                                            <input class="form-
                                                  control " id="
                                                  dateLastSeen" type
                                                  ="date" name="
                                                  dateLastSeen" />
                                        </div>
                                    </div>
                                    <div class="form-group ">
                                      <label for="narrative" class=
                                             "control-label col-lg-2
                                             ">narrative</label>
                                        <div class="col-lg-10">
                                            <textarea class="form-
                                                  control" rows="4"
                                                  name="narrative"
                                                  form="
                                                  missingStep2Form">
                                                  </textarea>
                                        </div>
                                    </div>
                                     <div class="form-group">
                                        <div class="btn-row" style="
                                               margin-left: 10%;
                                               margin-right:10%;">
                                            <button class="btn btn-
                                                  danger button-back
                                                  " type="button"
                                                  onclick="window.
                                                  history.back()"><i
                                                   class="fa fa-
                                                  arrow-left"></i>&
                                                  nbsp;&nbsp;Back</
                                                  button>
                                            <button class="btn btn-
                                                  primary button-
                                                  next" type="submit
                                                  ">Next&nbsp;&nbsp;
                                                  <i class="fa fa-
                                                  arrow-right"></i><
                                                  /button>
                                        </div>
                                    </div>
                                </form>
                            </div>
                        </div>
                    </section>
                </div>
            </div>
        </section>
    </section>
    <!--main content end-->
</section>
<!-- container section start -->
  <!-- javascripts -->
  <script src="<c:url value="/resources/js/jquery.js"/>"></
         script>
 <script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.
        js"/>"></script>
  <script src="<c:url value="/resources/js/jquery-1.8.3.min.js"
         />"></script>
  <script type="text/javascript" src="<c:url value="/resources/
         js/jquery-ui-1.9.2.custom.min.js"/>"></script>
  <!-- bootstrap -->
  <script src="<c:url value="/resources/js/bootstrap.min.js"/>">
```

```
          </script>
    <!-- nice scroll -->
    <script src="<c:url value="/resources/js/jquery.scrollTo.min.
          js"/>"></script>
    <script src="<c:url value="/resources/js/jquery.nicescroll.js"
          />" type="text/javascript"></script>
    <!-- jquery validate js -->
    <script src="<c:url value="/resources/js/jquery.validate.min.
          js"/>" type="text/javascript"></script>
    <!--custom script for all page-->
    <script src="<c:url value="/resources/js/scripts.js"/>"></
          script>
  </body>
</html>
```

Source Code 102:

create_missing_step3.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="/mwirs/user/welcome">Home</
      a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Missing</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Missing Person Case | Step 3 - Contact Person
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="missingStep3Form"
      method="post" action="step4">
<div class="form-group ">
<label for="name" class="control-label col-lg-2">name</label>
<div class="col-lg-10">
<input class="form-control " id="name" type="text" name="name" />
</div>
</div>
<div class="form-group ">
<label for="telNumber" class="control-label col-lg-2">telephone no
      .</label>
<div class="col-lg-10">
<input class="form-control " id="telNumber" type="text" name="
      telNumber" />
</div>
</div>
<div class="form-group ">
<label for="cellNumber" class="control-label col-lg-2">cellphone
      no.</label>
<div class="col-lg-10">
<input class="form-control " id="cellNumber" type="text" name="
      cellNumber" />
</div>
</div>
<div class="form-group ">
<label for="email" class="control-label col-lg-2">email</label>
<div class="col-lg-10">
<input class="form-control " id="email" type="email" name="email"
      />
</div>
</div>
<div class="form-group ">
<label for="address" class="control-label col-lg-2">address</label
      >
<div class="col-lg-10">
<input class="form-control " id="address" type="text" name="
      address" />
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/missing_step3_validation.
      js"/>"></script>
</body>
</html>
```

Source Code 103:

create_missing_step4.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
```

```
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Missing</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Missing Person Case | Step 4 - Upload Photos
</header>
<div class="panel-body">
<div class="form">
<div class="form-group">
<form action="validatePicture" class="form-horizontal dropzone" id
      ="myDropzone" enctype="multipart/form-data" method="post"
      style="margin-left:2%;margin-right: 2%">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]"
      multiple="multiple">
</div>
</form>
</div>
<form class="form-horizontal">
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="button" id="
      nextButton">Next&nbsp;&nbsp;<i class="fa fa-arrow-right"></i
      ></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--dropzone -->
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script src="<c:url value="/resources/js/dropzone_custom.js"/>"></
      script>
<script type="text/javascript">
$('#nextButton').click(function(){
window.location.replace("step5");
});
</script>
</body>
</html>
```

Source Code 104: create_missing.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Missing</li>
</ol>
</div>
```

```
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Missing Person Case | Step 1
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="missingStep1Form"
      method="post" action="missing/step2">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-10">
<input class="form-control " id="firstName" type="text" name="
      firstName" required />
</div>
</div>
<div class="form-group ">
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-10">
<input class="form-control " id="middleName" type="text" name="
      middleName" />
</div>
</div>
<div class="form-group ">
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-10">
<input class="form-control " id="lastName" type="text" name="
      lastName" required />
</div>
</div>
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-10">
<input class="form-control " id="alias" type="text" name="alias" /
      >
</div>
</div>
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-10">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default active">
<input type="radio" name="sex" value="Male" id="Male" checked="
      checked"/>Male
</label>
<label class="btn btn-default">
<input type="radio" name="sex" value="Female" id="Female"/>Female
</label>
</div>
</div>
</div>
<div class="form-group ">
<label for="birthDate" class="control-label col-lg-2">birth date</
      label>
<div class="col-lg-10">
<input class="form-control " id="birthDate" type="date" name="
      birthDate" />
</div>
</div>
<div class="form-group ">
<label for="height" class="control-label col-lg-2">height in cm</
      label>
<div class="col-lg-10">
<input class="form-control " id="height" type="number" name="
      height" min="0" />
</div>
</div>
<div class="form-group ">
<label for="eyeColor" class="control-label col-lg-2">eye color</
      label>
<div class="col-lg-10">
<input class="form-control " id="eyeColor" type="text" name="
      eyeColor"/>
</div>
</div>
<div class="form-group ">
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-10">
<input class="form-control " id="nationality" type="text" name="
      nationality"/>
</div>
</div>
<div class="form-group ">
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-10">
<input class="form-control " id="investigator" type="text" name="
      investigator"/>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="reset"> Reset&
      nbsp;&nbsp;<i class="fa fa-refresh"></i></button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/missing_step1_validation.
      js"/>"></script>
</body>
</html>
```

Source Code 105: create_sysad.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Create System Admin</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
```

```
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      System Admin</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Create System Admin</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
System Administrator
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="sysAdForm" method=
      "post">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-10">
<input class="form-control " id="firstName" type="text" name="
      firstName" required />
</div>
</div>
<div class="form-group ">
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-10">
<input class="form-control " id="middleName" type="text" name="
      middleName" />
</div>
</div>
<div class="form-group ">
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-10">
<input class="form-control " id="lastName" type="text" name="
      lastName" required />
</div>
</div>
<div class="form-group ">
<label for="username" class="control-label col-lg-2">username</
      label>
<div class="col-lg-10">
<input class="form-control" id="username" name="username" type="
      text" onchange="validateUniqueUsername();" required/>
</div>
</div>
<div class="form-group ">
<label for="email" class="control-label col-lg-2">email</label>
<div class="col-lg-10">
<input class="form-control " id="email" type="email" name="email"
      onchange="validateUniqueEmail();" required />
</div>
</div>
<div class="form-group">
<div class="btn-row">
<button class="btn btn-danger button-back" type="reset"> Reset&
      nbsp;&nbsp;<i class="fa fa-refresh"></i></button>
<button class="btn btn-primary button-next" type="submit"
data-toggle="modal" data-target="#loadingModal"
>finish&nbsp;&nbsp;<i class="fa fa-check"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- Modal -->
<div id="loadingModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-body" style="text-align: center;">
<i class="fa fa-spinner fa-spin fa-5x"></i>
</div>
</div>
</div>
</div>
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Creation successful</h4>
</div>
<div class="modal-body">
<p>Creation successful! An email was sent containing the account
      details.
</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Creation unsuccessful</h4>
</div>
<div class="modal-body">
<p>An error was encountered during creation. Please try again.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/create_sysad_script.js"/>
      "></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 106: create_wanted_choose.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
```

```
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Wanted</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 4 - Choose primary picture
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" method="post" action="
      reviewDetails">
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">display picture</
      label>
<div class="col-lg-10">
<div class="btn-group" data-toggle="buttons">
<c:forEach items="${validImages }" var="image" varStatus="status">
<c:choose>
<c:when test="${status.index ==0}">
<label class="btn btn-default active" style="border: none;">
<img src="getWantedPicture/${status.index}" id="img-button" style=
      "height:100px;width: auto;">
<input type="radio" name="primary" value="${status.index}" class="
      btn-radio" checked="checked"/>
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default" style="border: none; opacity:0.6;">
<img src="getWantedPicture/${status.index}" id="img-button" style=
      "height:100px;width: auto;">
<input type="radio" name="primary" value="${status.index}" class="
      btn-radio"/>
</label>
</c:otherwise>
</c:choose>
</c:forEach>
</div>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script type="text/javascript">
$('.btn-default').click(function() {
$(this).css('opacity','1');
$('.btn-default').not(this).css('opacity','0.6');
});
</script>
</body>
</html>
```

Source Code 107:

create_wanted_review.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
```

```
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Wanted</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 5 - Review Details
</header>
<div class="panel-body">
<div class="col-md-3 col-lg-3 " align="center">
<c:choose>
<c:when test="${empty validImages }">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModal${primaryIndex}">
<img alt="User Pic" src="getWantedPicture/${primaryIndex }"
class="img-thumbnail img-responsive">
</a>
<div id="myModal${primaryIndex }" class="modal fade" tabindex="-1"
       role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="getWantedPicture/${primaryIndex }" class="img-responsive
      " style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>
<td>first name</td>
<td>${wantedOnCreate.firstName }</td>
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.middleName}">
<td>${wantedOnCreate.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${wantedOnCreate.lastName }</td>
</tr>
<tr>
<td>sex</td>
<td>${wantedOnCreate.sex }</td>
</tr>
<tr>
<td>offense</td>
<td  style="white-space: normal;">
<c:forEach items="${wantedOnCreate.offense }" var="offense">
${offense }<br>
</c:forEach>
</td>
</tr>
<tr>
<td>alias</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.alias}">
<td>${wantedOnCreate.alias }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>birth date</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.birthDate}">
<td>${wantedOnCreate.getBirthDateString() }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>height</td>
<c:choose>
<c:when test="${wantedOnCreate.height != 0}">
<td>${wantedOnCreate.height } cm</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>eye color</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.eyeColor}">
<td>${wantedOnCreate.eyeColor }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>nationality</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.nationality}">
<td>${wantedOnCreate.nationality }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>reward</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.reward}">
<td>${wantedOnCreate.reward }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>narrative</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.narrative}">
<td>${wantedOnCreate.narrative}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>status</td>
<td>${wantedOnCreate.status }</td>
</tr>
<tr>
<td>investigator</td>
<c:choose>
<c:when test="${not empty wantedOnCreate.investigator}">
<td>${wantedOnCreate.investigator}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td  style="white-space: normal;" colspan="2">
<c:forEach items="${validImages }" var="picture" varStatus="status
      ">
<c:if test="${status.index!=primaryIndex }">
<a data-toggle="modal" href="#myModal${status.index }">
<img alt="User Pic" src="getWantedPicture/${status.index }"
class="img-responsive pull-left" style="height:70px;">
</a>
<div id="myModal${status.index }" class="modal fade" tabindex="-1"
       role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="getWantedPicture/${status.index }" class="img-responsive
      " style="width: 100%;">
</div>
</div>
</div>
</div>
</c:if>
</c:forEach>
</td>
</tr>
</tbody>
</table>
</div>
<div class="form">
<form class="form-horizontal">
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<a class="btn btn-success button-next" type="button" id="finish">
      Finish&nbsp;&nbsp;<i class="fa fa-check"></i></a>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
<!-- Modal -->
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Creation successful</h4>
</div>
<div class="modal-body">
<p>Creation successful! </p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Creation unsuccessful</h4>
</div>
<div class="modal-body">
<p>An error was encountered during creation. Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script type="text/javascript">
$("#finish").click(function(){
$.ajax({
async: false,
url: "finish",
success:function(){
$('#successfulModal').modal("show");
},
error: function(){
$('#failModal').modal("show");
},
});
})
$('#successfulModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/create/wanted');
});
$('#failModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/create/wanted');
});
</script>
</body>
</html>
```

Source Code 108:

create_wanted_step2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Wanted</li>
</ol>
</div>
</div>
```

```
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 2 - Additional Information
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="wantedStep2Form"
      method="post" action="step3">
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-10">
<input class="form-control " id="alias" type="text" name="alias" /
      >
</div>
</div>
<div class="form-group ">
<label for="birthDate" class="control-label col-lg-2">birth date</
      label>
<div class="col-lg-10">
<input class="form-control " id="birthDate" type="date" name="
      birthDate" />
</div>
</div>
<div class="form-group ">
<label for="height" class="control-label col-lg-2">height in cm</
      label>
<div class="col-lg-10">
<input class="form-control " id="height" type="number" name="
      height" min="0" />
</div>
</div>
<div class="form-group ">
<label for="eyeColor" class="control-label col-lg-2">eye color</
      label>
<div class="col-lg-10">
<input class="form-control " id="eyeColor" type="text" name="
      eyeColor"/>
</div>
</div>
<div class="form-group ">
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-10">
<input class="form-control " id="nationality" type="text" name="
      nationality"/>
</div>
</div>
<div class="form-group ">
<label for="reward" class="control-label col-lg-2">reward in Peso<
      /label>
<div class="col-lg-10">
<input class="form-control " id="reward" type="number" name="
      reward" min="0"/>
</div>
</div>
<div class="form-group ">
<label for="narrative" class="control-label col-lg-2">narrative</
      label>
<div class="col-lg-10">
<textarea class="form-control" rows="4" name="narrative" form="
      wantedStep2Form"></textarea>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/wanted_step2_validation.
      js"/>"></script>
</body>
</html>
```

Source Code 109: create_wanted_step3.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Wanted</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 3 - Upload Photos
</header>
<div class="panel-body">
<div class="form">
```

```
<div class="form-group">
<form action="validatePicture" class="form-horizontal dropzone" id
      ="myDropzone" enctype="multipart/form-data" method="post"
      style="margin-left:2%;margin-right: 2%">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]"
      multiple="multiple">
</div>
</form>
</div>
<form class="form-horizontal">
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-primary button-next" type="button" id="
      nextButton">Next&nbsp;&nbsp;<i class="fa fa-arrow-right"></i
      ></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--dropzone -->
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script src="<c:url value="/resources/js/dropzone_custom.js"/>"></
      script>
<script type="text/javascript">
$('#nextButton').click(function(){
window.location.replace("step4");
});
</script>
</body>
</html>
```

Source Code 110: create_wanted.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Write a case | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i>
      Write a case</h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-pencil-square-o"></i>Write a case</li>
<li><i class="fa fa-user"></i>Wanted</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive Case | Step 1
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="wantedStep1Form"
      method="post" action="wanted/step2">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-10">
<input class="form-control " id="firstName" type="text" name="
      firstName" required />
</div>
</div>
<div class="form-group ">
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-10">
<input class="form-control " id="middleName" type="text" name="
      middleName" />
</div>
</div>
<div class="form-group ">
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-10">
<input class="form-control " id="lastName" type="text" name="
      lastName" required />
</div>
</div>
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-10">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default active">
<input type="radio" name="sex" value="Male" id="Male" checked="
      checked"/>Male
</label>
<label class="btn btn-default">
<input type="radio" name="sex" value="Female" id="Female"/>Female
</label>
</div>
</div>
</div>
<div class="form-group ">
<label for="offense" class="control-label col-lg-2">offense</label
      >
<div class="col-lg-10">
<select name="offense" class="form-control" multiple="multiple" id
      ="offense">
<c:forEach items="${offenses }" var="item">
<option value="${item }">${item }</option>
</c:forEach>
</select>
```

```
</div>
</div>
<div class="form-group ">
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-10">
<select name="status" class="form-control" id="status">
<c:forEach items="${wantedStatus }" var="item">
<option value="${item }">${item }</option>
</c:forEach>
</select>
</div>
</div>
<div class="form-group ">
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-10">
<input class="form-control " id="investigator" type="text" name="
      investigator"/>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="reset"> Reset&
      nbsp;&nbsp;<i class="fa fa-refresh"></i></button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/wanted_step1_validation.
      js"/>"></script>
</body>
</html>
```

Source Code 111: edit_missing.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Missing | Edit</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i> Edit
      </h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i><a href="/mwirs/missing/${missing.id
       }">Missing: ${missing.firstName } ${missing.middleName } ${
      missing.lastName }</a></li>
<li><i class="fa fa-pencil-square-o"></i>Edit</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
<strong>${missing.firstName } ${missing.middleName } ${missing.
      lastName }</strong> | Edit
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="editMissingForm"
      method="post" action="step2">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-2">
<input class="form-control " id="firstName" type="text" name="
      firstName" value="${missing.firstName }" required />
</div>
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-2">
<input class="form-control " id="middleName" type="text" name="
      middleName" value="${missing.middleName }"/>
</div>
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-2">
<input class="form-control " id="lastName" type="text" name="
      lastName" value="${missing.lastName }"required />
</div>
</div>
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-2">
<input class="form-control " id="alias" type="text" name="alias"
      value="${missing.alias }" />
</div>
<label for="birthDate" class="control-label col-lg-2">birth date</
      label>
<div class="col-lg-2">
<input class="form-control " id="birthDate" type="date" name="
      birthDate" value="${missing.getBirthDateInputValue() }"/>
</div>
<label for="height" class="control-label col-lg-2">height</label>
<div class="col-lg-2">
<input class="form-control " id="height" type="text" name="height"
       value="${missing.height }" />
</div>
</div>
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-4">
<div class="btn-group" data-toggle="buttons">
<c:choose>
<c:when test="${missing.sex == 'Male' }">
```

```
<label class="btn btn-default active">
<input type="radio" name="sex" value="Male" id="Male" checked="
      checked"/>Male
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default">
<input type="radio" name="sex" value="Male" id="Male"/>Male
</label>
</c:otherwise>
</c:choose>
<c:choose>
<c:when test="${missing.sex == ’Female’ }">
<label class="btn btn-default active">
<input type="radio" name="sex" value="Female" id="Female"checked="
      checked"/>Female
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default">
<input type="radio" name="sex" value="Female" id="Female"/>Female
</label>
</c:otherwise>
</c:choose>
</div>
</div>
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-4">
<input class="form-control " id="nationality" type="text" name="
      nationality" value="${missing.nationality }"/>
</div>
</div>
<div class="form-group ">
<label for="narrative" class="control-label col-lg-2">narrative</
      label>
<div class="col-lg-10">
<textarea class="form-control" rows="4" name="narrative" form="
      editMissingForm">${missing.narrative }</textarea>
</div>
</div>
<div class="form-group">
<label for="placeLastSeen" class="control-label col-lg-2">place
      last seen</label>
<div class="col-lg-4">
<input class="form-control " id="placeLastSeen" type="text" name="
      placeLastSeen" value="${missing.placeLastSeen }" />
</div>
<label for="dateLastSeen" class="control-label col-lg-2">date last
       seen</label>
<div class="col-lg-4">
<input class="form-control " id="dateLastSeen" type="date" name="
      dateLastSeen" value="${missing.getDateLastSeenInputValue() }
      " />
</div>
</div>
<div class="form-group ">
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-4">
<input class="form-control " id="investigator" type="text" name="
      investigator" value="${missing.investigator }"/>
</div>
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-4">
<select name="status" class="form-control" id="status">
<c:forEach items="${status }" var="item">
<c:choose>
<c:when test="${item == missing.status }">
<option value="${item }" selected="selected">${item }</option>
</c:when>
<c:otherwise>
<option value="${item }">${item }</option>
</c:otherwise>
</c:choose>
</c:forEach>
</select>
</div>
</div>
<div class="form-group">
<header class="panel-heading">
<strong>Contact Person</strong>
</header>
</div>
<div class="form-group">
<label for="personName" class="control-label col-lg-2">name</label
      >
<div class="col-lg-4">
<input class="form-control " id="personName" type="text" name="
      personName" value="${person.name }" />
</div>
<label for="personAddress" class="control-label col-lg-2">address<
      /label>
<div class="col-lg-4">
<input class="form-control " id="personAddress" type="text" name="
      personAddress" value="${person.address }" />
</div>
</div>
<div class="form-group">
<label for="personTel" class="control-label col-lg-2">telephone no
      .</label>
<div class="col-lg-2">
<input class="form-control " id="personTel" type="text" name="
      personTel" value="${person.telNumber }" />
</div>
<label for="personCell" class="control-label col-lg-2">cellphone
      no.</label>
<div class="col-lg-2">
<input class="form-control " id="personCell" type="text" name="
      personCell" value="${person.cellNumber }" />
</div>
<label for="personEmail" class="control-label col-lg-2">email</
      label>
<div class="col-lg-2">
<input class="form-control " id="personEmail" type="text" name="
      personEmail" value="${person.email }" />
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-success button-next" type="submit" id="
      finish">Finish&nbsp;&nbsp;<i class="fa fa-check"></i></
      button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Edit successful</h4>
</div>
<div class="modal-body">
<p>${missing.firstName } ${missing.middleName }${missing.lastName
      } successfully edited.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Edit unsuccessful</h4>
</div>
<div class="modal-body">
<p>Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
```

```
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/edit_missing_validation.
      js"/>"></script>
<script type="text/javascript">
$('#successfulModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/missing/${missing.id}');
});
</script>
</body>
</html>
```

