UNIVERSITY OF THE PHILIPPINES MANILA

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CHRONIC KIDNEY DISEASE MONITORING SYSTEM

A special problem in partial fulfillment

of the requirements for the degree of

Bachelor of Science in Computer Science

Submitted by:

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Abstract

Chronic Kidney Disease is a lifelong condition that requires regular monitoring to effectively reduce the risk of further complications and improve the patient's quality of life. With these given, Chronic Kidney Disease Monitoring System aims to be an alternative to traditional monitoring process by providing users with functionalities to submit medical event, and submit clinical logs which will be converted to graphs for analysis. Moreover, this system also aims to boost interaction between users through the use of forum and internal messaging system. Also, it aims to promote circulation of medically validated resources to help patients in making improved and intelligent health decisions.

Keywords: chronic kidney disease, monitoring, end-stage renal disease, kidney

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I.   Introduction

A.   Background of the Study

Chronic Kidney Disease (CKD) is a condition characterized by a gradual loss of kidney function over time such as filtering blood normally due to damage. CKD increases the risk for many diseases, including cardiovascular disease, end-stage renal disease (ESRD), and mortality. However, CKD usually has no symptoms until its most advanced state [1].

CKD has also been defined clinically as decreased kidney function and/ or kidney damage that lasted for at least 3 months. Glomerular filtration rate (GFR) is a test used to check how well the kidneys are working and determine the stage of kidney disease. Kidney dysfunction is indicated by a GFR of less than 60 mL/min/1.73 m^2, while kidney damage is indicated by a GFR of less than 15 mL/min/1.73 m^2 and most frequently evidenced by increased urinary albumin excretion [2].

CKD has been categorized into five stages:

Stage 1: Kidney damage with GFR $\geq$ 90 mL/min/ 1.73 m^2.

Stage 2: Kidney damage with GFR 60–89 mL/min/ 1.73 m^2.

Stage 3: GFR 30–59 mL/min/1.73 m^2 regardless of kidney damage.

Stage 4: GFR 15–29 mL/min/1.73 m^2 regardless of kidney damage.

Stage 5: GFR < 15 mL/min/1.73 m^2 regardless of kidney damage, or kidney failure treated by dialysis or transplantation [1].

Stage 5 Chronic Kidney Disease is also known as the End-Stage Renal Disease (ESRD). Patients with ESRD are those whose kidneys stop working well enough to live without dialysis or a kidney transplant which are the main treatments for managing the disease [3].

Kidney transplantation is the process of surgically placing a healthy kidney from another person to the ESRD patient. The new kidney is placed inside the lower

abdomen where the surgeon connects its artery and vein to the artery and vein of the patient [4].

On the other hand, dialysis is the process of separating elements in a solution by diffusion, gets rid of extra fluid and wastes through a semipermeable membrane. A semipermeable membrane is a thin surface with tiny holes that lets small particles (like waste products and excess fluid) pass through, but keeps large particles (like blood cells) back. The two forms of dialysis are hemodialysis and peritoneal dialysis [5].

Kidney diseases especially End-Stage Renal Disease, as of February 2014, is the seventh leading cause of death in the Philippines. Moreover, study shows that one Filipino develops chronic renal failure every hour, or about 120 Filipinos per million people per year [6]. With these statistics given, some organizations aim to provide better care for kidney disease patients. The Philippine Society of Nephrology (PSN) [1] has done a number of health programs to promote awareness, prevention and treatment of renal disease. It held several symposiums in the country, offers a number postgraduate courses for training health professionals interested in learning different fields of nephrology (e.g. Managing the Difficult Dialysis Patient, The Resilience of the Filipino Kidney: Empowering Health Professionals, etc.) Moreover, it has done several medical missions like the PSN Typhoon Yolanda Dialysis Relief Operation in which members (nephrologists and dialysis nurses) volunteered, provided dialysis equipment, and gave the patients full treatment and a month's supply of the basic medicines needed. Part of its advocacies is the Deceased Organ Donation which objective is to increase the number of patients with ESRD undergoing deceased organ transplantation through education of health care professionals [7]. So far, most of its projects revolve around the advancement of knowledge of the health professionals to provide best quality care for the patients with kidney disease.