Source Code 112: edit_wanted.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Wanted | Edit</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-pencil-square-o"></i> Edit
      </h3>
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i><a href="/mwirs/wanted/${wanted.id }
      ">Wanted Fugitive: ${wanted.firstName } ${wanted.middleName
      } ${wanted.lastName }</a></li>
<li><i class="fa fa-pencil-square-o"></i>Edit</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
<strong>${wanted.firstName } ${wanted.middleName } ${wanted.
      lastName }</strong> | Edit
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="editWantedForm"
      method="post" action="step2">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-2">
<input class="form-control " id="firstName" type="text" name="
      firstName" value="${wanted.firstName }" required />
</div>
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-2">
<input class="form-control " id="middleName" type="text" name="
      middleName" value="${wanted.middleName }"/>
</div>
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-2">
<input class="form-control " id="lastName" type="text" name="
      lastName" value="${wanted.lastName }"required />
</div>
</div>
<div class="form-group ">
<label for="alias" class="control-label col-lg-2">alias</label>
<div class="col-lg-2">
<input class="form-control " id="alias" type="text" name="alias"
      value="${wanted.alias }" />
</div>
<label for="birthDate" class="control-label col-lg-2">birth date</
      label>
<div class="col-lg-2">
<input class="form-control " id="birthDate" type="date" name="
      birthDate" value="${wanted.getBirthDateInputValue() }"/>
</div>
<label for="height" class="control-label col-lg-2">height</label>
<div class="col-lg-2">
<input class="form-control " id="height" type="text" name="height"
       value="${wanted.height }" />
</div>
</div>
<div class="form-group ">
<label for="sex" class="control-label col-lg-2">sex</label>
<div class="col-lg-2">
<div class="btn-group" data-toggle="buttons">
<c:choose>
<c:when test="${wanted.sex == 'Male' }">
<label class="btn btn-default active">
<input type="radio" name="sex" value="Male" id="Male" checked="
      checked"/>Male
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default">
<input type="radio" name="sex" value="Male" id="Male"/>Male
</label>
</c:otherwise>
</c:choose>
<c:choose>
<c:when test="${wanted.sex == 'Female' }">
<label class="btn btn-default active">
<input type="radio" name="sex" value="Female" id="Female"checked="
      checked"/>Female
</label>
</c:when>
<c:otherwise>
<label class="btn btn-default">
<input type="radio" name="sex" value="Female" id="Female"/>Female
</label>
</c:otherwise>
</c:choose>
</div>
</div>
<label for="nationality" class="control-label col-lg-2">
      nationality</label>
<div class="col-lg-2">
<input class="form-control " id="nationality" type="text" name="
      nationality" value="${wanted.nationality }"/>
</div>
<label for="reward" class="control-label col-lg-2">reward</label>
<div class="col-lg-2">
<input class="form-control " id="height" type="text" name="reward"
       value="${wanted.reward }" />
</div>
</div>
<div class="form-group ">
<label for="narrative" class="control-label col-lg-2">narrative</
      label>
<div class="col-lg-10">
<textarea class="form-control" rows="4" name="narrative" form="
      editWantedForm">${wanted.narrative }</textarea>
</div>
```

```
</div>
<div class="form-group ">
<label for="investigator" class="control-label col-lg-2">
      investigator</label>
<div class="col-lg-10">
<input class="form-control " id="investigator" type="text" name="
      investigator" value="${wanted.investigator }"/>
</div>
</div>
<div class="form-group ">
<label for="offense" class="control-label col-lg-2">offense</label
      >
<div class="col-lg-4">
<select name="offense" class="form-control" multiple="multiple" id
      ="offense">
<c:forEach items="${offenses }" var="item">
<c:set var="contains" value="${false }"/>
<c:forEach items="${wanted.offense }" var="offense">
<c:if test="${offense == item}">
<c:set var="contains" value="${true }"/>
</c:if>
</c:forEach>
<c:choose>
<c:when test="${contains }">
<option value="${item }" selected="selected">${item }</option>
</c:when>
<c:otherwise>
<option value="${item }">${item }</option>
</c:otherwise>
</c:choose>
</c:forEach>
</select>
</div>
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-4">
<select name="status" class="form-control" id="status">
<c:forEach items="${wantedStatus }" var="item">
<c:choose>
<c:when test="${item == wanted.status }">
<option value="${item }" selected="selected">${item }</option>
</c:when>
<c:otherwise>
<option value="${item }">${item }</option>
</c:otherwise>
</c:choose>
</c:forEach>
</select>
</div>
</div>
<div class="form-group">
<div class="btn-row" style="margin-left: 10%; margin-right:10%;">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-success button-next" type="submit" id="
      finish">Finish&nbsp;&nbsp;<i class="fa fa-check"></i></
      button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Edit successful</h4>
</div>
<div class="modal-body">
<p>${wanted.firstName } ${wanted.middleName }${wanted.lastName }
      successfully edited.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Edit unsuccessful</h4>
</div>
<div class="modal-body">
<p>Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/edit_wanted_validation.js
      "/>"></script>
<script type="text/javascript">
$('#successfulModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/wanted/${wanted.id}');
});
</script>
</body>
</html>
```

Source Code 113: header_general.jsp

```
<header class="header dark-bg">
    <div class="toggle-nav">
        <div class="icon-reorder tooltips" data-original-
              title="Toggle Navigation" data-placement="
              bottom"><i class="icon_menu"></i></div>
    </div>
    <!--logo start-->
    <a href="/mwirs" class="logo">MW <span class="lite">IRS
         </span></a>
    <!--logo end-->
    <div class="nav search-row" id="top_menu">
        <!-- search form start -->
        <ul class="nav top-menu">
            <li>
                <form class="navbar-form">
                    <input class="form-control" placeholder="
                           Search" type="text">
                </form>
            </li>
        </ul>
        <!-- search form end -->
    </div>
    <div class="top-nav notification-row">
        <!-- notificatoin dropdown start-->
        <ul class="nav pull-right top-menu">
        <li>
             <a href="/mwirs/register">Register </a>
           </li>
           <li>
          <p>|</p>
           </li>
           <li>
                <a href="/mwirs/login">Login</a>
           </li>
        </ul>
        <!-- notificatoin dropdown end-->
    </div>
</header>
<!--header end-->
```

Source Code 114: header_sa.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<header class="header dark-bg">
<div class="toggle-nav">
<div class="icon-reorder tooltips" data-original-title="Toggle
      Navigation" data-placement="bottom"><i class="icon_menu"></i
      ></div>
</div>
<!--logo start-->
<a href="${home }" class="logo">MW <span class="lite">IRS</span></
      a>
<!--logo end-->
<div class="top-nav notification-row">
<!-- notificatoin dropdown start-->
<ul class="nav pull-right top-menu">
</li>
<!-- inbox notificatoin end -->
<!--                    alert notification start -->
<li id="alert_notificatoin_bar" class="dropdown">
<a data-toggle="dropdown" class="dropdown-toggle" href="#">
<i class="icon-bell-l"></i>
<span class="badge bg-important" id="notifCount" >${pendingUsers.
      size() }</span>
</a>
<ul class="dropdown-menu extended notification">
<div id="notifs">
<div class="notify-arrow notify-arrow-blue"></div>
<c:forEach var="user" items="${pendingUsers }">
<li>
<a href="/mwirs/SysAd/users/pending" class="blue">
<span class="label label-primary"><i class="fa fa-user" aria-
      hidden="true"></i></span>
Pending registration from <strong> ${ user.firstName} ${user.
      middleName } ${user.lastName } </strong>
<span class="small italic pull-right">${user.getDateCreatedString
      () }</span>
</a>
</li>
</c:forEach>
</div>
</ul>
</li>
<!-- alert notification end-->
<!-- user login dropdown start-->
<li class="dropdown">
<a data-toggle="dropdown" class="dropdown-toggle" href="#">
<span class="photo">
<c:choose>
<c:when test="${empty loggedInUser.pictureDTO }">
<i class="fa fa-user"></i>
</c:when>
<c:otherwise>
<img src="/mwirs/user/picture" style="height:30px;" class="img-
      circle">
</c:otherwise>
</c:choose>
</span>
<span class="username">${loggedInUser.firstName} ${loggedInUser.
      lastName}</span>
<b class="caret"></b>
</a>
<ul class="dropdown-menu extended logout">
<div class="log-arrow-up"></div>
<li class="eborder-top">
<a href="/mwirs/user/viewProfile"><i class="icon_profile"></i> My
      Profile</a>
</li>
<li>
<a href="/mwirs/user/logout"><i class="icon_key_alt"></i> Log Out<
      /a>
</li>
</ul>
</li>
<!-- user login dropdown end -->
</ul>
<!-- notificatoin dropdown end-->
</div>
</header>
<!--header end-->
```

Source Code 115: histograms.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Face Recognition Details</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/recognize_face_style.css"
      />" rel="stylesheet">
<script src="<c:url value="/resources/js/plotly-latest.min.js"/>">
      </script>
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-bar-chart"></i>Face
      Recognition Details</h3>
<c:choose>
<c:when test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-search"></i><a href="/mwirs/faceRecognizer">
      Face Recognizer</a></li>
<li><i class="fa fa-bar-chart"></i>Face Recognition Details</li>
</ol>
</c:when>
<c:otherwise>
<ol class="breadcrumb">
<li><i class="fa fa-search"></i><a href="/mwirs/faceRecognizer">
      Face Recognizer</a></li>
<li><i class="fa fa-bar-chart"></i>Face Recognition Details</li>
</ol>
</c:otherwise>
</c:choose>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Face Recognition Details
</header>
<div class="panel-body">
<div class="row">
<div class="col-md-4"></div>
<div class="col-md-4 section-label">
Test Picture
</div>
<div class="col-md-4"></div>
</div>
<div class="row" style="text-align: center;">
<div class="col-md-3">
<img src="/mwirs/faceRecognizer/results/testPicture"
```

```
id="img-button" style="height:250px;;width: auto;" class=" pull-
      right img-thumbnail img-responsive">
</div>
<div class="col-md-6">
<div id="primaryHist" style="width:700px;height:250px;" class="
      pull-left"></div>
</div>
</div>
<div class="row">
<div class="col-md-4"></div>
<div class="col-md-4 section-label">
Pictures of: <a href="/mwirs/${category }/${caseProfile.id}">${
      caseProfile.firstName } ${caseProfile.middleName } ${
      caseProfile.lastName }</a>
</div>
<div class="col-md-4"></div>
</div>
<div class="row">
<c:forEach var = "detail" items="${details }">
<div class="row">
<div class="col-md-3">
<img src="/mwirs/faceRecognizer/results/picture/${category }/${
      caseId}/${detail.id}"
id="img-button" style="height:250px;width: auto;" class="img-
      thumbnail img-responsive pull-right">
</div>
<div class="col-md-6">
<div id="div/${detail.id }" style="width:700px;height:250px;"></
      div>
</div>
<div class="col-md-3 " style="height:250px;">
<p class="histogram-similarity">${detail.similarity } %</p>
</div>
</div>
</c:forEach>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<c:forEach var = "detail" items="${details }">
<script type="text/javascript">
var x = ${detail.histogram.toString()}
var data = [
{
x: x,
type: 'histogram'
}
];
Plotly.newPlot('div/${detail.id}', data);
</script>
</c:forEach>
<script type="text/javascript">
var x = ${testHistogram.toString()};
var data = [
{
x: x,
type: 'histogram'
}
];
Plotly.newPlot('primaryHist', data);
</script>
</body>
</html>
```

Source Code 116: login.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Login</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet">
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<div class="login-body">
<div class="login-img-body">
<div class="container">
<form class="login-form " id="login_form" action="/mwirs/login/
      validate" method="post">
<div class="login-wrap">
<p class="login-img"><i class="icon_lock_alt"></i></p>
<c:if test="${errorMessage != null }">
<div class="alert alert-danger" role="alert">
<i class="fa fa-exclamation-circle"></i>
<span class="sr-only">Error:</span>
${errorMessage }
</div>
</c:if>
<c:if test="${successMessage !=null }">
<div class="alert alert-success">
<i class="fa fa-check"></i>
${successMessage }
</div>
</c:if>
<div class="input-group">
<span class="input-group-addon"><i class="icon_profile"></i></span
      >
<input type="text" class="form-control" placeholder="Username"
      name="username" id="username" autofocus required="required">
</div>
<div class="input-group">
<span class="input-group-addon"><i class="icon_key_alt"></i></span
      >
<input type="password" class="form-control" placeholder="Password"
       name="password" id="password" required="required">
</div>
<span class="pull-left"> <a href="#" data-toggle="modal" data-
      target="#passwordModal"> Forgot Password?</a></span>
<button class="btn btn-primary btn-lg btn-block" type="submit">log
       in</button>
<a href="/mwirs/register" class="btn btn-info btn-lg btn-block"
      role="button" id="signup">sign up</a>
</div>
</form>
</div>
</div>
</div>
</section>
<!-- container section end -->
<!-- Modal -->
<div id="passwordModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
```

```
<h4 class="modal-title">Forgot password?</h4>
</div>
<div class="modal-body">
<p><strong>Please enter your email address used in your account.</
      strong></p>
<form class="form-validate form-horizontal" id="forgotPasswordForm
      " method="post" action="#">
<div class="form-group ">
<label for="email" class="control-label col-lg-2">email</label>
<div class="col-lg-10">
<input class="form-control " id="email" type="email" name="email"/
      >
</div>
</div>
</form>
</div>
<div class="modal-footer">
<button type="button" id="submitPassword" class="btn btn-success">
      Submit&nbsp;&nbsp;<i class="fa fa-check"></i></button>
</div>
</div>
</div>
</div>
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p>You will receive an email containing your new password.
</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Your email does not exist in the system. Please try again or
      contact system administrator.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/login_validation.js"/>"><
      /script>
<!--custome script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 117: missing_profile.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
      pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
</head>
<body>
<input type="hidden" value="${missing.id }" id="caseId">
<!-- container section start -->
<section id="container" class="">
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-user"></i>Missing</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i>Missing: ${missing.firstName } ${
      missing.middleName } ${missing.lastName }</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Missing Person
</header>
<div class="panel-body">
<div class="col-md-3 col-lg-3 " align="center">
<div class="row">
<c:choose>
<c:when test="${!hasPrimaryPic}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModalPrimary">
<img alt="User Pic" src="picture/primary"
class="img-thumbnail img-responsive">
</a>
<div id="myModalPrimary" class="modal fade" tabindex="-1" role="
      dialog" aria-labelledby="myModalLabel" aria-hidden="true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture/primary" class="img-responsive" style="width:
      100%;">
```

```
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<c:choose>
<c:when test="${empty loggedInUser }">
<div class="list-group" style="margin-top: 10px;" >
<a href="/mwirs/tip/create/${missing.id }" class="list-group-item"
      >
<i class="fa fa-eye"></i>&nbsp; submit a tip</a>
</div>
</c:when>
<c:when test="${loggedInUser.canUpdate(missing) }">
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#profilePicModal">
<i class="fa fa-picture-o"></i>&nbsp;
change profile picture</a>
<!--modal start-->
<div id="profilePicModal" class="modal fade" role="dialog" >
<div class="modal-dialog" style="width:250px;">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload profile picture</h4>
</div>
<div class="modal-body">
<form action="picture/validateProfilePicture" class="form-
      horizontal dropzone pull-right" id="profPicDropzone"
enctype="multipart/form-data" method="post" style="width:200px;">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]">
</div>
</form>
</div>
<div class="modal-footer">
<a role="button" class="btn btn-success" style="margin-top: 10px;"
       id="uploadProfilePicture" href="picture/
      changeMissingProfilePicture/${missing.id }"><i class="fa fa-
      upload" aria-hidden="true"></i> &nbsp;Upload</a>
</div>
</div>
</div>
</div>
<!--modal end-->
<a href="/mwirs/tip/view/${missing.id }" class="list-group-item">
<i class="fa fa-eye"></i>&nbsp;
view submitted tips
<c:if test="${newTipCount>0 }">
<span class="badge">${newTipCount }</span>
</c:if>
</a>
<a href="/mwirs/missing/edit/${missing.id}" class="list-group-item
      ">
<i class="fa fa-pencil-square-o"></i>&nbsp;
edit case</a>
<a class="list-group-item" data-toggle="modal" href="#deleteModal"
      >
<i class="fa fa-trash-o"></i>&nbsp;
delete case</a>
</div>
</c:when>
<c:when test="${loggedInUser.canViewTips(missing) }">
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="/mwirs/tip/view/${missing.id }" class="list-group-item">
<i class="fa fa-eye"></i>&nbsp;
view submitted tips
<c:if test="${newTipCount>0 }">
<span class="badge">${newTipCount }</span>
</c:if>
</a>
</div>
</c:when>
</c:choose>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>
<td>first name</td>
<td>${missing.firstName }</td>
```

```
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty missing.middleName}">
<td>${missing.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${missing.lastName }</td>
</tr>
<tr>
<td>sex</td>
<td>${missing.sex }</td>
</tr>
<tr>
<td>alias</td>
<c:choose>
<c:when test="${not empty missing.alias}">
<td>${missing.alias }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>birth date</td>
<c:choose>
<c:when test="${not empty missing.birthDate}">
<td>${missing.getBirthDateString() }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>height</td>
<c:choose>
<c:when test="${missing.height != 0}">
<td>${missing.height } cm</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>eye color</td>
<c:choose>
<c:when test="${not empty missing.eyeColor}">
<td>${missing.eyeColor }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>nationality</td>
<c:choose>
<c:when test="${not empty missing.nationality}">
<td>${missing.nationality }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>place last seen</td>
<c:choose>
<c:when test="${not empty missing.placeLastSeen}">
<td>${missing.placeLastSeen }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>date last seen</td>
<c:choose>
<c:when test="${not empty missing.dateLastSeen}">
<td>${missing.getDateLastSeenString() }</td>
</c:when>
```

```
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
</tr>
<c:if test="${loggedInUser.canViewTips(missing) }">
<c:set var="contactPerson" value="${missing.contactPerson }"></c:
      set>
<c:if test="${!contactPerson.isEmpty()}">
<tr>
<td>Contact Person</td>
<td  style="white-space: normal;">
<c:if test="${ not empty contactPerson.name }">
${contactPerson.name }<br>
</c:if>
<c:if test="${ not empty contactPerson.email }">
<strong>@</strong> ${contactPerson.email }<br>
</c:if>
<c:if test="${ not empty contactPerson.telNumber }">
<i class="fa fa-phone-square"></i> ${contactPerson.telNumber }<br>
</c:if>
<c:if test="${ not empty contactPerson.cellNumber }">
<i class="fa fa-mobile"></i> ${contactPerson.cellNumber }<br>
</c:if>
<c:if test="${ not empty contactPerson.address }">
<i class="fa fa-home"></i> ${contactPerson.address }
</c:if>
</td>
</tr>
</c:if>
</c:if>
<tr>
<td>narrative</td>
<c:choose>
<c:when test="${not empty missing.narrative}">
<td>${missing.narrative}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>status</td>
<td>${missing.status }</td>
</tr>
<c:if test="${ not empty loggedInUser }">
<tr>
<td>investigator</td>
<c:choose>
<c:when test="${not empty wanted.investigator}">
<td>${wanted.investigator}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
</c:if>
<tr>
<td>date reported</td>
<td>${missing.getDateCreatedString() }</td>
</tr>
<tr>
<td  style="white-space: normal;" colspan="2">
<c:forEach items="${missing.pictures }" var="picture">
<a data-toggle="modal" href="#myModal${picture.id }">
<img alt="User Pic" src="picture/${picture.id }"
class="img-responsive pull-left" style="height:70px;">
</a>
<div id="myModal${picture.id}" class="modal fade" tabindex="-1"
      role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture/${picture.id}" class="img-responsive" style="
      width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:forEach>
<br>
<c:if test="${loggedInUser.canUpdate(missing) }">
<a href="#" data-toggle="modal" data-target="#picModal" class="
      pull-right">
<i class="fa fa-plus-square-o" aria-hidden="true"></i>&nbsp;
upload/delete pictures</a>
<!--modal start-->
<div id="picModal" class="modal fade" role="dialog" >
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload/Delete Pictures</h4>
</div>
<div class="modal-body">
<form action="picture/validatePictures" class="form-horizontal
      dropzone" id="picDropzone"
enctype="multipart/form-data" method="post">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]"
      multiple="multiple">
</div>
</form>
</div>
<div class="modal-footer">
<a role="button" class="btn btn-success" style="margin-top: 10px;"
       id="uploadProfilePicture"
href="picture/saveMissingPictures/${missing.id }">
<i class="fa fa-floppy-o" aria-hidden="true"></i> &nbsp;save
      changes</a>
</div>
</div>
</div>
</div>
<!--modal end-->
</c:if>
</td>
</tr>
</tbody>
</table>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<div id=deleteModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Delete this case</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to delete <strong> ${missing.firstName }
      ${missing.middleName } ${missing.lastName } </strong>
from missing persons?
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default pull-left" data-
      dismiss="modal">Cancel</button>
<button type="button" class="btn btn-danger pull-right" id="
      deleteConfirm">Yes</button>
</div>
</div>
</div>
</div>
<div id=successfulModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p> <strong> ${missing.firstName } ${missing.middleName } ${
      missing.lastName } </strong>
deleted from missing persons.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
```

```
<div id=failModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Cannot delete <strong> ${missing.firstName } ${missing.
      middleName } ${missing.lastName } </strong>
from missing persons.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/case_profile_script.js"/>
      "></script>
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script type="text/javascript">
Dropzone.options.picDropzone = {
maxFiles: 10,
acceptedFiles: "image/jpeg,image/png,image/gif",
parallelUploads:1,
uploadMultiple:false,
init: function () {
this.on("maxfilesexceeded", function (data) {
var res = eval(’(’ + data.xhr.responseText + ’)’);
});
this.on("addedfile", function (file) {
var removeButton = Dropzone.createElement("<button type=\"button\"
       id=\"delete-button\">"+
"<i class=\"fa fa-trash-o fa-2x\"></i></button>");
var _this = this;
removeButton.addEventListener("click", function (e) {
e.preventDefault();
e.stopPropagation();
_this.removeFile(file);
});
file.previewElement.appendChild(removeButton);
});
this.on("removedfile",function(file){
$.ajax({
async:false,
url : ’picture/deletePicture’,
data: {
"fileName":file.name,
},
success : function(data) {
}
});
});
var myDropzone = this;
<c:forEach items="${missing.pictures }" var="picture">
fileName = "${picture.fileName}";
url = "picture/${picture.id}";
var existingFile = {
name: fileName,
size: ${picture.size},
type: ’image/’+fileName.split(’.’).pop(),
status: Dropzone.ADDED,
accepted: true,
url: url,
};
myDropzone.emit("addedfile", existingFile);
myDropzone.createThumbnailFromUrl(existingFile,url);
myDropzone.emit("thumbnail", existingFile, url);
myDropzone.emit("complete", existingFile);
</c:forEach>
},
};
</script>
</body>
</html>
```

Source Code 118:

recognize_face_results.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<c:choose>
<c:when test="${not empty allResults }">
<section class="panel">
<header class="panel-heading">
Results
</header>
<div class="panel-body">
<div class="col-md-12">
<c:forEach var = "result" items="${allResults }">
<div class="row" style="margin: 5px auto;">
<c:forEach var="wantedEntry" items="${wantedResult}">
<c:set var="wanted" value="${wantedEntry.key }"/>
<c:if test="${result.key == wanted.id }">
<c:set var="picture" value="${wanted.primaryPictureDTO}"></c:set>
<div class="col-md-4 text-center">
<c:choose>
<c:when test="${empty picture}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive ">
</c:when>
<c:otherwise>
<img src="faceRecognizer/results/picture/wanted/${ wanted.id}/${
      picture.id}"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive ">
</c:otherwise>
</c:choose>
</div>
<div class="col-md-6">
<div class="row name">
<a href="/mwirs/wanted/${wanted.id }">${wanted.firstName} ${wanted
      .middleName} ${wanted.lastName}</a>
</div>
<div class="row">
WANTED (<em>status: ${wanted.status }</em>)
</div>
</div>
<div class="col-md-2 similarity">
${result.value} %
<button type="button" class="btn btn-primary btn-xs view-details"
id="/wanted/${ wanted.id}">view details</button>
</div>
</c:if>
</c:forEach>
<c:forEach var="missingEntry" items="${missingResult}">
<c:set var="missing" value="${missingEntry.key}"/>
<c:if test="${result.key == missing.id }">
<c:set var="picture" value="${missing.primaryPictureDTO}"></c:set>
<div class="col-md-4 text-center">
<c:choose>
<c:when test="${empty picture}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive ">
</c:when>
<c:otherwise>
<img src="faceRecognizer/results/picture/missing/${ missing.id}/${
       picture.id}"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive ">
</c:otherwise>
</c:choose>
</div>
<div class="col-md-6">
<div class="row name">
<a href="/mwirs/missing/${missing.id }">${missing.firstName} ${
      missing.middleName} ${missing.lastName}</a>
</div>
<div class="row">
MISSING (<em>status: ${missing.status } </em>)
</div>
```

```
</div>
<div class="col-md-2 similarity">
${result.value} %
<button type="button" class="btn btn-primary btn-xs view-details"
id="/missing/${ missing.id}">view details</button>
</div>
</c:if>
</c:forEach>
</div>
</c:forEach>
</div>
</div>
</section>
</c:when>
<c:otherwise>
<header class="panel-heading no-results">
No  results found.
</header>
</c:otherwise>
</c:choose>
```

Source Code 119: recognize_face.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Face Recognizer</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/recognize_face_style.css"
      />" rel="stylesheet"/>
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-search"></i>Face
      Recognizer</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i>Face Recognizer</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<!--                 form end -->
<section class="panel">
<header class="panel-heading">
Upload image
</header>
<div class="panel-body">
<div class="col-md-12">
<div class="form">
<div class="col-md-6">
<div class="form-group">
<form action="faceRecognizer/validatePicture" class="form-
      horizontal dropzone pull-right" id="myDropzone"
enctype="multipart/form-data" method="post">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]">
</div>
</form>
</div>
</div>
<div class="col-md-6">
<form method="post" id="choiceForm">
<label>Search In:</label>
<div class="form-group ">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default active">
<input type="checkbox" name="category" value="wanted" checked="
      checked"/>Wanted Fugitives
</label>
<label class="btn btn-default">
<input type="checkbox" name="category" value="missing"/>Missing
      Persons
</label>
</div>
</div>
</form>
<div class="form-group ">
<button class="btn btn-info"id="submit">
submit
</button>
<div class="warning">
<em> This might take a while</em>
</div>
</div>
</div>
</div>
</div>
</div>
</section>
<!--                 form end -->
<!-- results start -->
<div class = "results">
</div>
<!--results end -->
<!-- details start-->
<div id="detailsModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Details</h4>
</div>
<div class="modal-body" style="text-align: center;">
<i class="fa fa-spinner fa-spin fa-5x"></i>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- details end-->
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
```

```
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--dropzone -->
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script src="<c:url value="/resources/js/recognize_face_script.js"
      />"></script>
<!--charts -->
<script src="<c:url value="/resources/assets/chart-master/Chart.js
      "/>"></script>
</body>
</html>
```

Source Code 120: register_step2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Account Registration Step 2</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet">
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
<script src='https://www.google.com/recaptcha/api.js'></script>
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Account Registration | Step 2
</header>
<div class="panel-body">
<div id="errorMessage"></div>
<form class="form-validate form-horizontal" id="registrationForm"
      method="post" action="">
<div class="form">
<div class="form-group ">
<label for="crimeRegistrarRadio" class="control-label col-lg-2">
      Crime Registrar</label>
<div class="col-lg-10">
<div class="btn-group" data-toggle="buttons">
<label class="btn btn-default active">
<input type="radio" class="crimeRegistrarRadio" value="y" id="yes"
       checked="checked"/>Yes
</label>
<label class="btn btn-default">
<input type="radio" class="crimeRegistrarRadio" value="n" id="no"/
      >No
</label>
<input type="hidden" name="crimeRegistrar" id="crimeRegistrar"
      value="y">
</div>
</div>
</div>
<div class="form-group ">
<label for="PRO" class="control-label col-lg-2">PRO</label>
<div class="col-lg-10">
<input class="form-control " id="PRO" type="text" name="PRO"
      required="required"/>
</div>
</div>
<div class="form-group ">
<label for="PPO" class="control-label col-lg-2">PPO</label>
<div class="col-lg-10">
<input class="form-control " id="PPO" type="text" name="PPO"/>
</div>
</div>
<div class="form-group ">
<label for="cityMunicipalPS" class="control-label col-lg-2">City/
      Municipal PS</label>
<div class="col-lg-10">
<input class="form-control " id="cityMunicipalPS" type="text" name
      ="cityMunicipalPS"/>
</div>
</div>
<div class="form-group ">
<label for="PCP" class="control-label col-lg-2">PCP</label>
<div class="col-lg-10">
<input class="form-control" id="PCP" name="PCP" type="text"/>
</div>
</div>
<div class = "form-group">
<label for="recaptcha" class="control-label col-lg-2">captcha</
      label>
<div class="col-lg-10">
<div>
<div class="g-recaptcha" data-sitekey="6LdbtBoTAAAAACmz75_a-
      nxTvq2txfSOxlKzcL8J" class=""></div>
</div>
</div>
</div>
<div class="form-group">
<div class="btn-row">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-success button-next" type="submit"
id="finish" data-toggle="modal" data-target="#loadingModal" data-
      backdrop="static" >Finish&nbsp;&nbsp;<i class="fa fa-check">
      </i></button>
</div>
</div>
</div>
</form>
</div>
</section>
</div>
</div>
</section>
<!-- page end-->
</section>
</section>
<!--main content end-->
<!-- Modal -->
<div id="loadingModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-body" style="text-align: center;">
<i class="fa fa-spinner fa-spin fa-5x"></i>
</div>
</div>
</div>
</div>
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Registration successful</h4>
</div>
<div class="modal-body">
<p>You can login after the system administrator has reviewed your
      account. You will receive an email at:
<strong>${email}</strong>.
Thank you.
```

```
</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Registration unsuccessful</h4>
</div>
<div class="modal-body">
<p>An error was encountered during registration. Please try again
      or contact system administrator.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/
      registration_step2_validation.js"/>"></script>
</body>
</html>
```

Source Code 121: register.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Account Registration Step 1</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet" />
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Account Registration | Step 1
</header>
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="registrationForm1"
       method="post" action="register/step_2">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">first name</
      label>
<div class="col-lg-10">
<input class="form-control " id="firstName" type="text" name="
      firstName" required />
</div>
</div>
<div class="form-group ">
<label for="middleName" class="control-label col-lg-2">middle name
      </label>
<div class="col-lg-10">
<input class="form-control " id="middleName" type="text" name="
      middleName" />
</div>
</div>
<div class="form-group ">
<label for="lastName" class="control-label col-lg-2">last name</
      label>
<div class="col-lg-10">
<input class="form-control " id="lastName" type="text" name="
      lastName" required />
</div>
</div>
<div class="form-group ">
<label for="username" class="control-label col-lg-2">username</
      label>
<div class="col-lg-10">
<input class="form-control" id="username" name="username" type="
      text" onchange="validateUniqueUsername();" required/>
</div>
</div>
<div class="form-group ">
<label for="password" class="control-label col-lg-2">password</
      label>
<div class="col-lg-10">
<input class="form-control " id="password" type="password" name="
      password" maxlength="20" required/>
<button type="button" role="button" title="Show Password"
style="position: absolute; right: 20px; top: 25px; margin-top: -22
      px; background: transparent;
border: none; color: #6a6a6a;" id ="toggle">
<i class="fa fa-eye fa-2x"></i>
</button>
</div>
</div>
<div class="form-group ">
<label for="email" class="control-label col-lg-2">email</label>
<div class="col-lg-10">
<input class="form-control " id="email" type="email" name="email"
      onchange="validateUniqueEmail();" required />
</div>
</div>
<div class="form-group">
<div class="btn-row">
<button class="btn btn-danger button-back" type="reset"> Reset&
      nbsp;&nbsp;<i class="fa fa-refresh"></i></button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
```

```
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/registration_validation.
      js"/>"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 122: report.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Report a Person Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet" />
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-flag-o"></i>Report a
      Person Missing</h3>
</div>
</div>
<div class="row">
<div class="col-lg-9">
<section class="panel">
<header class="panel-heading">
Report
</header>
<div class="panel-body">
<div>
If a family member, peer or friend is missing and their
      whereabouts are unknown and you have strong reason to
      believe of possible serious fears for their personal safety
      and welfare, contact your nearest local police immediately
      to report the person missing. You do not have to wait 24
      hours to report someone as missing leave it to the police to
       determine.
<br><br>
<strong>A full missing person report must be filed at a police
      station  it cannot be done by phone, text message or email.
</strong>
<br><br>
The report will be entered into the Police records. The case will
      be assigned to an officer who will work with you and inform
      you of any progress being made to locate the missing person.
Contact your local police station (Please check our contact
      directory) to file a report if you have a family member or
      friend missing and you hold serious fears for their safety.
      The report will be entered into the Police record and the
      case will be assigned to an officer who will work with you
      and inform you of any progress being made. This officer will
       remain your point of contact.
</div>
</div>
</section>
</div>
<div class="col-lg-3">
<section class="panel">
<header class="panel-heading">
Contacts
</header>
<div class="panel-body">
<i class="fa fa-phone"></i> &nbsp; <a href="download/
      phoneDirectory">phone directory</a>
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
</body>
</html>
```

Source Code 123: sidebar_cr.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!--sidebar start-->
<aside>
<div id="sidebar" class="nav-collapse ">
<!-- sidebar menu start-->
<ul class="sidebar-menu">
<li class="">
<a class="" href="${home }">
<i class="icon_house_alt"></i>
<span>Home</span>
</a>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-pencil-square-o"></i>
<span>Write a case</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/create/wanted">Wanted Fugitive</a></
      li>
<li><a class="" href="/mwirs/create/missing">Missing Person</a></
      li>
</ul>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-list-alt"></i>
<span>View Records</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/wanted/view_all/
      REPORT_DATE_NEW_TO_OLD">Wanted Fugitive</a></li>
<li><a class="" href="/mwirs/missing/view_all/
      REPORT_DATE_NEW_TO_OLD">Missing Person</a></li>
</ul>
</li>
<li>
```

```
<a class="" href="/mwirs/faceRecognizer">
<i class="fa fa-user"></i>
<span>Face Recognizer</span>
</a>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-search"></i>
<span>Advanced Search</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/search/wanted">Wanted Fugitive</a></
      li>
<li><a class="" href="/mwirs/search/missing">Missing Person</a></
      li>
</ul>
</li>
<li>
<a class="" href="/mwirs/tip/viewAll">
<i class="fa fa-eye"></i>
<span>Tips</span>
</a>
</li>
</ul>
<!-- sidebar menu end-->
<ul class="up-pnp-logo">
<img src="<c:url value="/resources/img/up-logo.png"/>" class="
      sidebar-logo">
<img src="<c:url value="/resources/img/pnp-logo.png"/>" class="
      sidebar-logo">
<div>
UP Manila | PNP<br>
2016
</div>
</ul>
</div>
</aside>
<!--sidebar end-->
```

Source Code 124: sidebar_general.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!--sidebar start-->
<aside>
<div id="sidebar" class="nav-collapse ">
<!-- sidebar menu start-->
<ul class="sidebar-menu">
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-list-alt"></i>
<span>View Records</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/wanted/view_all/
      REPORT_DATE_NEW_TO_OLD">Wanted Fugitive</a></li>
<li><a class="" href="/mwirs/missing/view_all/
      REPORT_DATE_NEW_TO_OLD">Missing Person</a></li>
</ul>
</li>
<li>
<a class="" href="/mwirs/faceRecognizer">
<i class="fa fa-user"></i>
<span>Face Recognizer</span>
</a>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-search"></i>
<span>Advanced Search</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/search/wanted">Wanted Fugitive</a></
      li>
<li><a class="" href="/mwirs/search/missing">Missing Person</a></
      li>
</ul>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-flag-o"></i>
<span>Report</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/report">Report a Person Missing</a></
      li>
</ul>
</li>
</ul>
<!-- sidebar menu end-->
<ul class="up-pnp-logo">
<img src="<c:url value="/resources/img/up-logo.png"/>" class="
      sidebar-logo">
<img src="<c:url value="/resources/img/pnp-logo.png"/>" class="
      sidebar-logo">
<div>
UP Manila | PNP<br>
2016
</div>
</ul>
</div>
</aside>
<!--sidebar end-->
```

Source Code 125: sidebar_po.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!--sidebar start-->
<aside>
<div id="sidebar" class="nav-collapse ">
<!-- sidebar menu start-->
<ul class="sidebar-menu">
<li class="">
<a class="" href="${home }">
<i class="icon_house_alt"></i>
<span>Home</span>
</a>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-list-alt"></i>
<span>View Records</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/wanted/view_all/
      REPORT_DATE_NEW_TO_OLD">Wanted Fugitive</a></li>
<li><a class="" href="/mwirs/missing/view_all/
      REPORT_DATE_NEW_TO_OLD">Missing Person</a></li>
</ul>
</li>
<li>
<a class="" href="/mwirs/faceRecognizer">
<i class="fa fa-user"></i>
<span>Face Recognizer</span>
</a>
</li>
<li class="sub-menu">
<a href="javascript:;" class="">
<i class="fa fa-search"></i>
<span>Advanced Search</span>
<span class="menu-arrow arrow_carrot-right"></span>
</a>
<ul class="sub">
<li><a class="" href="/mwirs/search/wanted">Wanted Fugitive</a></
      li>
<li><a class="" href="/mwirs/search/missing">Missing Person</a></
      li>
</ul>
</li>
<li>
<a class="" href="/mwirs/tip/viewAll">
<i class="fa fa-eye"></i>
<span>Tips</span>
</a>
</li>
</ul>
<!-- sidebar menu end-->
<ul class="up-pnp-logo">
<img src="<c:url value="/resources/img/up-logo.png"/>" class="
      sidebar-logo">
<img src="<c:url value="/resources/img/pnp-logo.png"/>" class="
      sidebar-logo">
<div>
UP Manila | PNP<br>
2016
</div>
</ul>
</div>
</aside>
<!--sidebar end-->
```

Source Code 126: sidebar_sa.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!--sidebar start-->
<aside>
<div id="sidebar" class="nav-collapse ">
<!-- sidebar menu start-->
<ul class="sidebar-menu">
<li class="">
<a class="" href="${home }">
<i class="icon_house_alt"></i>
<span>Home</span>
</a>
</li>
<li>
<a class="" href="/mwirs/SysAd/users/all">
<i class="fa fa-user"></i>
<span>User Accounts</span>
</a>
</li>
<li>
<a class="" href="/mwirs/SysAd/create">
<i class="fa fa fa-pencil-square-o"></i>
<span>Create Sys Ad</span>
</a>
</li>
</ul>
<!-- sidebar menu end-->
<ul class="up-pnp-logo">
<img src="<c:url value="/resources/img/up-logo.png"/>" class="
      sidebar-logo">
<img src="<c:url value="/resources/img/pnp-logo.png"/>" class="
      sidebar-logo">
<div>
UP Manila | PNP<br>
2016
</div>
</ul>
</div>
</aside>
<!--sidebar end-->
```