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[1]www.psn.ph/

B. Statement of the Problem

Study shows that the two leading causes of ESRD are diabetes and hypertension, which together account for almost 60 percent of dialysis patients. Another leading cause is the glomerulonephritis, or several renal diseases usually affecting both kidneys often characterized by inflammation of either the glomeruli or small blood vessels in the kidney [6]. Most patients with CKD will die of events related to these diseases before ESRD develops. Therefore, an important focus of care for patients with CKD should include management of cardiovascular and diabetes risk factors [8]. A monitoring system can provide an efficient and effective mean for management of CKD before leading to ESRD.

There are a lot of systems available on the Internet that helps in monitoring a patient's condition, mostly for diabetes and hypertension [9] which are the leading causes of CKD in the Philippines, but rarely for solely CKD. Some of these systems are limited to providing self-management tools for the patients [10]. Some of these systems are limited to their state/country/city and can't be applied in the Philippine setting [11].

Given that PSN has implemented various advocacies, so far, no online or existing monitoring system regarding CKD is available in the Philippines, thus, there are no means of interacting with other CKD patients in the country. Moreover, there are no means to obtain medically validated information directly from health professionals.

C. Objectives of the Study

The study aims to develop a web-based monitoring system that will have the following functionalities:

1. Allows the patient to:

    (a) Login/out of the system

(b) Modify his/her account information (password, profile)

(c) Update medical condition (sudden events e.g. *dizziness*, *vomitted*, etc)

(d) View/Update charts (e.g. *blood pressure*, *blood glucose*, *pulse rate*, etc)

(e) Interact with other patients and health professionals through participating in forums

(f) View doctor/ care provider suggestions/recommendations regarding entered medical condition

(g) Schedule clinic appointment online

(h) Receive notification of the scheduled appointment to the clinic via email

(i) View medically validated medical information (e.g. articles, images, videos)

(j) Can download articles in PDF format

(k) Exchange messages with health professionals online

2. Allows the health professional to:

(a) Login/out of the system

(b) Modify his/her account information

(c) Update patient's medical condition (view patient's medical condition, make proper recommendations/suggestions)

(d) Approve scheduled appointment booked by the patient

(e) View and post medically validated information on CKD (e.g. articles, images, videos)

(f) Interact with patients and other health professionals through forums

(g) Exchange private messages with other health professionals and patients online

3. Allows the Moderator (on top of being a health professional) to:

    (a) Approve links, resources, messages and topics to be included in the forum and ensure appropriateness and suitability of content for public viewing

4. Allows the Local System Administrator to:

    (a) Login/out of the system

    (b) Modify his/her account information

    (c) Manage user account per hospital/clinic (e.g. patients, health professionals in a specific hospital/clinic)

5. Allows the Global Systems Administrator to:

    (a) Login/out of the system

    (b) Modify his/her account information

    (c) Manage local system administrator(hospital/clinic) accounts

    (d) Manage moderator accounts

D.   Significance of the Project

Chronic diseases like CKD are irreversible, thus, visits to the hospitals/clinics to update a patient's condition is inevitable, constant and lifelong. The system allows the health professionals in charge of the patient with CKD to have remote access to his/her personal information, condition and charts which can greatly help in tracking/monitoring the patient's state, thus, lessening the number of actual visits of the patient, thereby lessening costs as costs will be prohibitive as the condition is lifelong.

The system also promotes self-management of CKD patients. Study shows that supporting self-management in people living with CKD is an important element in preventing disease progression [12]. Being able to monitor their condition, patients

will be aware of the decisions they have to make in order to avoid disease progression. Moreover, the system also boosts the patient's social interaction by allowing participation in forums.

The system also serves as a venue for providing medically validated medical information, and not just a website of dubious origin since health professionals will be the ones providing related materials and moderating the forums regarding CKD online. Ensuring the validity of information provided by the health professionals can help patients with CKD make knowledgeable decisions regarding their condition and produce improved outcomes.

E. Scope and Limitations

1. Enrolment of the patients will be done during their first visit in the hospital (after diagnosis of CKD).

2. Enrolment of the health professionals will be done online which will be validated by the local system administrator.

3. Enrolment of hospitals/clinics will be done online which will be validated by the global systems administrator.

4. Enrolment to the system is free to all validated accounts.

5. Moderator of the system can function as a health professional but with additional functionalities as stated above.

6. Patient charts can be downloaded in PDF format only.

7. Online consultation is limited compared to face to face consultation with the health professional (e.g. diagnostic reports being the only basis of evaluation of a patient)

8. The hospital will not be accountable for any malpractice/maltreatment made by a health professional to a patient. Moreover, complaints made by the patient regarding maltreatment by a hospital/clinic, the health professional will not be held accountable as well. With these given, the project will not be involved in any situation that calls for questioning legal accountability.

F.   Assumptions

1. All inputs of patient are valid

2. Patient has his/her own tools to use to provide data from home (e.g.body weight, blood pressure)

3. Registration to the system is voluntary and the users agreed to the terms and conditions of the said registration

II. Review of Related Literature

Monitoring systems is not a new concept and in fact has already been developed in other countries. Relatively few but still are able to be developed, are CKD monitoring systems. In 2014, Morr, Cole and Perl have developed a health virtual community for patients with CKD which offers patients tools that can help them to access medically validated treatment and disease management information, track and report on related medical events, invite a member of the healthcare team to virtually communicate, track and monitor patients to ensure treatment and medication adherence, and transition to home care [11].

While this health VC is helpful in monitoring the condition of patients and effective in educating about the disease, it lacks implementation of forums in which patients and medical professionals can interact. Moreover, this health VC is only available to institutions and patients in Canada, making it inaccessible to institutions and patients from different countries like the Philippines.

Meanwhile, Rosmani et al. designed an Online Informational Self-Care Tool to assist patients and those who are at risk of kidney disease in self-managing their conditions by providing guidelines and comprehensive information about CKD. The application was developed with four main menus: Introduction (to kidney and kidney disease symptoms), Effects (for kidney patients), Healthcare (diet, precautions and activities for kidney patients) and Quiz [10].

The tool is easy to use but is limited to being a source of information and lacks implementation of interaction between patients and health professionals.

On the other hand, Rosso et al. proposed in 2010 an open platform, CHRONIOUS, to monitor and manage elderly patients with chronic diseases by using sensors in gathering and analysing events in the patients' environment instead of conventional data processing. In this system, unobtrusive wearable sensors are used by the patients to allow monitoring of information about their actions, the situations around them,

and their interactions with the environment [13].

Additionally, Fernandes et al. have developed a distance care system for pre-dialysis chronic kidney disease patients which focus in the treatment of CKD is to prevent its progression through optimal medical control. The system enables exchange of messages between doctors and patients; enables users to receive messages via e-mail alerting them of their duties; and guarantees the confidentiality by individual passwords. The system aimed to increase the coverage area of nephrologists, reduce costs and bring the patient to the family care physician. They carried out a platform to perform E-consulting where a virtual office can be explored by the users and used as an alternative to face-to-face consultation. The study was carried out in accordance with the Declaration of Helsinski and the Good Clinical Practice guidelines from the International Conference of Harmonization, as well as local Health Surveillance Agency (ANVISA) [14].

Estudillo-Valderrama et al. conducted a study in 2014 regarding the feasibility of a distributed approach for the management of alarms related to the monitoring of CKD patients involved in the eNefro project. The proposed approach aims to provide the eNefro project using a distributed architecture, enable the assessment of geographical differences, and improve the procedures that might be used when processing patient data at different locations. Prioritization issues and alarms are catered to methodologically based on the definitions given by the ISO IEC/CD 60601 which tackles the specific requirements for systems and alarm signals utilized in patient care, and further developed based on the data distribution service specification [15].

Aside from this, the DARWIN decision support design process, developed in 2005 by Raghavan et al., is a support system for the dialysis treatment of CKD patients. This tool exhibits the feasibility of utilizing a flexible clinical decision support through standard software tools and offers its users features such as reminders, alerts, sugges-

tions, notifications, interpretations, suggestions, assistance, prediction, and critique.

Five phases of development have been applied for the completion and quality assurance of the distinct intelligences the system has, namely: Intelligence, Design, Choice, Implementation, and Monitoring. The first phase is where various work groups of nurses and physicians from Dialysis Clinic, Inc. (DCI) were created to assemble the private knowledge and to determine the public knowledge available for the intelligent system support of chosen key clinical decisions.