Source Code 127:

submit_tip_step2.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Submit a Tip</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet">
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
<script src='https://www.google.com/recaptcha/api.js'></script>
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-eye"></i> Submit a tip</h3
      >
<ol class="breadcrumb">
<c:choose>
<c:when test="${not empty wanted }">
<li><i class="fa fa-user"></i><a href="/mwirs/wanted/${wanted.id }
      ">Wanted Fugitive: ${wanted.firstName } ${wanted.middleName
      } ${wanted.lastName }</a></li>
</c:when>
<c:when test="${not empty missing }">
<li><i class="fa fa-user"></i><a href="/mwirs/missing/${missing.id
       }">Missing Person: ${missing.firstName } ${missing.
      middleName } ${missing.lastName }</a></li>
</c:when>
</c:choose>
<li><i class="fa fa-eye"></i>Submit a tip</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Submit a tip about
<c:choose>
<c:when test="${not empty wanted }">
<strong>${wanted.firstName } ${wanted.middleName } ${wanted.
      lastName }</strong>
</c:when>
<c:when test="${not empty missing }">
<strong>${missing.firstName } ${missing.middleName } ${missing.
      lastName }</strong>
</c:when>
</c:choose>
| Step 2
</header>
<div class="panel-body">
<div id="errorMessage"></div>
<div class="form">
<div class="form-group">
<label for="photos" class="control-label col-lg-2" style="text-
      align: right;">photos</label>
<div class="col-lg-10">
<form action="uploadPicture" class="form-validate form-horizontal
      dropzone"
id="myDropzone" enctype="multipart/form-data" method="post">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]"
      multiple="multiple">
</div>
</form>
</div>
</div>
<form class="form-validate form-horizontal" id="tipForm" method="
      post" action="">
<div class = "form-group">
<label for="recaptcha" class="control-label col-lg-2">captcha</
      label>
<div class="col-lg-10">
<div>
<div class="g-recaptcha" data-sitekey="6LdbtBoTAAAAACmz75_a-
      nxTvq2txfSOxlKzcL8J" class=""></div>
</div>
</div>
</div>
<div class="form-group">
<div class="col-lg-2"></div>
<div class="col-lg-10">
<input type="checkbox" name="accept" id="accept">
<em>The information I've provided on this form is correct to the
      best of my knowledge. I understand that providing false
      information could subject me to fine, imprisonment, or both.
      </em>
</div>
</div>
</form>
<div class="form-group">
<div class="btn-row">
<button class="btn btn-danger button-back" type="button" onclick="
      window.history.back()"><i class="fa fa-arrow-left"></i>&nbsp
      ;&nbsp;Back</button>
<button class="btn btn-success button-next" type="submit" id="
      finish"
data-toggle="modal" data-target="#loadingModal" data-backdrop="
      static">Finish&nbsp;&nbsp;<i class="fa fa-check"></i></
      button>
</div>
</div>
</div>
```

```
</div>
</section>
</div>
</div>
</section>
<!-- page end-->
</section>
</section>
<!--main content end-->
<!-- Modal -->
<div id="loadingModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-body" style="text-align: center;">
<i class="fa fa-spinner fa-spin fa-5x"></i>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="successfulModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Operation successful</h4>
</div>
<div class="modal-body">
<p>Your tip has been submitted. Thank you for your cooperation.
</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Operation unsuccessful</h4>
</div>
<div class="modal-body">
<p>An error was encountered during registration. Please try again
      or contact system administrator.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<!-- custom form validation script for this page-->
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script src="<c:url value="/resources/js/submit_tip_final.js"/>"><
      /script>
<script type="text/javascript">
$(’#successfulModal’).on(’hidden.bs.modal’, function () {
<c:choose>
<c:when test="${not empty wanted }">
window.location.replace(’/mwirs/wanted/${caseId}’);
</c:when>
<c:when test="${not empty missing }">
window.location.replace(’/mwirs/missing/${caseId}’);
</c:when>
</c:choose>
});
$(’#failModal’).on(’hidden.bs.modal’, function () {
window.location.replace(’/mwirs/tip/create/${caseId}’);
});
</script>
</body>
</html>
```

Source Code 128: submit_tip.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Submit a Tip</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet" />
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet" />
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-eye"></i> Submit a tip</h3
      >
<ol class="breadcrumb">
<c:choose>
<c:when test="${not empty wanted }">
<li><i class="fa fa-user"></i><a href="/mwirs/wanted/${wanted.id }
      ">Wanted Fugitive: ${wanted.firstName } ${wanted.middleName
      } ${wanted.lastName }</a></li>
</c:when>
<c:when test="${not empty missing }">
<li><i class="fa fa-user"></i><a href="/mwirs/missing/${missing.id
       }">Missing Person: ${missing.firstName } ${missing.
      middleName } ${missing.lastName }</a></li>
</c:when>
</c:choose>
<li><i class="fa fa-eye"></i>Submit a tip</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Submit a tip about
<c:choose>
<c:when test="${not empty wanted }">
<strong>${wanted.firstName } ${wanted.middleName } ${wanted.
      lastName }</strong>
</c:when>
<c:when test="${not empty missing }">
<strong>${missing.firstName } ${missing.middleName } ${missing.
      lastName }</strong>
</c:when>
</c:choose>
| Step 1
</header>
```

```
<div class="panel-body">
<div class="form">
<form class="form-validate form-horizontal" id="tipFormPart1"
      method="post" action="step1">
<div class="form-group ">
<label for="firstName" class="control-label col-lg-2">your first
      name</label>
<div class="col-lg-2">
<input class="form-control " id="firstName" type="text" name="
      firstName" required="required"/>
</div>
<label for="middleName" class="control-label col-lg-2">your middle
       name</label>
<div class="col-lg-2">
<input class="form-control " id="middleName" type="text" name="
      middleName"/>
</div>
<label for="lastName" class="control-label col-lg-2">your last
      name</label>
<div class="col-lg-2">
<input class="form-control " id="lastName" type="text" name="
      lastName" required="required"/>
</div>
</div>
<div class="form-group">
<label for="email" class="control-label col-lg-2">email</label>
<div class="col-lg-4">
<input class="form-control " id="email" type="email" name="email"
      required="required"/>
</div>
<label for="phoneNumber" class="control-label col-lg-2">phone
      number</label>
<div class="col-lg-4">
<input class="form-control " id="phoneNumber" type="text" name="
      phoneNumber" required="required"/>
</div>
</div>
<div class="form-group">
<label for="address" class="control-label col-lg-2">address</label
      >
<div class="col-lg-10">
<input class="form-control " id="address" type="text" id="address"
       name="address" required="required"/>
</div>
</div>
<div class="form-group ">
<label for="information" class="control-label col-lg-2">
      information</label>
<div class="col-lg-10">
<textarea class="form-control" rows="4" name="narrative" id="
      narrative" form="tipFormPart1" required="required"></
      textarea>
</div>
</div>
<div class="form-group">
<div class="btn-row">
<button class="btn btn-danger button-back" type="reset"> Reset&
      nbsp;&nbsp;<i class="fa fa-refresh"></i></button>
<button class="btn btn-primary button-next" type="submit">Next&
      nbsp;&nbsp;<i class="fa fa-arrow-right"></i></button>
</div>
</div>
</form>
</div>
</div>
</section>
</div>
</div>
<!-- page end-->
</section>
</section>
<!--main content end-->
</section>
<!-- container section end -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<script src="<c:url value="/resources/js/hideShowPassword.min.js"
      />"></script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!-- custom form validation script for this page-->
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/
      submit_tip_step1_validation.js"/>"></script>
</body>
</html>
```

Source Code 129: sysad_welcome.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Welcome, ${loggedInUser.firstName }</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- full calendar css-->
<link href="<c:url value="/resources/assets/fullcalendar/
      fullcalendar/bootstrap-fullcalendar.css"/>" rel="stylesheet"
       />
<link href="<c:url value="/resources/assets/fullcalendar/
      fullcalendar/fullcalendar.css"/>" rel="stylesheet" />
<!-- easy pie chart-->
<link href="<c:url value="/resources/assets/jquery-easy-pie-chart/
      jquery.easy-pie-chart.css"/>" rel="stylesheet" type="text/
      css" media="screen"/>
<!-- owl carousel -->
<link rel="<c:url value="/resources/css/owl.carousel.css"/>" type=
      "text/css">
<link href="<c:url value="/resources/css/jquery-jvectormap-1.2.2.
      css"/>" rel="stylesheet">
<!-- Custom styles -->
<link rel="stylesheet" href="<c:url value="/resources/css/
      fullcalendar.css"/>">
<link href="<c:url value="/resources/css/widgets.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/xcharts.min.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<!-- HTML5 shim and Respond.js IE8 support of HTML5 -->
<!--[if lt IE 9]>
<script src="js/html5shiv.js"></script>
<script src="js/respond.min.js"></script>
<script src="js/lte-ie7.js"></script>
<![endif]-->
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="icon_house_alt"></i> Home</h3>
</div>
</div>
<div class="row">
<div class="col-lg-4 col-md-4">
<div class="info-box blue-bg">
<i class="fa fa-exclamation" aria-hidden="true"></i>
<div class="count">${pendingCount }</div>
<div class="title">Pending Accounts</div>
```

```
</div><!--/.info-box-->
</div><!--/.col-->
<div class="col-lg-4 col-md-4">
<div class="info-box brown-bg">
<i class="fa fa-lock" aria-hidden="true"></i>
<div class="count">${lockedCount }</div>
<div class="title">Locked Accounts</div>
</div><!--/.info-box-->
</div><!--/.col-->
<div class="col-lg-4 col-md-4">
<div class="info-box dark-bg">
<i class="fa fa-thumbs-o-up" aria-hidden="true"></i>
<div class="count">${approvedCount }</div>
<div class="title">Approved Accounts</div>
</div><!--/.info-box-->
</div><!--/.col-->
</div><!--/.row-->
<h1> ${test } </h1>
<div class="row">
<div class="col-lg-12 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2><i class="fa fa-user"></i><strong>Recent Registrations</strong
      ></h2>
</div>
<div class="panel-body">
<table class="table bootstrap-datatable">
<thead>
<tr>
<th></th>
<th>Name</th>
<th>User Type</th>
<th>Date Registered</th>
<th>Status</th>
</tr>
</thead>
<tbody id="userTable">
<c:if test="${empty recentUsers }">
<tr>
<td align="center" colspan="5">No recent registrations.</td>
</tr>
</c:if>
<c:forEach var="user" items="${recentUsers }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty user.pictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:50px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img src="picture/${user.id }" style="height:50px; margin-top:-2px
      ;">
</c:otherwise>
</c:choose>
</td>
<td><a href="/mwirs/SysAd/user/${user.id}">${user.firstName } ${
      user.middleName } ${user.lastName }</a></td>
<td>${user.userType.toString() }</td>
<td>${user.getDateCreatedString() }</td>
<td>${user.status }</td>
</tr>
</c:forEach>
</tbody>
</table>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="userPager"></ul>
</div>
</div>
</div>
</div>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custome script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script>
$(document).ready(function(){
$('#userTable').pageMe({pagerSelector:'#userPager',showPrevNext:
      true,hidePageNumbers:false,perPage:3});
});
</script>
</body>
</html>
```

Source Code 130: user_profile_sysad.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<title>MW-IRS | User Profile</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
<!-- HTML5 shim and Respond.js IE8 support of HTML5 -->
<!--[if lt IE 9]>
<script src="js/html5shiv.js"></script>
<script src="js/respond.min.js"></script>
<script src="js/lte-ie7.js"></script>
<![endif]-->
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<c:choose>
<c:when test="${not empty user }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-user"></i>User Profile</h3
      >
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
```

```
<li><i class="fa fa-user"></i>User Profile: ${user.firstName } ${
      user.middleName } ${user.lastName }</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
${user.userType.toString() }
</header>
<div class="panel-body">
<c:choose>
<c:when test="${empty successful }"></c:when>
<c:when test="${successful}">
<div class="alert alert-success alert-dismissible" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-
      label="Close"><span aria-hidden="true">&times;</span></
      button>
<strong>Successful!</strong> ${message }
</div>
</c:when>
<c:otherwise>
<div class="alert alert-danger alert-dismissible" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-
      label="Close"><span aria-hidden="true">&times;</span></
      button>
<strong>Error!</strong> ${message }
</div>
</c:otherwise>
</c:choose>
<div class="col-md-3 col-lg-3 " align="center">
<div class="row">
<c:choose>
<c:when test="${empty user.pictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModalPrimary">
<img alt="User Pic" src="picture"
class="img-thumbnail img-responsive">
</a>
<div id="myModalPrimary" class="modal fade" tabindex="-1" role="
      dialog" aria-labelledby="myModalLabel" aria-hidden="true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture" class="img-responsive" style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#statusModal">
<i class="fa fa-flag"></i>&nbsp;
change status</a>
<!-- Modal -->
<div id="statusModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Change Status</h4>
</div>
<form class="form-validate form-horizontal" method="post" action="
      changeStatus">
<div class="modal-body">
<div class="form-group ">
<label for="status" class="control-label col-lg-2">status</label>
<div class="col-lg-10">
<select class="form-control" name="status">
<c:forEach var="status" items="${statusValues }">
<c:choose>
<c:when test="${status == user.status }">
<option value="${status }" selected="selected">${status }</option>
</c:when>
<c:otherwise>
<option value="${status }" >${status }</option>
</c:otherwise>
</c:choose>
</c:forEach>
</select>
</div>
</div>
</div>
<div class="modal-footer">
<button type="submit" class="btn btn-success" style="margin-top:
      10px;">
<i class="fa fa-floppy-o" aria-hidden="true"></i> &nbsp;save
      changes</button>
</div>
</div>
</form>
</div>
</div>
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#passwordModal">
<i class="fa fa-key" aria-hidden="true"></i>&nbsp;
reset password</a>
<!-- Modal -->
<div id="passwordModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Reset Password</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to reset <strong>${user.username }</strong
      >'s password?</p>
</div>
<div class="modal-footer">
<form action="resetPassword" method="post">
<button type="submit" class="btn btn-success" style="margin-top:
      10px;">
<i class="fa fa-check" aria-hidden="true"></i> &nbsp;reset
      password</button>
</form>
</div>
</div>
</div>
</div>
<a class="list-group-item" data-toggle="modal" href="#deleteModal"
      >
<i class="fa fa-trash-o"></i>&nbsp;
delete account</a>
</div>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>

                              <tr>
<td>user name</td>
<td>${user.username }</td>
</tr>
<tr>
<td>first name</td>
<td>${user.firstName }</td>
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty user.middleName}">
<td>${user.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${user.lastName }</td>
</tr>
<tr>

                              <tr>
<td>email</td>
<td>${user.email }</td>
</tr>
<tr>

                              <tr>
<td>office</td>
<td style="white-space: normal;">
<c:choose>
```

```
<c:when test="${not empty user.officeDTO }">
<c:set value="${user.officeDTO }" var="office"/>
<c:if test="${ not empty office.PRO }">
<strong>PRO</strong>: ${office.PRO }<br>
</c:if>
<c:if test="${ not empty office.PPO }">
<strong>PRO</strong>: ${office.PPO }<br>
</c:if>
<c:if test="${ not empty office.cityMunicipalPS }">
<strong>City/Municipal PS</strong>: ${office.cityMunicipalPS }<br>
</c:if>
<c:if test="${ not empty office.PCP }">
<strong>PCP</strong>: ${office.PCP }<br>
</c:if>
</c:when>
<c:otherwise>
<em>none</em>
</c:otherwise>
</c:choose>
</td>
</tr>
<tr>
                          <tr>

                            <tr>
<td>status</td>
<td>${user.status }</td>
</tr>
<tr>
                            <tr>

                          <tr>

                            <tr>
<td>registered</td>
<td>${user.getDateCreatedString()}</td>
</tr>
</tbody>
</table>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<div id=deleteModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Delete this account</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to delete <strong> ${missing.firstName } $
      {missing.middleName } ${missing.lastName }</strong>’s
      account?
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default pull-left" data-
      dismiss="modal">Cancel</button>
<button type="button" class="btn btn-danger pull-right" id="
      deleteConfirm">Yes</button>
</div>
</div>
</div>
</div>
<div id=successfulModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p> <strong> ${user.firstName } ${user.middleName } ${user.lastName
       }</strong>’s account has been deleted.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id=failModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Cannot delete <strong> ${user.firstName } ${user.middleName } ${
      user.lastName }</strong>’s account.
Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<input type="hidden" value="${user.id }" id="userId">
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script>
$(’#deleteConfirm’).click(function(){
$.ajax({
async:false,
url : ’delete/account’,
data:{"id":$(’#userId’).val()},
method: "POST",
success : function(data) {
$("#deleteModal").modal("hide");
$(’#successfulModal’).modal("show");
},
error: function(data){
$("#deleteModal").modal("hide");
$(’#failModal’).modal("show");
}
});
});
$(’#successfulModal’).on(’hidden.bs.modal’, function () {
if(history.length<=1){
window.location.replace(’/mwirs/SysAd/users/all’);
}
window.history.back();
});
</script>
</body>
</html>
```

Source Code 131: user_profile.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | My Profile</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
```

```
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-user"></i>My Profile</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i>My Profile: ${loggedInUser.firstName
       } ${loggedInUser.middleName } ${loggedInUser.lastName }</li
      >
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
${loggedInUser.userType.toString() }
</header>
<div class="panel-body">
<c:choose>
<c:when test="${empty successful }"></c:when>
<c:when test="${successful}">
<div class="alert alert-success alert-dismissible" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-
      label="Close"><span aria-hidden="true">&times;</span></
      button>
<strong>Successful!</strong> ${message }
</div>
</c:when>
<c:otherwise>
<div class="alert alert-danger alert-dismissible" role="alert">
<button type="button" class="close" data-dismiss="alert" aria-
      label="Close"><span aria-hidden="true">&times;</span></
      button>
<strong>Error!</strong> ${message }
</div>
</c:otherwise>
</c:choose>
<div class="col-md-3 col-lg-3 " align="center">
<div class="row">
<c:choose>
<c:when test="${empty loggedInUser.pictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModalPrimary">
<img alt="User Pic" src="picture"
class="img-thumbnail img-responsive">
</a>
<div id="myModalPrimary" class="modal fade" tabindex="-1" role="
      dialog" aria-labelledby="myModalLabel" aria-hidden="true">
<div class="modal-dialog">
```