Furthermore, the data gathered through focus group methods and various interviews were transcribed as text documents. Sections of these texts were then categorized based on patterns and similarities in decision-making.

During the design phase, the different variables are determined, the relationships among these are identified, and a model is created. While in the choice phase, recommended solutions and alternate proposals are evaluated and the best recommendation is selected. The fourth phase, implementation, is where the actual solution is exhibited and applied. The final phase, monitoring, could simply be stated as the intelligent phase adapted to the implementation stage [16].

Personal Area Network technologies have also been utilized to upgrade the telemonitoring of Peritoneal Dialysis patients. The Open Telenephrology Platform is a Bluetooth-based application which enhances the televisit system through the use of Bluetooth measurement devices along with a software to guide its users on the proper measurement of their fluid status, blood pressure, weight, and fluid balance.

Aside from this, a communication server application for the electronic patient record or EPR visualization and management, along with a remote database are used in the said platform. This system has already been implemented in Severo Ochoa Hospital and was even deemed as a contributor to the reduction of the period of hospitalization of their patients from 5.7 days to a mere 2.2.

Moreover, this system is being monitored and validated at the Accessible Digital

Home (ADH) wherein a wideband ADSL communication is provided as well as the assessment of how PD patients are making use of the technology by taking their own measures from their homes and sending it to Severo Ochoa Hospital where nephrologists are located [17].

Web-based consultation systems have already been established and implemented in the past in which family physicians can consult a nephrologist about a patient with CKD. With these online systems, relevant data are exported from the patient's electronic file to a protected digital environment from which advice can be formulated by the nephrologist.

In order to assess the potential of telenephrology in reducing in-person referrals, a study was conducted in 2013 where Scherp et al. analyzed telenephrology consultations by 28 family practices and 5 nephrology departments in Netherlands between May 2009 and August 2011. They measured the discrepancy between the number of intended referrals by the family physician and the number of referrals requested by the nephrologist. Results show that in the absence of telenephrology, 43 patients (35.3%) would have been referred by their family physicians, while the nephrologist considered referral necessary in only 17 patients (13.9%). Moreover, the family physician would have treated 79 patients in primary care whereas the nephrologist deemed referral necessary for 10 of these patients. The results indicated that a web-based consultation system might reduce the number of referrals and is useful. Moreover, it also concluded that telenephrology may contribute to an effective use of health facilities by allowing the patients to be treated in primary care with remote support by a nephrologist [18].

On the other hand, the National Chinese Medicine Academy designed an integration of clinic research information sharing system, named Sharing System, to serve as an upgrade to the clinical data mining and analysis. This Sharing System served as a solution for the lessening of the massive manpower clinical researches call for, as well

as the hastening of the analyzation of the clinical data gathered. This information system was used for analyzing the Chronic Kidney Disease patients from the NCMA hospital to assess the effect of traditional Chinese medicine-based therapy in their rehabilitation.

The clinical information collected from the CKD patients were recorded in the Sharing System. Aside from storage, this information sharing system also provided a means for the researchers to circulate the data mined from the patients. Moreover, other information about patients, such as the diagnosis of TCM syndrome, laboratory tests' results, scores of TCM symptoms, as well as the treatment plan were also communicated through the Sharing System [19].

III.   Theoretical Framework

A.   Chronic Kidney Disease

1. Definition and Stages

Chronic kidney disease or CKD is defined as abnormalities of kidney structure or function that has been present for three months or longer. Criteria for marking a condition as CKD are (a) the presence of one or more of the markers of kidney damage such as albuminuria which is the presence of albumin in the urine, urine sediment abnormalities, electrolyte and other abnormalities due to tubular disorders, abnormalities detected by histology, structural abnormalities detected by imaging, history of kidney transplantation and (b) decrease in the glomerular filtration rate (GFR) [1, 5].