```
<div class="modal-content">
<div class="modal-body">
<img src="picture" class="img-responsive" style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#profilePicModal">
<i class="fa fa-picture-o"></i>&nbsp;
change profile picture</a>
<!--modal start-->
<div id="profilePicModal" class="modal fade" role="dialog" >
<div class="modal-dialog" style="width:250px;">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload profile picture</h4>
</div>
<div class="modal-body">
<form action="verifyPicture" class="form-horizontal dropzone pull-
      right" id="profPicDropzone"
enctype="multipart/form-data" method="post" style="width:200px;">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]">
</div>
</form>
</div>
<div class="modal-footer">
<a role="button" class="btn btn-success" style="margin-top: 10px;"
       id="uploadPicture" href="uploadPicture"><i class="fa fa-
      upload" aria-hidden="true"></i> &nbsp;Upload</a>
</div>
</div>
</div>
</div>
<!--modal end-->
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#passwordModal">
<i class="fa fa-key" aria-hidden="true"></i>&nbsp;
change password</a>
<!-- Modal -->
<div id="passwordModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Change Password</h4>
</div>
<form class="form-validate form-horizontal" id="passForm" method="
      post" action="changePassword">
<div class="modal-body">
<div class="form-group ">
<label for="currPass" class="control-label col-lg-2">current
      password</label>
<div class="col-lg-10">
<input class="form-control " id="currPass" type="password" name="
      currPass" required />
</div>
</div>
<div class="form-group form-horizontal" id="passForm">
<label for="verifyPass" class="control-label col-lg-2">verify
      current password</label>
<div class="col-lg-10">
<input class="form-control " id="verifyPass" type="password" name=
      "verifyPass" required />
</div>
</div>
<div class="form-group ">
<label for="newPass" class="control-label col-lg-2">new password</
      label>
<div class="col-lg-10">
<input class="form-control " id="newPass" type="password" name="
      newPass" required />
</div>
</div>
</div>
<div class="modal-footer">
<button type="submit" class="btn btn-success">submit</button>
```

```
</div>
</form>
</div>
</div>
</div>
<!-- End Modal -->
</div>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>

                             <tr>
<td>user name</td>
<td>${loggedInUser.username }</td>
</tr>
<tr>
<td>first name</td>
<td>${loggedInUser.firstName }</td>
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty loggedInUser.middleName}">
<td>${loggedInUser.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${loggedInUser.lastName }</td>
</tr>
<tr>

                             <tr>
<td>email</td>
<td>${loggedInUser.email }</td>
</tr>
<tr>

                             <tr>
<td>office</td>
<td style="white-space: normal;">
<c:choose>
<c:when test="${not empty loggedInUser.officeDTO }">
<c:set value="${loggedInUser.officeDTO }" var="office"/>
<c:if test="${ not empty office.PRO }">
<strong>PRO</strong>: ${office.PRO }<br>
</c:if>
<c:if test="${ not empty office.PPO }">
<strong>PRO</strong>: ${office.PPO }<br>
</c:if>
<c:if test="${ not empty office.cityMunicipalPS }">
<strong>City/Municipal PS</strong>: ${office.cityMunicipalPS }<br>
</c:if>
<c:if test="${ not empty office.PCP }">
<strong>PCP</strong>: ${office.PCP }<br>
</c:if>
</c:when>
<c:otherwise>
<em>none</em>
</c:otherwise>
</c:choose>
</td>
</tr>
</tbody>
</table>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script src="<c:url value="/resources/js/user_profile_script.js"/>
      "></script>
</body>
</html>
```

Source Code 132: user_welcome.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Welcome, ${loggedInUser.firstName }</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="icon_house_alt"></i> Home</h3>
</div>
</div>
<div class="row">
<div class="col-lg-4 col-md-4">
<div class="info-box blue-bg">
<i class="fa fa-user"></i>
<div class="count">${wantedCount }</div>
<div class="title">Total Wanted Cases</div>
</div><!--/.info-box-->
</div><!--/.col-->
<div class="col-lg-4 col-md-4">
<div class="info-box brown-bg">
<i class="fa fa-user"></i>
<div class="count">${missingCount }</div>
<div class="title">Total Missing Cases</div>
</div><!--/.info-box-->
</div><!--/.col-->
<div class="col-lg-4 col-md-4">
<div class="info-box dark-bg">
<i class="fa fa-eye"></i>
<div class="count">${tipCount }</div>
<div class="title">Total Tips Received</div>
</div><!--/.info-box-->
</div><!--/.col-->
```

```
</div><!--/.row-->
<div class="col-lg-6 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2><i class="fa fa-user"></i><strong>Recent Wanted Cases</strong>
      </h2>
</div>
<div class="panel-body">
<table class="table bootstrap-datatable">
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Offense</th>
<th>Date Reported</th>
<th>Status</th>
</tr>
</thead>
<tbody id="wantedTable">
<c:forEach var="wanted" items="${recentWanted }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty wanted.primaryPictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:50px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img src="wanted/picture/${wanted.id }" style="height:50px; margin
      -top:-2px;">
</c:otherwise>
</c:choose>
<%--                           <img src="wanted/picture/${wanted.id
       }" style="height:50px; margin-top:-2px;"> --%>
</td>
<td><a href="/mwirs/wanted/${wanted.id}">${wanted.firstName } ${
      wanted.middleName } ${wanted.lastName }</a></td>
<td>
<c:forEach var="offense" items="${wanted.offense}">
${offense } <br>
</c:forEach>
</td>
<td>${wanted.getDateCreatedString() }</td>
<td>${wanted.status }</td>
</tr>
</c:forEach>
</tbody>
</table>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="wantedPager"></ul>
</div>
</div>
</div>
</div>
</div><!--/col-->
<div class="col-lg-6 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2><i class="fa fa-user"></i><strong>Recent Missing Cases</strong
      ></h2>
</div>
<div class="panel-body">
<table class="table bootstrap-datatable">
<thead>
<tr>
<th></th>
<th>Name</th>
<th>Place Last Seen</th>
<th>Date Last Seen</th>
<th>Date Reported</th>
<th>Status</th>
</tr>
</thead>
<tbody id="missingTable">
<c:forEach var="missing" items="${recentMissing }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty missing.primaryPictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:50px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img src="missing/picture/${missing.id }" style="height:50px;
      margin-top:-2px;">
</c:otherwise>
</c:choose>
<%--                           <img src="missing/picture/${missing.
      id }" style="height:50px; margin-top:-2px;"> --%>
</td>
<td><a href="/mwirs/missing/${missing.id}">${missing.firstName } $
      {missing.middleName } ${missing.lastName }</a></td>
<td>${missing.placeLastSeen }</td>
<td>${missing.getDateLastSeenString() }</td>
<td>${missing.getDateCreatedString() }</td>
<td>${missing.status }</td>
</tr>
</c:forEach>
</tbody>
</table>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="missingPager"></ul>
</div>
</div>
</div>
</div><!--/col-->
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custome script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script>
$(document).ready(function(){
$('#missingTable').pageMe({pagerSelector:'#missingPager',
      showPrevNext:true,hidePageNumbers:false,perPage:3});
});
$(document).ready(function(){
$('#wantedTable').pageMe({pagerSelector:'#wantedPager',
      showPrevNext:true,hidePageNumbers:false,perPage:3});
});
</script>
</body>
</html>
```

Source Code 133: users.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | User Accounts</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
```

```
<link href="<c:url value="/resources/css/jquery.dataTables.min.css
      "/>" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-users"></i> User Accounts<
      /h3>
</div>
</div>
<div class="row">
<div class="col-lg-12 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2><i class="fa fa-user"></i></h2>
<span class="dropdown pull-right">
Show: &nbsp; &nbsp;
<button class="btn btn-link dropdown-toggle" type="button" data-
      toggle="dropdown">
${status } &nbsp; &nbsp;
<span class="caret"></span></button>
<ul class="dropdown-menu">
<li><a href="all">all</a></li>
<c:forEach var="status" items="${statusValues }">
<li><a href="${status }">${status }</a></li>
</c:forEach>
</ul>
</span>
</div>
<div class="panel-body">
<table class="table table-hover" id="table_id">
<thead>
<tr>
<th></th>
<th>name &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-caret
      -down"></i></th>
<th>username &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th>email &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th>user type &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th>status &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th></th>
</tr>
</thead>
<tbody id="userTable">
<c:forEach var="user" items="${users }">
<tr>
<td align="center">
<c:choose>
<c:when test="${empty user.pictureDTO}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
style="height:50px; margin-top:-2px;">
</c:when>
<c:otherwise>
<img src="picture/${user.id }" style="height:50px; margin-top:-2px
      ;">
</c:otherwise>
</c:choose>
</td>
<td><a href="/mwirs/SysAd/user/${user.id}">${user.firstName } ${
      user.middleName } ${user.lastName }</a></td>
<td>${user.username }</td>
<td>${user.email }</td>
<td>${user.userType.toString() }</td>
<td>${user.status }</td>
<td><em>${user.getDateCreatedString() }</em></td>
</tr>
</c:forEach>
</tbody>
</table>
</div>
</div>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custome script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script src="<c:url value="/resources/js/jquery.dataTables.min.js"
      />"></script>
<script>
$(document).ready( function () {
$('#table_id').DataTable();
} );
</script>
</body>
</html>
```

Source Code 134:

view_all_missing.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | View All Missing</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-users"></i> View All
      Missing</h3>
```

```
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-users"></i>View All Missing</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
All Missing
<span class="dropdown pull-right">
Sorted By: &nbsp; &nbsp;
<button class="btn btn-link dropdown-toggle" type="button" data-
      toggle="dropdown">
${criterion.toString() } &nbsp; &nbsp;
<span class="caret"></span></button>
<ul class="dropdown-menu">
<c:forEach var="criterion" items="${sortingCriteria }">
<li><a href="${criterion }">${criterion.toString() }</a></li>
</c:forEach>
</ul>
</span>
<form method="get">
</form>
</header>
<div class="panel-body">
<div class="row">
<div class="col-md-12">
<c:if test="${empty allMissing }">
<div style="text-align: center;">No records found.</div>
</c:if>
<table class="table-responsive table-body">
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody id="myTable">
<c:set var="count" value="0" scope="page" />
<c:forEach var = "missing" items="${allMissing }">
<c:set var="picture" value="${missing.primaryPictureDTO}"></c:set>
<c:if test="${count mod 6 == 0 }"><tr></c:if>
<td class="col-md-2" style="text-align: center;">
<c:choose>
<c:when test="${empty picture }">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive" style="height:100px;width:
      auto;" id="img-button">
</c:when>
<c:otherwise>
<img src="/mwirs/missing/picture/${ missing.id}/${ picture.id}"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive">
</c:otherwise>
</c:choose><br>
<strong><a href="/mwirs/missing/${missing.id }">${missing.
      firstName} ${missing.middleName} ${missing.lastName}</a></
      strong><br>
</td>
<c:set var="count" value="${count+1 }" scope="page" />
<c:if test="${count mod 6 == 0 }"></tr></c:if>
</c:forEach>
</tbody>
</table>
</div>
</div>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="myPager"></ul>
</div>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script type="text/javascript">
$(document).ready(function(){
$('#myTable').pageMe({pagerSelector:'#myPager',showPrevNext:true,
      hidePageNumbers:false,perPage:5});
});
</script>
</body>
</html>
```

Source Code 135: view_all_tips.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | All Tips</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/jquery.dataTables.min.css
      "/>" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<!--    HEADER -->
<jsp:include page="${page_header }"></jsp:include>
<!--       DASHBOARD -->
<jsp:include page="${page_sidebar }"></jsp:include>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-eye"></i> All Tips</h3>
</div>
</div>
<div class="row">
<div class="col-lg-12 col-md-12">
<div class="panel panel-default">
<div class="panel-heading">
<h2><i class="fa fa-eye"></i></h2>
</div>
<div class="panel-body">
<table class="table table-responsive" id="table_id">
<thead>
<tr>
```

```
<th>About &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th>From &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-caret
      -down"></i></th>
<th>Narrative &nbsp;<i class="fa fa-caret-up"></i><i class="fa fa-
      caret-down"></i></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody id="userTable">
<c:forEach var="entry" items="${tips }">
<c:set var="tip" value="${entry.key }"/>
<c:choose>
<c:when test="${ not tip.seen }"> <tr class="active " id="row${tip
      .id}"></c:when>
<c:otherwise><tr></c:otherwise>
</c:choose>
<td>${entry.value }</td>
<td>${tip.firstName } ${tip.middleName } ${tip.lastName }
<td>
<c:choose >
<c:when test="${tip.narrative.length()<30 }">
<em>${tip.narrative }</em>
</c:when>
<c:otherwise>
<em>${tip.narrative.substring(0,29) }...</em>
</c:otherwise>
</c:choose>
</td>
<td>${tip.getDateCreatedString() }</td>
<td><button type="button" class="btn btn-info pull-right"
data-toggle="modal" data-target="#modal${tip.id }">view details</
      button>
</tr>
</c:forEach>
</tbody>
</table>
</div>
</div>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- container section start -->
<c:forEach var="entry" items="${tips }">
<c:set var="tip" value="${entry.key }"/>
<!-- Modal -->
<div id="modal${tip.id }" class="modal fade tip-modal" role="
      dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Modal Header</h4>
</div>
<div class="modal-body">
<table class="table-responsive" style="width: 100%;">
<tbody>
<tr>
<td valign="top">About</td>
<td> ${entry.value }</td>
</tr>
<tr>
<td valign="top">From</td>
<td> ${tip.firstName } ${tip.middleName } ${tip.lastName } <br>
<strong>@</strong> ${tip.email }<br>
<i class="fa fa-phone"></i> ${tip.phoneNumber }<br>
<i class="fa fa-home"></i> ${tip.address }<br>
</td>
</tr>
<tr>
<td valign="top"> Information </td>
<td>${tip.narrative }</td>
</tr>
<c:if test="${not empty tip.pictures }">
<tr>
<td valign="top">Pictures</td>
<td>
<c:forEach var="picture" items="${tip.pictures }">
<a data-toggle="modal" href="#pictureMmodal${picture.id }">
<img alt="User Pic" src="viewAll/picture/${tip.id }/${picture.id }
      "
class="img-responsive pull-left" style="height:70px;">
</a>
</c:forEach>
</td>
</tr>
```

```
</c:if>
</tbody>
</table>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-danger pull-left" data-toggle
      ="modal" data-target="#deleteModal${tip.id }">Delete &nbsp;
      <i class="fa fa-trash-o"></i></button>
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id="deleteModal${tip.id }" class="modal fade delete-modal"
      role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Delete Tip</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to delete this?</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default pull-left delete-
      cancel" data-dismiss="modal" id="cancel${tip.id }">Cancel</
      button>
<button type="button" class="btn btn-danger pull-right delete-
      confirm" id="confirm${tip.id }">Yes</button>
</div>
</div>
</div>
</div>
</c:forEach>
<c:forEach var="entry" items="${tips }">
<c:set var="tip" value="${entry.key }"/>
<c:forEach var="picture" items="${tip.pictures }">
<div id="pictureMmodal${picture.id }" class="modal fade" tabindex=
      "-1" role="dialog" aria-labelledby="myModalLabel" aria-
      hidden="true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="viewAll/picture/${tip.id }/${picture.id }" class="img-
      responsive" style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:forEach>
</c:forEach>
<div id=successfulModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p> Tip deleted.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id=failModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Cannot delete this tip.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
```

```
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custome script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/jquery.dataTables.min.js"
      />"></script>
<script>
$(document).ready( function () {
$('#table_id').DataTable();
} );
$('.tip-modal').on('shown.bs.modal', function() {
var id = this.id.substring(5);
$.ajax({
async:false,
url : 'viewAll/setToSeen',
data: {
"id":id,
},
success:function(data){
var response = data.split("//");
if(!(data == "" || data==null)){
$("#row"+id.toString()).removeAttr("class");
$("#notifCount").html(response[0]);
$("#notifs").html(response[1]);
}
}
});
});
$(".delete-confirm").click(function(){
$('.delete-modal').modal("hide");
var id = this.id.substring(7);
$.ajax({
async:false,
url : 'delete',
data: {
"id":id,
},
success:function(data){
if(data=="successful"){
$("#successfulModal").modal("show");
}else{
$("#failModal").modal("show");
}
},
error:function(data){
$("#failModal").modal("show");
}
});
});
$('.delete-modal').on('shown.bs.modal', function() {
$('.tip-modal').modal("hide");
});
$(".delete-cancel").click(function(){
var id = this.id.substring(6);
$("#modal"+id).modal("show");
});
$('#successfulModal').on('hidden.bs.modal', function () {
location.reload();
})
</script>
</body>
</html>
```

Source Code 136: view_all_wanted.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | View All Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-users"></i> View All
      Wanted</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-users"></i>View All Wanted</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
All Wanted
<span class="dropdown pull-right">
Sorted By: &nbsp; &nbsp;
<button class="btn btn-link dropdown-toggle" type="button" data-
      toggle="dropdown">
${criterion.toString() } &nbsp; &nbsp;
<span class="caret"></span></button>
<ul class="dropdown-menu">
<c:forEach var="criterion" items="${sortingCriteria}">
<li><a href="${criterion }">${criterion.toString() }</a></li>
</c:forEach>
</ul>
</span>
<form method="get">
</form>
</header>
<div class="panel-body">
<div class="row">
<div class="col-md-12">
<c:if test="${empty allWanted }">
<div style="text-align: center;">No records found.</div>
</c:if>
<table class="table-responsive table-body">
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
```

```
<th></th>
</tr>
</thead>
<tbody id="myTable">
<c:set var="count" value="0" scope="page" />
<c:forEach var = "wanted" items="${allWanted }">
<c:set var="picture" value="${wanted.primaryPictureDTO}"></c:set>
<c:if test="${count mod 6 == 0 }"><tr></c:if>
<td class="col-md-2" style="text-align: center;">
<c:choose>
<c:when test="${empty picture }">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive" style="height:100px;width:
      auto;" id="img-button">
</c:when>
<c:otherwise>
<img src="/mwirs/wanted/picture/${ wanted.id}/${ picture.id}"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive">
</c:otherwise>
</c:choose><br>
<strong><a href="/mwirs/wanted/${wanted.id }">${wanted.firstName}
      ${wanted.middleName} ${wanted.lastName}</a></strong><br>
</td>
<c:set var="count" value="${count+1 }" scope="page" />
<c:if test="${count mod 6 == 0 }"></tr></c:if>
</c:forEach>
</tbody>
</table>
</div>
</div>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="myPager"></ul>
</div>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script type="text/javascript">
$(document).ready(function(){
$('#myTable').pageMe({pagerSelector:'#myPager',showPrevNext:true,
      hidePageNumbers:false,perPage:5});
});
</script>
</body>
</html>
```

Source Code 137: view_details_results.jsp

```
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Details</h4>
</div>
<div class="modal-body col-md-12">
<div class="row" style="text-align: center;">
<div class="col-md-12 center-block">
<img src="faceRecognizer/results/testPicture"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive">
</div>
</div>
<c:forEach var = "detail" items="${details }">
<div class="row">
<div class="col-md-4">
<img src="faceRecognizer/results/picture/${category }/${ caseId}/$
      {detail.id}"
id="img-button" style="height:100px;width: auto;" class="img-
      thumbnail img-responsive pull-right">
</div>
<div class="col-md-8 doughnut">
<canvas id="doughnut/${ detail.id}" height="70"></canvas>
<div class="similarity-modal">
${detail.similarity } %
</div>
</div>
<script>
var doughnutData = [
{
value: ${detail.similarity },
color:"#F7464A",
label: "similarity"
},
{
value : ${100-detail.similarity },
color : "#e1e1e1"
},
];
new Chart(document.getElementById("doughnut/${ detail.id}").
      getContext("2d")).Doughnut(doughnutData);
</script>
</div>
</c:forEach>
<a href="faceRecognizer/histograms/${category }/${caseId }" class=
      "pull-right"><i class="fa fa-bar-chart"></i>&nbsp;&nbsp;view
       histograms</a>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
```

Source Code 138: view_tips.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | View Tips</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
</head>
<body>
<!-- container section start -->
<section id="container" class="">
<c:choose>
```

```
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-eye"></i> View Tips</h3>
<ol class="breadcrumb">
<c:choose>
<c:when test="${not empty wanted }">
<li><i class="fa fa-user"></i><a href="/mwirs/wanted/${wanted.id }
      ">Wanted Fugitive: ${wanted.firstName } ${wanted.middleName
      } ${wanted.lastName }</a></li>
</c:when>
<c:when test="${not empty missing }">
<li><i class="fa fa-user"></i><a href="/mwirs/missing/${missing.id
       }">Missing Person: ${missing.firstName } ${missing.
      middleName } ${missing.lastName }</a></li>
</c:when>
</c:choose>
<li><i class="fa fa-bell"></i>Tips</li>
</ol>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
<c:choose>
<c:when test="${not empty wanted }">
<strong>${wanted.firstName } ${wanted.middleName } ${wanted.
      lastName }</strong>
</c:when>
<c:when test="${not empty missing }">
<strong>${missing.firstName } ${missing.middleName } ${missing.
      lastName }</strong>
</c:when>
</c:choose>
| Tips
</header>
<div class="panel-body">
<div class="row">
<div class="col-md-12 center-block">
<c:choose>
<c:when test="${not empty tips }">
<table class="table table-responsive tip-table">
<thead class="table-heading">
<tr>
<td>From</td>
<td>Narrative</td>
<td></td>
<td></td>
</tr>
</thead>
<tbody id="myTable" class="table-body">
<c:forEach var="tip" items="${tips }">
<c:choose>
<c:when test="${ not tip.seen }"> <tr class="active " id="row${tip
      .id}"></c:when>
<c:otherwise><tr></c:otherwise>
</c:choose>
<td>${tip.firstName } ${tip.middleName } ${tip.lastName }
<td>
<c:choose >
<c:when test="${tip.narrative.length()<30 }">
<em>${tip.narrative }</em>
</c:when>
<c:otherwise>
<em>${tip.narrative.substring(0,29) }...</em>
</c:otherwise>
</c:choose>
</td>
<td>${tip.getDateCreatedString() }</td>
<td><button type="button" class="btn btn-info"
data-toggle="modal" data-target="#modal${tip.id }">view details</
      button>
</tr>
</c:forEach>
</tbody>
</table>
</c:when>
<c:otherwise>
No tips found.
```

```
</c:otherwise>
</c:choose>
</div>
</div>
<div class="row">
<div class="col-md-12 text-center">
<ul class="pagination pagination-lg pager" id="myPager"></ul>
</div>
</div>
</div>
</section>
</div>
</div>
<c:forEach var="tip" items="${tips }">
<!-- Modal -->
<div id="modal${tip.id }" class="modal fade tip-modal" role="
      dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Modal Header</h4>
</div>
<div class="modal-body">
<table class="table-responsive" style="width: 100%;">
<tbody>
<tr>
<td valign="top">From</td>
<td> ${tip.firstName } ${tip.middleName } ${tip.lastName } <br>
<strong>@</strong> ${tip.email }<br>
<i class="fa fa-phone"></i> ${tip.phoneNumber }<br>
<i class="fa fa-home"></i> ${tip.address }<br>
</td>
</tr>
<tr>
<td valign="top"> Information </td>
<td>${tip.narrative }</td>
</tr>
<c:if test="${not empty tip.pictures }">
<tr>
<td valign="top">Pictures</td>
<td>
<c:forEach var="picture" items="${tip.pictures }">
<a data-toggle="modal" href="#pictureMmodal${picture.id }">
<img alt="User Pic" src="picture/${tip.id }/${picture.id }"
class="img-responsive pull-left" style="height:70px;">
</a>
</c:forEach>
</td>
</tr>
</c:if>
</tbody>
</table>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-danger pull-left" data-toggle
      ="modal" data-target="#deleteModal${tip.id }">Delete &nbsp;
      <i class="fa fa-trash-o"></i></button>
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id="deleteModal${tip.id }" class="modal fade delete-modal"
      role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Delete Tip</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to delete this?</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default pull-left delete-
      cancel" data-dismiss="modal" id="cancel${tip.id }">Cancel</
      button>
<button type="button" class="btn btn-danger pull-right delete-
      confirm" id="confirm${tip.id }">Yes</button>
</div>
</div>
</div>
</div>
</c:forEach>
<c:forEach var="tip" items="${tips }">
<c:forEach var="picture" items="${tip.pictures }">
```

```
<div id="pictureMmodal${picture.id }" class="modal fade" tabindex=
      "-1" role="dialog" aria-labelledby="myModalLabel" aria-
      hidden="true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture/${tip.id }/${picture.id }" class="img-responsive
      " style="width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:forEach>
</c:forEach>
</section>
</section>
<!--main content end-->
</section>
<div id=successfulModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p> Tip deleted.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id=failModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Cannot delete this tip.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/pagination.js"/>"></
      script>
<script type="text/javascript">
$(document).ready(function(){
$(’#myTable’).pageMe({pagerSelector:’#myPager’,showPrevNext:true,
      hidePageNumbers:false,perPage:10});
});
$(’.tip-modal’).on(’shown.bs.modal’, function() {
var id = this.id.substring(5);
$.ajax({
async:false,
url : ’setToSeen’,
data: {
"id":id,
},
success:function(data){
var response = data.split("//");
if(!(data == "" || data==null)){
$("#row"+id.toString()).removeAttr("class");
$("#notifCount").html(response[0]);
$("#notifs").html(response[1]);
}
}
});
});
$(".delete-confirm").click(function(){
$(’.delete-modal’).modal("hide");
var id = this.id.substring(7);
$.ajax({
async:false,
url : ’delete’,
data: {
"id":id,
},
success:function(data){
if(data=="successful"){
$("#successfulModal").modal("show");
}else{
$("#failModal").modal("show");
}
},
error:function(data){
$("#failModal").modal("show");
}
});
});
$(’.delete-modal’).on(’shown.bs.modal’, function() {
$(’.tip-modal’).modal("hide");
});
$(".delete-cancel").click(function(){
var id = this.id.substring(6);
$("#modal"+id).modal("show");
});
$(’#successfulModal’).on(’hidden.bs.modal’, function () {
location.reload();
})
</script>
</body>
</html>
```

Source Code 139: wanted_profile.jsp

```
<%@ page language="java" contentType="text/html; charset=UTF-8"
pageEncoding="UTF-8"%>
<%@ taglib uri="http://java.sun.com/jsp/jstl/core" prefix="c" %>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale
      =1.0">
<title>MW-IRS | Wanted</title>
<link rel="icon" href="<c:url value="/resources/img/pnp-logo.png"
      />">
<!-- Bootstrap CSS -->
<link href="<c:url value="/resources/css/bootstrap.min.css"/>" rel
      ="stylesheet" />
<!-- bootstrap theme -->
<link href="<c:url value="/resources/css/bootstrap-theme.css"/>"
      rel="stylesheet">
<!--external css-->
<!-- font icon -->
<link href="<c:url value="/resources/css/elegant-icons-style.css"
      />" rel="stylesheet" />
<link href="<c:url value="/resources/css/font-awesome.min.css"/>"
      rel="stylesheet" />
<!-- Custom styles -->
<link href="<c:url value="/resources/css/style.css"/>" rel="
      stylesheet">
<link href="<c:url value="/resources/css/style-responsive.css"/>"
      rel="stylesheet"/>
<link href="<c:url value="/resources/css/jquery-ui-1.10.4.min.css"
      />" rel="stylesheet">
<link href="<c:url value="/resources/css/review_details.css"/>"
      rel="stylesheet">
<link href="<c:url value="/resources/css/dropzone.css"/>" rel="
      stylesheet">
</head>
<body>
<input type="hidden" value="${wanted.id }" id="caseId">
<!-- container section start -->
```

```
<section id="container" class="">
<c:choose>
<c:when test="${not empty loggedInUser }">
<jsp:include page="${page_header }"></jsp:include>
<jsp:include page="${page_sidebar }"></jsp:include>
</c:when>
<c:otherwise>
<jsp:include page="header_general.jsp"></jsp:include>
<jsp:include page="sidebar_general.jsp"></jsp:include>
</c:otherwise>
</c:choose>
<!--main content start-->
<section id="main-content">
<section class="wrapper">
<!--overview start-->
<div class="row">
<div class="col-lg-12">
<h3 class="page-header"><i class="fa fa-user"></i>Wanted</h3>
<c:if test="${not empty home }">
<ol class="breadcrumb">
<li><i class="fa fa-home"></i><a href="${home }">Home</a></li>
<li><i class="fa fa-user"></i>Wanted Fugitive: ${wanted.firstName
      } ${wanted.middleName } ${wanted.lastName }</li>
</ol>
</c:if>
</div>
</div>
<div class="row">
<div class="col-lg-12">
<section class="panel">
<header class="panel-heading">
Wanted Fugitive
</header>
<div class="panel-body">
<div class="col-md-3 col-lg-3 " align="center">
<div class="row">
<c:choose>
<c:when test="${!hasPrimaryPic}">
<img alt="User Pic" src="<c:url value="/resources/img/default-user
      .jpg"/>"
class="img-thumbnail img-responsive">
</c:when>
<c:otherwise>
<a data-toggle="modal" href="#myModalPrimary">
<img alt="User Pic" src="picture/primary"
class="img-thumbnail img-responsive">
</a>
<div id="myModalPrimary" class="modal fade" tabindex="-1" role="
      dialog" aria-labelledby="myModalLabel" aria-hidden="true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture/primary" class="img-responsive" style="width:
      100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:otherwise>
</c:choose>
</div>
<c:choose>
<c:when test="${empty loggedInUser }">
<div class="list-group" style="margin-top: 10px;" >
<a href="/mwirs/tip/create/${wanted.id }" class="list-group-item">
<i class="fa fa-eye"></i>&nbsp; submit a tip</a>
</div>
</c:when>
<c:when test="${loggedInUser.canUpdate(wanted) }">
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="#" class="list-group-item" data-toggle="modal" data-
      target="#profilePicModal">
<i class="fa fa-picture-o"></i>&nbsp;
change profile picture</a>
<!--modal start-->
<div id="profilePicModal" class="modal fade" role="dialog" >
<div class="modal-dialog" style="width:250px;">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload profile picture</h4>
</div>
<div class="modal-body">
<form action="picture/validateProfilePicture" class="form-
      horizontal dropzone pull-right" id="profPicDropzone"
enctype="multipart/form-data" method="post" style="width:200px;">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]">
</div>
</form>
</div>
<div class="modal-footer">
<a role="button" class="btn btn-success" style="margin-top: 10px;"
       id="uploadProfilePicture" href="picture/
      changeWantedProfilePicture/${wanted.id }"><i class="fa fa-
      upload" aria-hidden="true"></i> &nbsp;Upload</a>
</div>
</div>
</div>
</div>
<!--modal end-->
<a href="/mwirs/tip/view/${wanted.id }" class="list-group-item">
<i class="fa fa-eye"></i>&nbsp;
view submitted tips
<c:if test="${newTipCount>0 }">
<span class="badge">${newTipCount }</span>
</c:if>
</a>
<a href="/mwirs/wanted/edit/${wanted.id }" class="list-group-item"
      >
<i class="fa fa-pencil-square-o"></i>&nbsp;
edit case</a>
<a class="list-group-item" data-toggle="modal" href="#deleteModal"
      >
<i class="fa fa-trash-o"></i>&nbsp;
delete case</a>
</div>
</c:when>
<c:when test="${loggedInUser.canViewTips(wanted) }">
<div class="list-group" style="margin-top: 10px; text-align: left;
      " >
<a href="/mwirs/tip/view/${wanted.id }" class="list-group-item">
<i class="fa fa-eye"></i>&nbsp;
view submitted tips
<c:if test="${newTipCount>0 }">
<span class="badge">${newTipCount }</span>
</c:if>
</a>
</div>
</c:when>
</c:choose>
</div>
<div class=" col-md-9 col-lg-9 ">
<table class="table table-user-information">
<tbody>
<tr>
<td>first name</td>
<td>${wanted.firstName }</td>
</tr>
<tr>
<td>middle name</td>
<c:choose>
<c:when test="${not empty wanted.middleName}">
<td>${wanted.middleName }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>last name</td>
<td>${wanted.lastName }</td>
</tr>
<tr>
<td>sex</td>
<td>${wanted.sex }</td>
</tr>
<tr>
<td>offense</td>
<td  style="white-space: normal;">
<c:forEach items="${wanted.offense }" var="offense">
${offense }<br>
</c:forEach>
</td>
</tr>
<tr>
<td>alias</td>
<c:choose>
<c:when test="${not empty wanted.alias}">
<td>${wanted.alias }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
```

```
<tr>
<td>birth date</td>
<c:choose>
<c:when test="${not empty wanted.birthDate}">
<td>${wanted.getBirthDateString() }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>height</td>
<c:choose>
<c:when test="${wanted.height != 0}">
<td>${wanted.height } cm</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>eye color</td>
<c:choose>
<c:when test="${not empty wanted.eyeColor}">
<td>${wanted.eyeColor }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>nationality</td>
<c:choose>
<c:when test="${not empty wanted.nationality}">
<td>${wanted.nationality }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>reward</td>
<c:choose>
<c:when test="${not empty wanted.reward}">
<td>${wanted.reward }</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>narrative</td>
<c:choose>
<c:when test="${not empty wanted.narrative}">
<td>${wanted.narrative}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
<tr>
<td>status</td>
<td>${wanted.status }</td>
</tr>
<c:if test="${ not empty loggedInUser }">
<tr>
<td>investigator</td>
<c:choose>
<c:when test="${not empty wanted.investigator}">
<td>${wanted.investigator}</td>
</c:when>
<c:otherwise>
<td> <em>[not set]</em> </td>
</c:otherwise>
</c:choose>
</tr>
</c:if>
<tr>
<td>date reported</td>
<td>${wanted.getDateCreatedString() }</td>
</tr>
<tr>
<td  style="white-space: normal" colspan="2">
<c:forEach items="${wanted.pictures }" var="picture">
<a data-toggle="modal" href="#myModal${picture.id }">
<img alt="User Pic" src="picture/${picture.id }"
class="img-responsive pull-left" style="height:70px;">
</a>
<div id="myModal${picture.id}" class="modal fade" tabindex="-1"
      role="dialog" aria-labelledby="myModalLabel" aria-hidden="
      true">
<div class="modal-dialog">
<div class="modal-content">
<div class="modal-body">
<img src="picture/${picture.id}" class="img-responsive" style="
      width: 100%;">
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
</c:forEach>
<br>
<c:if test="${loggedInUser.canUpdate(wanted) }">
<a href="#" data-toggle="modal" data-target="#picModal" class="
      pull-right">
<i class="fa fa-plus-square-o" aria-hidden="true"></i>&nbsp;
upload/delete pictures</a>
<!--modal start-->
<div id="picModal" class="modal fade" role="dialog" >
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload/Delete Pictures</h4>
</div>
<div class="modal-body">
<form action="picture/validatePictures" class="form-horizontal
      dropzone" id="picDropzone"
enctype="multipart/form-data" method="post">
<div class="form-group fallback">
<input class="form-control " type="file" name="pictures[]"
      multiple="multiple">
</div>
</form>
</div>
<div class="modal-footer">
<a role="button" class="btn btn-success" style="margin-top: 10px;"
       id="uploadProfilePicture"
href="picture/saveWantedPictures/${wanted.id }">
<i class="fa fa-floppy-o" aria-hidden="true"></i> &nbsp;save
      changes</a>
</div>
</div>
</div>
</div>
<!--modal end-->
</c:if>
</td>
</tr>
</tbody>
</table>
</div>
</div>
</section>
</div>
</div>
</section>
</section>
<!--main content end-->
</section>
<div id=deleteModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Delete this case</h4>
</div>
<div class="modal-body">
<p>Are you sure you want to delete <strong> ${wanted.firstName } $
      {wanted.middleName } ${wanted.lastName } </strong>
from wanted fugitives?
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default pull-left" data-
      dismiss="modal">Cancel</button>
<button type="button" class="btn btn-danger pull-right" id="
      deleteConfirm">Yes</button>
</div>
</div>
</div>
```

```
</div>
<div id=successfulModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Successful</h4>
</div>
<div class="modal-body">
<p> <strong> ${wanted.firstName } ${wanted.middleName } ${wanted.
      lastName } </strong>
deleted from wanted fugitives.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<div id=failModal class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Unsuccessful</h4>
</div>
<div class="modal-body">
<p>Cannot delete <strong> ${wanted.firstName } ${wanted.middleName
       } ${wanted.lastName } </strong>
from wanted fugitives.
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- Modal -->
<div id="failUploadModal" class="modal fade" role="dialog">
<div class="modal-dialog">
<!-- Modal content-->
<div class="modal-content">
<div class="modal-header">
<button type="button" class="close" data-dismiss="modal">&times;</
      button>
<h4 class="modal-title">Upload unsuccessful</h4>
</div>
<div class="modal-body">
<p>Please try again.</p>
</div>
<div class="modal-footer">
<button type="button" class="btn btn-default" data-dismiss="modal"
      >Close</button>
</div>
</div>
</div>
</div>
<!-- javascripts -->
<script src="<c:url value="/resources/js/jquery.js"/>"></script>
<script src="<c:url value="/resources/js/jquery-ui-1.10.4.min.js"
      />"></script>
<script src="<c:url value="/resources/js/jquery-1.8.3.min.js"/>"><
      /script>
<script type="text/javascript" src="<c:url value="/resources/js/
      jquery-ui-1.9.2.custom.min.js"/>"></script>
<!-- bootstrap -->
<script src="<c:url value="/resources/js/bootstrap.min.js"/>"></
      script>
<!-- nice scroll -->
<script src="<c:url value="/resources/js/jquery.scrollTo.min.js"/>
      "></script>
<script src="<c:url value="/resources/js/jquery.nicescroll.js"/>"
      type="text/javascript"></script>
<!-- jquery validate js -->
<script src="<c:url value="/resources/js/jquery.validate.min.js"/>
      " type="text/javascript"></script>
<!--custom script for all page-->
<script src="<c:url value="/resources/js/scripts.js"/>"></script>
<script src="<c:url value="/resources/js/case_profile_script.js"/>
      "></script>
<script src="<c:url value="/resources/js/dropzone.js"/>"></script>
<script type="text/javascript">
Dropzone.options.picDropzone = {
maxFiles: 10,
acceptedFiles: "image/jpeg,image/png,image/gif",
parallelUploads:1,
uploadMultiple:false,
init: function () {
this.on("maxfilesexceeded", function (data) {
var res = eval(’(’ + data.xhr.responseText + ’)’);
});
this.on("addedfile", function (file) {
var removeButton = Dropzone.createElement("<button type=\"button\"
       id=\"delete-button\">"+
"<i class=\"fa fa-trash-o fa-2x\"></i></button>");
var _this = this;
removeButton.addEventListener("click", function (e) {
e.preventDefault();
e.stopPropagation();
_this.removeFile(file);
});
file.previewElement.appendChild(removeButton);
});
this.on("removedfile",function(file){
$.ajax({
async:false,
url : ’picture/deletePicture’,
data: {
"fileName":file.name,
},
success : function(data) {
}
});
});
var myDropzone = this;
<c:forEach items="${wanted.pictures }" var="picture">
fileName = "${picture.fileName}";
url = "picture/${picture.id}";
var existingFile = {
name: fileName,
size: ${picture.size},
type: ’image/’+fileName.split(’.’).pop(),
status: Dropzone.ADDED,
accepted: true,
url: url,
};
myDropzone.emit("addedfile", existingFile);
myDropzone.createThumbnailFromUrl(existingFile,url);
myDropzone.emit("thumbnail", existingFile, url);
myDropzone.emit("complete", existingFile);
</c:forEach>
},
};
</script>
</body>
</html>
```

D. Javascript Files

Source Code 140: advanced_search_missing_script.js

```
var Script = function(){
var age = [10,50]
var height = [100,160]
$(".age")
.slider({
min: 0,
max: 150,
range: true,
values: [age[0], age[1]]
}).slider("float").
on("slidechange slide", function( event, ui ) {
age[0] = ui.values[0];
age[1] = ui.values[1];
});
$(".height")
.slider({
min: 0,
max: 300,
range: true,
values: [height[0], height[1]]
}).slider("float").
on("slidechange slide", function( event, ui ) {
height[0] = ui.values[0];
height[1] = ui.values[1];
});
var form = document.getElementById("advancedSearch");
var formData = new FormData(form );
$(’#submit’).click(function(){
scrollToAnchor(’results-anchor’);
});
$("#advancedSearch").validate({
submitHandler: function(){
var sex = new Array();
$(’input[name="sex"]:checked’).each(function(){
sex.push($(this).val());
});
$.ajax({
async:false,
type: ’POST’,
url : ’missing/submit’,
data: {
"name":    $(’#name’).val(),
"alias":     $(’#alias’).val(),
"eyeColor":  $(’#eyeColor’).val(),
"nationality":  $(’#nationality’).val(),
"reward":    $(’#reward’).val(),
"status":    $(’#status’).val(),
"placeLastSeen":$(’#placeLastSeen’).val(),
"dateLastSeen":$(’#dateLastSeen’).val(),
"age":       age,
"height":    height,
"sex":       sex,
}
,
success : function(response) {
$(".results").html(response);
},
error: function(response){
alert("Error encountered");
window.location.replace(’/mwirs/search/missing’);
}
});
},
});
}();
```

Source Code 141: advanced_search_wanted_script.js

```
var Script = function(){
var age = [10,50]
var height = [100,160]
$(".age")
.slider({
min: 0,
max: 150,
range: true,
values: [age[0], age[1]]
}).slider("float").
on("slidechange slide", function( event, ui ) {
age[0] = ui.values[0];
age[1] = ui.values[1];
});
$(".height")
.slider({
min: 0,
max: 300,
range: true,
values: [height[0], height[1]]
}).slider("float").
on("slidechange slide", function( event, ui ) {
height[0] = ui.values[0];
height[1] = ui.values[1];
});
var form = document.getElementById("advancedSearch");
var formData = new FormData(form );
$(’#submit’).click(function(){
scrollToAnchor(’results-anchor’);
});
$("#advancedSearch").validate({
submitHandler: function(){
var sex = new Array();
$(’input[name="sex"]:checked’).each(function(){
sex.push($(this).val());
});
$.ajax({
async:false,
type: ’POST’,
url : ’wanted/submit’,
data: {
"name":    $(’#name’).val(),
"alias":     $(’#alias’).val(),
"eyeColor":  $(’#eyeColor’).val(),
"nationality":  $(’#nationality’).val(),
"reward":    $(’#reward’).val(),
"status":    $(’#status’).val(),
"offense":   $(’#offense’).val(),
"age":       age,
"height":    height,
"sex":       sex,
}
,
success : function(response) {
$(".results").html(response);
},
error: function(response){
alert("Error encountered");
window.location.replace(’/mwirs/search/missing’);
}
});
},
});
}();
```

Source Code 142: create_sysad_script.js

```
var Script = function () {
$().ready(function() {
var showPassword = false;
$(’#toggle’).hover(function(){
showPassword = !showPassword;
$(’#password’).hideShowPassword(showPassword);
});
$("#sysAdForm").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
username: {
required: true,
minlength: 5,
uniqueUsername:true,
},
email: {
required: true,
email: true,
uniqueEmail: true,
}
},
messages: {
firstName: {
required: "Please provide a first name.",
},
lastName: {
required: "Please provide a last name.",
},
username: {
required: "Please enter a username.",
minlength: "Your username must consist of at least 5 characters
      long.",
uniqueUsername:"Username already taken.",
},
email: {
required: "Please enter a valid email address.",
email: "Please enter a valid email address.",
uniqueEmail: "Email already taken."
}
},
submitHandler: function(){
var data = $('#sysAdForm').serialize();
$.ajax({
async:false,
type: 'POST',
url : 'create/finish',
data: data,
success : function(data) {
$('#loadingModal').modal("hide");
if(data == "success"){
$('#successfulModal').modal("show");
}
else{
$('#errorMessage').html(data);
}
},
error: function(data){
$('#loadingModal').modal("hide");
$('#failModal').modal("show");
}
});
},
});
$('#loadingModal').on('shown.bs.modal',function(){
$('#loadingModal').modal("hide");
$("#sysAdForm").submit();
});
$('#successfulModal').on('hidden.bs.modal',function(){
window.location.replace('/mwirs/SysAd/users/all');
});
$('#failModal').on('hidden.bs.modal', function () {
window.location.replace('/mwirs/SysAd/create');
});
// propose username by combining first- and lastname
$("#username").focus(function() {
var firstname = $("#firstName").val();
var lastname = $("#lastName").val();
if(firstname && lastname && !this.value) {
$(this).val(firstname + "." + lastname);
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$('#firstName').focusout(function(){
var str = $("#firstName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#firstName").val(name)
});
$('#middleName').focusout(function(){
var str = $("#middleName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#middleName").val(name)
});
$('#lastName').focusout(function(){
var str = $("#lastName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#lastName").val(name)
});
});
$('#username').on('change keyup paste mouseup',function(){
var response = false;
$.validator.addMethod("uniqueUsername", function() {
$.ajax({
method: "POST",
async:false,
url : '/mwirs/register/validateUniqueUsername',
data: {
"username":$('#username').val(),
},
success : function(data) {
if(data == "true") {
response = true;
}
}
}); return response;
}, "Username already taken.");
});
$('#email').on('change keyup paste mouseup',function(){
var response = false;
$.validator.addMethod("uniqueEmail", function() {
$.ajax({
method: "POST",
async:false,
url : '/mwirs/register/validateUniqueEmail',
data: {
"email":$('#email').val(),
},
success : function(data) {
if(data == "true") {
response = true;
}
}
}); return response;
}, "Email already taken.");
});
}();
```

Source Code 143: dropzone_custom.js

```
var Script = function () {
Dropzone.options.myDropzone = {
maxFiles: 10,
acceptedFiles: "image/jpeg,image/png,image/gif",
parallelUploads:1,
uploadMultiple:false,
init: function () {
this.on("maxfilesexceeded", function (data) {
var res = eval('(' + data.xhr.responseText + ')');
});
this.on("addedfile", function (file) {
var removeButton = Dropzone.createElement("<button type=\"button\"
       id=\"delete-button\">"+
"<i class=\"fa fa-trash-o fa-2x\"></i></button>");
var _this = this;
removeButton.addEventListener("click", function (e) {
e.preventDefault();
e.stopPropagation();
_this.removeFile(file);
});
file.previewElement.appendChild(removeButton);
});
this.on("removedfile",function(file){
$.ajax({
async:false,
url : 'deletePicture',
data: {
"fileName":file.name,
},
success : function(data) {
}
});
});
},
};
}();
```

Source Code 144: edit_missing_validation.js

```
var Script = function () {
$().ready(function() {
$("#editMissingForm").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
status: {
required:true,
}
},
messages: {
firstName: {
required: "Please provide first name.",
},
lastName: {
required: "Please provide last name.",
},
status: {
required:"Specify status.",
}
},
submitHandler:function(){
var data = $(’#editMissingForm’).serialize();
$.ajax({
method: "POST",
async:  false,
url :   ’step2’,
data: data,
success : function(data) {
if(data == "success"){
$("#successfulModal").modal("show");
}else{
$("#failModal").modal("show");
}
},
error: function(data){
$("#failModal").modal("show");
},
});
}
});
});
}();
```

Source Code 145: edit_wanted_validation.js

```
var Script = function () {
$().ready(function() {
$("#editWantedForm").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
offense:{
required:true,
},
status: {
required:true,
}
},
messages: {
firstName: {
required: "Please provide first name.",
},
lastName: {
required: "Please provide last name.",
},
offense:{
required:"Specify at least one offense.",
},
status: {
required:"Specify status.",
}
},
submitHandler:function(){
var data = $(’#editWantedForm’).serialize();
$.ajax({
method: "POST",
async:  false,
url :   ’step2’,
data: data,
success : function(data) {
if(data == "success"){
$("#successfulModal").modal("show");
}else{
$("#failModal").modal("show");
}
},
error: function(data){
$("#failModal").modal("show");
},
});
}
});
});
}();
```

Source Code 146: missing_step1_validation.js

```
var Script = function () {
$().ready(function() {
$("#missingStep1Form").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
},
messages: {
firstName: {
required: "Please provide first name.",
},
lastName: {
required: "Please provide last name.",
},
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$(’#firstName’).focusout(function(){
var str = $("#firstName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#firstName").val(name)
});
$(’#middleName’).focusout(function(){
var str = $("#middleName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#middleName").val(name)
});
$(’#lastName’).focusout(function(){
var str = $("#lastName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#lastName").val(name)
});
$(’#alias’).focusout(function(){
var str = $("#alias").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#alias").val(name)
});
$(’#nationality’).focusout(function(){
var str = $("#nationality").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#nationality").val(name)
});
});
}();
```

Source Code 147:

missing_step3_validation.js

```
var Script = function () {
$().ready(function() {
$("#missingStep3Form").validate({
rules: {
email: {
email: true,
},
},
messages: {
email: {
email: "Please provide a valid email.",
},
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$(’#name’).focusout(function(){
var str = $("#name").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#name").val(name)
});
});
}();
```

Source Code 148:

recognize_face_script.js

```
var Script = function () {
Dropzone.options.myDropzone = {
dictDefaultMessage: "Please upload a FRONTAL image.",
maxFiles: 1,
acceptedFiles: "image/jpeg,image/png,image/gif",
parallelUploads:1,
uploadMultiple:false,
init: function () {
this.on("maxfilesexceeded", function (data) {
var res = eval(’(’ + data.xhr.responseText + ’)’);
});
this.on("addedfile", function (file) {
var removeButton = Dropzone.createElement("<button type=\"button\"
       id=\"delete-button\">"+
"<i class=\"fa fa-trash-o fa-2x\"></i></button>");
var _this = this;
removeButton.addEventListener("click", function (e) {
e.preventDefault();
e.stopPropagation();
_this.removeFile(file);
});
file.previewElement.appendChild(removeButton);
});
this.on("removedfile",function(file){
$.ajax({
async:false,
url : ’faceRecognizer/deletePicture’,
data: {
"fileName":file.name,
},
success : function(data) {
}
});
});
},
};
$(’#submit’).click(function(){
var wanted = false;
var missing = false;
$(’input[type="checkbox"]:checked’).each(function(){
if($(this).val() == "wanted"){
wanted = true;
}else if($(this).val() == "missing"){
missing = true;
}
});
if(!wanted && !missing){
return false;
}
$(’#submit’).html("<i class=\"fa fa-spinner fa-spin\"></i> loading
       ");
$(’#submit’).attr("disabled","disabled");
$(".warning").css("visibility","visible");
$.ajax({
type: "POST",
data:{
"wanted":    wanted.toString(),
"missing": missing.toString(),
},
url: "faceRecognizer/recognize",
success: function(response) {
$(".results").html(response);
$(’#submit’).html("submit");
$(’#submit’).removeAttr("disabled");
$(".warning").css("visibility","hidden");
},
error:function(response){
$(’#submit’).html("submit");
$(’#submit’).removeAttr("disabled");
$(".warning").css("visibility","hidden");
}
});
});
$(document).delegate(".view-details","click",function(){
var id = $(this).attr(’id’);
$(’.modal-body’).css("text-align","center");
$(’.modal-body’).html("<i class=\"fa fa-spinner fa-spin fa-5x\"></
       i>" );
$(’#detailsModal’).modal("show");
$.ajax({
url:"faceRecognizer/viewDetails"+id,
success: function(response) {
$(’#detailsModal’).html(response);
$(’#detailsModal’).modal("show");
},
error:function(response){
alert("Error encountered.");
window.location.replace("/mwirs/login");
},
});
});
}();
```

Source Code 149:

registration_step2_validation.js

```
var Script = function () {
$(document).ready(function(){
$("#registrationForm").validate({
submitHandler: function(){
var data = $(’#registrationForm’).serialize();
$.ajax({
async:false,
type: ’POST’,
url : ’final_step’,
data: data,
success : function(data) {
$(’#loadingModal’).modal("hide");
if(data == "success"){
$(’#successfulModal’).modal("show");
}
else{
$(’#errorMessage’).html(data);
}
},
error: function(data){
$(’#loadingModal’).modal("hide");
$(’#failModal’).modal("show");
}
});
},
});
$(’#loadingModal’).on(’shown.bs.modal’,function(){
$(’#loadingModal’).modal("hide");
$("#registrationForm").submit();
});
$(’.crimeRegistrarRadio’).change(function() {
if ($(this).val() == ’n’) {
$(’#PRO’).removeAttr("required");
$(’#crimeRegistrar’).attr("value","n");
}
else if ($(this).val()== ’y’) {
$(’#PRO’).attr("required","required");
$(’#crimeRegistrar’).attr("value","y");
}
});
$(’#successfulModal’).on(’hidden.bs.modal’, function () {
window.location.replace(’/mwirs/login’);
});
$(’#failModal’).on(’hidden.bs.modal’, function () {
window.location.replace(’/mwirs/register’);
});
});
}();
```

Source Code 150: registration_validation.js

```
var Script = function () {
$().ready(function() {
var showPassword = false;
$(’#toggle’).hover(function(){
showPassword = !showPassword;
$(’#password’).hideShowPassword(showPassword);
});
$("#registrationForm1").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
username: {
required: true,
minlength: 5,
uniqueUsername:true,
},
password: {
required: true,
minlength: 5,
},
email: {
required: true,
email: true,
uniqueEmail: true,
}
},
messages: {
firstName: {
required: "Please provide your first name.",
},
lastName: {
required: "Please provide your last name.",
},
username: {
required: "Please enter a username.",
minlength: "Your username must consist of at least 5 characters
      long.",
uniqueUsername:"Username already taken.",
},
password: {
required: "Please provide a password.",
minlength: "Your password must be at least 5 characters long.",
},
email: {
required: "Please enter a valid email address.",
email: "Please enter a valid email address.",
uniqueEmail: "Email already taken."
}
}
});
// propose username by combining first- and lastname
$("#username").focus(function() {
var firstname = $("#firstName").val();
var lastname = $("#lastName").val();
if(firstname && lastname && !this.value) {
$(this).val(firstname + "." + lastname);
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$(’#firstName’).focusout(function(){
var str = $("#firstName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#firstName").val(name)
});
$(’#middleName’).focusout(function(){
var str = $("#middleName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#middleName").val(name)
});
$(’#lastName’).focusout(function(){
var str = $("#lastName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#lastName").val(name)
});
});
$(’#username’).on(’change keyup paste mouseup’,function(){
var response = false;
$.validator.addMethod("uniqueUsername", function() {
$.ajax({
method: "POST",
async:false,
url : ’register/validateUniqueUsername’,
data: {
"username":$(’#username’).val(),
},
success : function(data) {
if(data == "true") {
response = true;
}
}
}); return response;
}, "Username already taken.");
});
$(’#email’).on(’change keyup paste mouseup’,function(){
var response = false;
$.validator.addMethod("uniqueEmail", function() {
$.ajax({
method: "POST",
async:false,
url : ’register/validateUniqueEmail’,
data: {
"email":$(’#email’).val(),
},
success : function(data) {
if(data == "true") {
response = true;
}
}
});  return response;
}, "Email already taken.");
});
}();
```

Source Code 151: scripts.js

```
function initializeJS() {
//tool tips
jQuery(’.tooltips’).tooltip();
//popovers
jQuery(’.popovers’).popover();
//custom scrollbar
//for html
jQuery("html").niceScroll({styler:"fb",cursorcolor:"#007AFF",
      cursorwidth: ’6’, cursorborderradius: ’10px’, background: ’#
      F7F7F7’, cursorborder: ’’, zindex: ’1000’});
//for sidebar
jQuery("#sidebar").niceScroll({styler:"fb",cursorcolor:"#007AFF",
      cursorwidth: ’3’, cursorborderradius: ’10px’, background: ’#
      F7F7F7’, cursorborder: ’’});
// for scroll panel
jQuery(".scroll-panel").niceScroll({styler:"fb",cursorcolor:"#007
      AFF", cursorwidth: ’3’, cursorborderradius: ’10px’,
      background: ’#F7F7F7’, cursorborder: ’’});
//sidebar dropdown menu
jQuery(’#sidebar .sub-menu > a’).click(function () {
var last = jQuery(’.sub-menu.open’, jQuery(’#sidebar’));
jQuery(’.menu-arrow’).removeClass(’arrow_carrot-right’);
jQuery(’.sub’, last).slideUp(200);
var sub = jQuery(this).next();
if (sub.is(":visible")) {
jQuery(’.menu-arrow’).addClass(’arrow_carrot-right’);
sub.slideUp(200);
} else {
jQuery(’.menu-arrow’).addClass(’arrow_carrot-down’);
sub.slideDown(200);
}
var o = (jQuery(this).offset());
diff = 200 - o.top;
if(diff>0)
jQuery("#sidebar").scrollTo("-="+Math.abs(diff),500);
else
jQuery("#sidebar").scrollTo("+="+Math.abs(diff),500);
});
// sidebar menu toggle
jQuery(function() {
function responsiveView() {
var wSize = jQuery(window).width();
if (wSize <= 768) {
jQuery(’#container’).addClass(’sidebar-close’);
jQuery(’#sidebar > ul’).hide();
}
if (wSize > 768) {
jQuery(’#container’).removeClass(’sidebar-close’);
jQuery(’#sidebar > ul’).show();
}
}
jQuery(window).on(’load’, responsiveView);
jQuery(window).on(’resize’, responsiveView);
});
jQuery(’.toggle-nav’).click(function () {
if (jQuery(’#sidebar > ul’).is(":visible") === true) {
jQuery(’#main-content’).css({
’margin-left’: ’0px’
});
jQuery(’#sidebar’).css({
’margin-left’: ’-180px’
});
jQuery(’#sidebar > ul’).hide();
jQuery("#container").addClass("sidebar-closed");
} else {
jQuery(’#main-content’).css({
’margin-left’: ’180px’
});
jQuery(’#sidebar > ul’).show();
jQuery(’#sidebar’).css({
’margin-left’: ’0’
});
jQuery("#container").removeClass("sidebar-closed");
}
});
//bar chart
if (jQuery(".custom-custom-bar-chart")) {
jQuery(".bar").each(function () {
var i = jQuery(this).find(".value").html();
jQuery(this).find(".value").html("");
jQuery(this).find(".value").animate({
height: i
}, 2000)
})
}
}
jQuery(document).ready(function(){
initializeJS();
});
function scrollToAnchor(aid){
var aTag = $("a[name=’"+ aid +"’]");
$(’html,body’).animate({scrollTop: aTag.offset().top},’slow’);
}
function timer() {
$.ajax({
url : ’/mwirs/refreshNotifs’,
success : function(data) {
var response = data.split("//");
if(data != ""){
$("#notifCount").html(response[0]);
$("#notifs").html(response[1]);
}
}
});
}
window.setInterval(timer, 10000);
```

Source Code 152: submit_tip_final.js

```
var Script = function () {
$().ready(function() {
Dropzone.options.myDropzone = {
maxFiles: 10,
acceptedFiles: "image/jpeg,image/png,image/gif",
parallelUploads:1,
uploadMultiple:false,
init: function () {
this.on("maxfilesexceeded", function (data) {
var res = eval(’(’ + data.xhr.responseText + ’)’);
});
this.on("addedfile", function (file) {
var removeButton = Dropzone.createElement("<button type=\"button\"
       id=\"delete-button\">"+
"<i class=\"fa fa-trash-o fa-2x\"></i></button>");
var _this = this;
removeButton.addEventListener("click", function (e) {
e.preventDefault();
e.stopPropagation();
_this.removeFile(file);
});
file.previewElement.appendChild(removeButton);
});
this.on("removedfile",function(file){
$.ajax({
async:false,
url : ’deletePicture’,
data: {
"fileName":file.name,
},
success : function(data) {
}
});
});
},
};
$(’#loadingModal’).on(’shown.bs.modal’,function(){
var data = $(’#tipForm’).serialize();
$.ajax({
async:false,
type: ’POST’,
url: ’final’,
data: data,
success : function(response) {
$(’#loadingModal’).modal("hide");
if(response == "success"){
$(’#successfulModal’).modal("show");
}
else{
$(’#errorMessage’).html(response);
grecaptcha.reset();
}
},
error: function(response){
$(’#loadingModal’).modal("hide");
$(’#failModal’).modal("show");
}
});
});
});
}();
```

Source Code 153:

submit_tip_step1_validation.js

```
var Script = function () {
$().ready(function() {
$("#tipFormPart1").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
email: {
required: true,
email: true,
},
phoneNumber:{
required:true,
minlength:7,
},
address:{
required:true
},
narrative:{
required:true,
}
},
messages: {
firstName: {
required: "Please provide your first name.",
},
lastName: {
required: "Please provide your last name.",
},
email: {
required: "Please provide a valid email address.",
email: "Please provide a valid email address.",
},
phoneNumber:{
required:"Please provide a valid phone number.",
minlength:"Please provide a valid phone number.",
},
address:{
required:"Please provide your addrress.",
},
narrative:{
required:"Please provide a brief narrative about the tip.",
}
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$(’#firstName’).focusout(function(){
var str = $("#firstName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#firstName").val(name)
});
$(’#middleName’).focusout(function(){
var str = $("#middleName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#middleName").val(name)
});
$(’#lastName’).focusout(function(){
var str = $("#lastName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#lastName").val(name)
});
});
}();
```

Source Code 154:

wanted_step1_validation.js

```
var Script = function () {
$().ready(function() {
$("#wantedStep1Form").validate({
rules: {
firstName: {
required: true,
},
lastName: {
required: true,
},
offense: {
required:true,
},
status: {
required:true,
}
},
messages: {
firstName: {
required: "Please provide first name.",
},
lastName: {
required: "Please provide last name.",
},
offense: {
required:"Specify at least one offense.",
},
status: {
required:"Specify status.",
}
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$(’#firstName’).focusout(function(){
var str = $("#firstName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#firstName").val(name)
});
$(’#middleName’).focusout(function(){
var str = $("#middleName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#middleName").val(name)
});
$(’#lastName’).focusout(function(){
var str = $("#lastName").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#lastName").val(name)
});
});
}();
```

Source Code 155:

wanted_step2_validation.js

```
var Script = function () {
```

```
$().ready(function() {
$("#wantedStep2Form").validate({
rules: {
reward: {
validAmount: true,
},
height: {
validHeight: true,
}
},
messages: {
reward: {
validAmount: "Please type a valid amount.",
},
height: {
validHeight: "Please enter a valid number.",
}
}
});
function capitalize(string) {
return string.charAt(0).toUpperCase() + string.slice(1).
      toLowerCase();
}
$('#alias').focusout(function(){
var str = $("#alias").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#alias").val(name)
});
$('#nationality').focusout(function(){
var str = $("#nationality").val();
str = str.split(" ");
var name = "";
for(var i=0;i<str.length;i++){
name = name.concat(capitalize(str[i]));
name = name. concat(" ");
}
name = name.trim();
$("#nationality").val(name)
});
});
}();
```

E. CSS Files

Source Code 156: login_style.css

```
/*
Template Name: Creative Bootstrap 3 Responsive Admin Template
Template Version: 1.0
Author: GeeksLabs
Website: http://geekslabs.com/
*/
/* Import fonts */
@import url(http://fonts.googleapis.com/css?family=Lato
       :400,300,300italic,400italic,600,600italic,700,700italic
       ,800,800italic);
@import url(line-icons.css);
body {
    color: #797979;
    background: #eeeeee;
    font-family: 'Lato', sans-serif;
    padding: 0px !important;
    margin: 0px !important;
    font-size:14px !important;
}
h1,h2,h3,h4,h5{
    font-weight: 300;
}
label{
    font-weight: 300;
}
ul li {
    list-style: none;
}
a, a:hover, a:focus {
    text-decoration: none;
    outline: none;
    outline: 0;
}
input:focus, textarea:focus { outline: none; }
table tr th { color: #688a7e;}
*:focus {outline: none;}
::selection {
    background: #688a7e;
    color: #fff;
}
::-moz-selection {
    background: #688a7e;
    color: #fff;
}
#container {
    width: 100%;
    height: 100%;
}
.Creative-pro, .Creative-pro h3{
    display: block;
    position: fixed;
    bottom:0;
    z-index: 100000;
    width: 100%;
    overflow: hidden;
    height: 50px;
    margin:0px;
}
.Creative-pro h3{
    padding-bottom: 10px;
    padding-top: 10px;
}
.lite{
    color: #00a0df !important;
}
/*main content*/
#main-content {
    margin-left: 20%;
    margin-right: 20%;
}
.header, .footer {
    min-height: 60px;
    padding: 0 15px;
}
.box1 {
    font-size: 16px;
    display: inline-block;
    width: 25%;
    padding: .25em .5em;
    margin: 20px 10px 0 0;
}
.header {
    position: fixed;
    left: 0;
    right: 0;
    z-index: 1002;
}
.white-bg {
    background: rgba(255,255,255,0.9);
    border-bottom: 1px solid #f1f2f7;
}
.dark-bg {
    background: rgba(54,66,74,1);
    border-bottom: 1px solid #f1f2f7;
}
.panel-content{
    padding: 10px;
}
.wrapper {
    display: inline-block;
    margin-top: 60px;
    padding: 15px;
    width: 100%;
}
a.logo {
    font-size: 30px;
    font-weight:bold;
    color: #fed189;
    float: left;
    margin-top: 8px;
    text-transform: uppercase;
}
a.logo:hover, a.logo:focus {
    text-decoration: none;
    outline: none;
}
a.logo span {
    color: #688a7e;
}
/*notification*/
#top_menu .nav > li, ul.top-menu > li {
    float: left;
}
.search-row {
    float: left;
    margin-top: 15px;
    margin-left: 16px;
}
.notification-row {
    float: right;
    margin-top: 15px;
    margin-left: 65px;
}
#task_notificatoin_bar, #mail_notificatoin_bar, #
       alert_notificatoin_bar{
    margin-top: 7px;
}
ul.top-menu > li > a {
    color: #fed189;
    font-size: 18px;
    padding: 2px 6px;
    margin-right: 15px;
    margin-top: 15px;
}
ul.top-menu > li > p{
    color: #ffffff;
    font-size:18px;
    padding: 2px 6px;
    margin-right: 15px;
    margin-top: 15px;
    font-weight: bold;
}
ul.top-menu > li > a:hover, ul.top-menu > li > a:focus {
    background: transparent !important;
    color: #D7D7D7 !important;
}
.notification-row .badge {
    position: absolute;
    right: -4px;
    top: 0px;
    z-index: 100;
    border-radius: 9px;
    min-width: 18px;
    height: 18px;
    text-align: center;
    padding: 3px 5px;
    background: #00a0df;
    font-weight: 400;
}
.badge {
    border-radius: 9px;
    min-width: 18px;
    height: 18px;
    text-align: center;
    padding: 3px 5px;
    background: #00a0df;
}
.dropdown-menu.extended {
    max-width: 300px !important;
    min-width: 160px !important;
    top: 42px;
    width: 235px !important;
    padding: 0;
    box-shadow: 0 2px 5px rgba(0, 0, 0, 0.176) !important;
    border: none !important;
    border-radius: 4px;
    -webkit-border-radius: 4px;
}
.navbar-form{
    padding: 0px;
    margin: 0 0 0 10px;
}
.navbar-form .form-control{
    width: 200px;
    height: 30px;
    background: white url('../img/icons/search-line-icon.png') no-
           repeat 3px;
    padding-left: 24px;
    margin-top: 1px;
}
@media screen and (-webkit-min-device-pixel-ratio:0) {
    /* Safari and Chrome */
    .dropdown-menu.extended {
        box-shadow: 0 2px 8px rgba(0, 0, 0, 0.176) !important;
    };
}
/*----*/
.page-header {
  margin: 12px 0 20px;
  border-bottom: none;
  opacity: 0.7;
  text-transform: uppercase;
}
.page-header i {
  color: #acb1b8;
  margin-right: 10px;
  float: left;
  font-size: 30px;
  line-height: 22px;
  opacity: 0.8;
}
.breadcrumb {
  -webkit-border-radius: 0px;
  -moz-border-radius: 0px;
  border-radius: 0px;
  height: 34px;
  position: relative;
  margin: 0 0 19px 0;
  overflow: hidden;
}
.breadcrumb li {
  position: relative;
  margin-right: 0;
}
.breadcrumb li i {
  Font-size: 15px;
  margin-right: 5px;
}
.breadcrumb > .active {
  color: #d4d4d4;
}
/*---------------- color------------------------*/
.dark-heading-bg {
  background: #4c4f53;
  border: 1px solid #4c4f53;
}
.main-bg {
  background: #e6e8ea;
}
.white-bg {
  color : #768399;
  background : #fff;
  background-color : #fff;
}
.red-bg {
  color : #fff;
  background : #d95043;
  background-color : #d95043;
}
.blue-bg {
  color : #fff;
  background : #57889c;
  background-color : #57889c;
}
.green-bg {
  color : #fff;
  background : #26c281;
  background-color : #26c281;
}
.greenLight-bg {
  color: #71843f;
  background: #71843f;
  background-color: #71843f;
}
.yellow-bg {
  color : #fff;
  background : #fc6;
  background-color : #fc6;
}
.orange-bg {
  color : #fff;
  background : #f4b162;
  background-color : #f4b162;
}
.purple-bg {
  color : #fff;
  background : #af91e1;
  background-color : #af91e1;
}
.pink-bg {
  color : #fff;
  background : #f78db8;
  background-color : #f78db8;
}
.lime-bg {
  color : #fff;
  background : #a8db43;
  background-color : #a8db43;
}
.magenta-bg {
  color : #fff;
  background : #e65097;
  background-color : #e65097;
}
.teal-bg {
  color : #fff;
  background : #97d3c5;
  background-color : #97d3c5;
}
.brown-bg {
  color : #fff;
  background : #d1b993;
  background-color : #d1b993;
}
.gray-bg {
  color : #768399;
  background : #e4e9eb;
  background-color : #e4e9eb;
}
.dark-bg {
  color : #fff;
  background : #1a2732;
  background-color : #1a2732;
}
.facebook-bg {
  color: #fff;
  background: #3b5998;
  background-color : #3b5998;
}
.twitter-bg {
  color: #fff;
  background: #00aced;
  background-color : #00aced;
}
.linkedin-bg {
  color: #fff;
  background: #4875b4;
  background-color : #4875b4;
}
/*search*/
.search {
    margin-top: 6px ;
    width: 20px;
    -webkit-transition: all .3s ease;
    -moz-transition: all .3s ease;
    -ms-transition: all .3s ease;
    -o-transition: all .3s ease;
    transition: all .3s ease;
    border: 1px solid #fff;
    box-shadow: none;
    background: url("../img/search-icon.jpg") no-repeat 10px 8px;
    padding:0 5px 0 35px;
    color: #fff;
}
.search:focus {
    margin-top: 5px ;
    width: 180px;
    border: 1px solid #eaeaea;
    box-shadow: none;
    -webkit-transition: all .3s ease;
    -moz-transition: all .3s ease;
    -ms-transition: all .3s ease;
    -o-transition: all .3s ease;
    transition: all .3s ease;
    color: #c8c8c8;
    font-weight: 300;
}
/*button*/
.btn-row {
    margin-bottom: 10px;
   margin-left: 5%;
   margin-right: 5%;
}
/*tabs*/
.tab-head {
    background: #688a7e;
    display: inline-block;
    width: 100%;
    margin-top: 60px;
}
.tab-container {
    margin-top: 10px;
}
.tab-head .nav-tabs > li > a {
    border-radius: 0;
    margin-right: 1px;
    color: #fff;
}
.tab-head .nav-tabs > li.active > a, .tab-head .nav-tabs > li > a:
       hover, .tab-head .nav-tabs > li.active > a:hover, .tab-head
       .nav-tabs > li.active > a:focus {
    background-color: #f1f2f7;
    border-color: #f1f2f7;
    color: #797979;
}
/*general page*/
.progress-xs {
    height: 8px;
}
.progress-sm {
    height: 12px;
}
.panel-heading .nav {
    border: medium none;
    font-size: 13px;
    margin: -10px -15px -11px;
}
.tab-bg-primary {
    background: #688a7e;
    border-bottom: none;
}
.tab-bg-info {
    background: #324c57;
    border-bottom: none;
}
.tab-bg-info.panel-heading .nav > li.active > a, .tab-bg-info.
       panel-heading .nav > li > a:hover{
    color: #36464d;
}
.tab-bg-info.panel-heading .nav{
    margin: -10px 15px -11px;
}
.panel-heading .nav > li > a,
.panel-heading .nav > li.active > a, .panel-heading .nav > li.
       active > a:hover, .panel-heading .nav > li.active > a:focus
       {
    border-width: 0;
    border-radius: 0;
}
.panel-heading .nav > li > a {
    color: #fff;
}
.panel-heading .nav > li.active > a, .panel-heading .nav > li > a:
       hover {
    color: #688a7e;
    background: #fff;
}
.tab-right {
    height: 38px;
}
.panel-heading.tab-right .nav > li:first-child.active > a, .tab-
       right.panel-heading .nav > li:first-child > a:hover {
    border-radius: 0 ;
    -webkit-border-radius: 0 ;
}
.panel-heading.tab-right .nav > li:last-child.active > a, .tab-
       right.panel-heading .nav > li:last-child > a:hover {
    border-radius: 0 4px 0 0;
    -webkit-border-radius: 0 4px 0 0;
}
.panel-heading.tab-right .nav-tabs > li > a {
```

```
    margin-left: 1px;
    margin-right: 0px;
}
.m-bot20 {
    margin-bottom: 20px;
}
.m-bot-none {
    margin-bottom: 0;
}
.wht-color {
    color: #fff;
}
.close-sm {
    font-size: 14px;
}
/*form*/
.sm-input {
    width: 175px;
}
.form-horizontal .form-group {
    border-bottom: 1px solid #eff2f7;
    padding-bottom: 15px;
    margin-bottom: 15px;
}
.form-horizontal .form-group:last-child {
    border-bottom: none;
    padding-bottom: 0px;
    margin-bottom: 0px;
}
.form-horizontal .form-group .help-block {
    margin-bottom: 0;
}
.round-input {
    border-radius: 500px;
    -webkit-border-radius: 500px;
}
.m-bot15 {
    margin-bottom: 15px;
}
.form-horizontal .checkbox-inline > input {
    margin-top: 1px;
   border:none;
}
.login-img-body{
   background:transparent
  -webkit-background-size: cover;
  -moz-background-size: cover;
  -o-background-size: cover;
  background-size: cover;
}
.login-form {
    max-width: 350px;
    margin: 100px auto 0;
    background-color: white;
}
.login-img-body .login-form{
    max-width: 350px;
    border: 1px solid #B0B6BE;
}
.login-form h2.login-form-heading {
    margin: 0;
    padding:20px 15px;
    text-align: center;
    background: #34aadc;
    border-radius: 5px 5px 0 0;
    -webkit-border-radius: 5px 5px 0 0;
    font-size: 18px;
    text-transform: uppercase;
    font-weight: 300;
    font-family: 'Lato', sans-serif;
}
.login-form .form-control {
    position: relative;
    font-size: 16px;
    height: auto;
    padding: 10px;
    -webkit-box-sizing: border-box;
    -moz-box-sizing: border-box;
    box-sizing: border-box;
}
.login-form .form-control:focus {
    z-index: 2;
}
.login-form .login-img{
    font-size: 50px;
    font-weight: 300;
}
.login-form .input-group{
    border: 1px solid #B0B6BE;
    margin-bottom: 20px;
}
.login-form .input-group-addon{
   vertical-align:top;
    padding: 12px 12px;
    font-size: 16px;
    font-weight: normal;
    line-height: 1;
    text-align: center;
    background-color: #ffffff;
    border: none;
    border-radius: 0;
}
.login-form input[type="text"], .login-form input[type="password"]
       {
    border: none;
    box-shadow: none;
    font-size: 16px;
    border-radius: 0;
}
.login-form .btn{
    border-radius: 0;
}
.login-form .btn-login {
    background: #f67a6e;
    color: #fff;
    text-transform: uppercase;
    font-weight: 300;
    font-family: 'Lato', sans-serif;
    box-shadow: 0 4px #e56b60;
    margin-bottom: 20px;
}
.login-form p {
    text-align: center;
    color: #b6b6b6;
    font-size: 16px;
    font-weight: 300;
}
.login-img3-body .login-form p,.login-img2-body .login-form p {
    color: #34aadc;
}
.login-form a {
    color: #b6b6b6;
}
.login-form a:hover {
    color: #34aadc;
}
.form .required{
    font-size: 16px;
    color: #00a0df;
}
.login-wrap {
    padding: 20px;
}
/*form validation*/
.login-form .login-wrap label.error {
    display: none;
    margin: 5px 0;
    color: #00a0df;
    font-weight: 500;
}
/*form wizard*/
.stepy-tab {
    text-align: center;
}
.stepy-tab ul{
    display: inline-block;
}
.stepy-tab ul li {
    float: left;
}
.step legend {
    border: none;
}
.button-back {
    float: left;
    width:100px;
}
.button-next, .finish {
    float: right;
    width:100px;
}
.button-back, .button-next, .finish {
    cursor: pointer; text-decoration: none;
}
.step {
    clear: left;
}
.step label {
    display: block;
}
.stepy-titles li {
    color: #757575;
    cursor: pointer;
    float: left;
    margin: 10px 15px;
}
.stepy-titles li span { display: block; }
.stepy-titles li.current-step div {
    color: #fff;
    cursor: auto;
    background: #688a7e;
    border-radius: 50%;
    -webkit-border-radius: 50%;
    width: 80px;
    height: 80px;
    line-height: 80px;
}
.stepy-titles li div{
    font-size:16px;
    font-weight: 300;
    background: #eee;
    border-radius: 50%;
    -webkit-border-radius: 50%;
    width: 80px;
    height: 80px;
    line-height: 80px;
}
```

Source Code 157: recognize_face_style.css

```
@CHARSET "UTF-8";
.dropzone{
   width:  200px;
   position: relative;
   text-align: center;
}
.warning{
   visibility: hidden;
   margin: 10px auto;
}
.similarity{
   font-size:40px;
   font-size: bold;
   text-align: center;
}
.section-label{
   font-size:20px;
   text-align: center;
   border-bottom: solid 1px;
   padding-bottom: 10px;
}
.histogram-similarity{
   font-size:40px;
   font-size: bold;
   text-align: center;
    text-align: center;
    position: relative;
    top: 50%;
    -ms-transform: translateY(-50%);
    -webkit-transform: translateY(-50%);
    transform: translateY(-50%);
}
.view-details{
   margin-top: -50px;
}
.similarity-modal{
   font-size:20px;
   text-align: center;
}
.doughnut{
   text-align: center;
}
```

Source Code 158: review_details.css

```
.table {
  table-layout:inherit;
}
.table td {
  white-space: pre-wrap;
}
```

XI. Acknowledgement

My Special Problem maybe was not as hard as others but it surely was difficult for me to push through with it and eventually finish it. I have experienced a lot of difficulties coding because I have to study a lot of technologies I am not even familiar with that I need to use. My classmates knew me as someone who prefers to work on the back end all day because working on the front end was never my forte nor I find it worthy of my efforts because I know that it will surely look disastrous after all.

However, in the course of making this project, I have learned that I have to be flexible because there will come times that I need to work alone. I have learned to design my database, work on the logic part and even design the webpage. These efforts put into this project are inspired by my objectives in life and by people who I want to take pride in me.

I want to thank my professors especially my SP adviser, Ms. Perl Gasmen, for guiding me throughout this project, for defending me in my proposal where I almost cried and for helping me with my defense. If it wasn't for you, I may have really cried that day.

For my classmates, whether close to me or not, I thank you for the encouragement you gave me. Actually, you also gave me inspiration to push through. When I see some of you coding and making progress, it puts pressure on me that I must do the same. I hope to see you all in our graduation. I am really proud of our batch! We broke the infinite loop procrastination!

I thank my boyfriend, Elroi, for the love and support while I am making my SP. Thank you for joining me in my sleepless nights while you play and I code, for providing me a conducive coding place and for feeding me. Thank you for believing in me and for believing that I can finish this project successfully.

I thank my siblings and tita a lot for encouraging me to finish my project by saying 'Ate, you're still not finished with that thesis!'. You pressure me but not in a

bad way.

To my nanay who was not here through the course of making this project, I still want to thank you for always giving me the support I need and for always showing that you are proud of me.

My dad and my mom are my main inspiration for finishing my SP and for everything that I do. I thank them for the constant support and love.

Most of all, I thank God. We may have not been that close the past few months because I am very preoccupied with this project but He has never let me down. He still listens to my prayers and still gave me what I desire the most.