Classification and monitoring of CKD has been based on the measured glomerular filtration rate (GFR) and albumin excretion rate (AER). GFR estimates kidney function. As GFR declines, complications of CKD are more likely and more severe. Tracking of GFR over time monitor the effectiveness of a therapy. Therefore, stable GFR may indicate that therapy is working and decline of GFR means progression of CKD. GFR also reflects the total filtration of all two million nephrons, which are the filtering units of the kidney, in the body thus, as nephrons are damaged or destroyed, GFR declines. On the other hand, AER is the preferred measure for screening, assessing, and monitoring kidney damage. AER estimates 24–hour urine albumin excretion. Evaluation of AER over time helps in assessing response to therapy and monitoring progression of CKD. Elevated albuminuria may reflect higher risk for progression of CKD and a decrease in urine albumin may reflect positive response to therapy and may be associated with improved renal and cardiovascular results [2].

[1, 3]

GFR category	GFR (mL/min/1.73 m²)	Terms
G1 (Stage 1)	≥ 90	Normal or high
G2 (Stage 2)	60-89	Mildly decreased
G3a (Stage 3)	45-59	Mildly to moderately decreased
G3b (Stage 3)	30-44	Moderately to severely decreased
G4 (Stage 4)	15-29	Severely decreased
G5 (Stage 5)	< 15	Kidney failure

Table 1: GFR categories in CKD

--	AER	ACR		--
Category	(mg/24 hours)	(mg/mmol)	(mg/g)	Terms
A1	< 30	< 3	< 3	Normal to mildly increased
A2	30-300	3-30	30-300	Moderately increased
A3	> 300	> 30	> 300	Severely increased

Table 2: Albuminuria categories in CKD

2. Signs and Symptoms

Many people who have chronic kidney disease are not aware of having it until the later stages because the early signs can be very subtle. Moreover, it can take many years for a condition to go from stage 1 CKD to End Stage Renal Disease (ESRD). However, patients can still get indications for accepting conditions as signs and symptoms of CKD. The following are the most common symptoms of CKD:

(a) Changes in urination

Kidneys are responsible for urine, thus, when the kidneys are failing, noticeable changes can be observed like: increased need to urinate particularly at night; urine may be foamy or bubbly; urination is more/less often or in greater/lesser amounts than usual and with pale/dark color; urine may contain blood; patient may feel pressure or have difficulty urinating.

(b) Swelling

Kidneys are responsible for removing extra fluid in the body, thus, if they fail, these fluids will build up in the patient's body which can cause swelling in the legs, ankles, feet, face, and/or hands.

(c) Fatigue

Erythropoietin is a hormone secreted by the kidneys that increases the rate of production of red blood cells in response to falling levels of oxygen in the tissues. As the kidneys fail, they produce less of this hormone causing the muscles and brain of a patient tire very quickly.

(d) Skin rashes/ Itching

Kidneys are responsible for removing wastes from the bloodstream thus when the kidneys fail, the build-up of wastes in the blood can cause severe itching.

(e) Metallic taste in mouth

A build-up of wastes in the blood (called uremia) can make food taste different and cause bad breath. This may be responsible for losing appetite resulting to weight loss.

(f) Nausea and vomiting

A severe build-up of wastes in the blood (uremia) can also cause nausea and vomiting. Loss of appetite can lead to weight loss.

(g) Shortness of breath

Trouble catching breath can be related to the kidneys in two ways. First, extra fluid in the body can build up in the lungs. And second, anemia (a shortage of oxygen-carrying red blood cells) can leave the body oxygen–starved and short of breath.

(h) Feeling cold

Anemia, which is a complication of CKD, can result in feeling cold all the time, even in a warm environment.

(i) Dizziness and trouble concentrating

Anemia related to kidney failure means that the brain is not getting enough oxygen. This can lead to memory problems, trouble with concentration, and dizziness [20].

3. Complications of CKD

(a) Hypertension

Hypertension is a traditional cardiovascular risk factor which contributes to the cardiovascular risk associated with chronic kidney disease. It develops in more than 75% of CKD patients at any stage and is both a cause and a consequence of chronic kidney disease [21, 8]. Study shows that patients with hypertension are at increased risk for new or recurrent cardiovascular events in individuals with stage 2-3 CKD [21].

(b) Anemia

Anemia is defined as a reduction in one or more of the major red blood cell measurements which are the hemoglobin concentration, hematocrit, or red blood cell count. The World Health Organization defines anemia as a hemoglobin level less than 13 g/dL in men and post-menopausal women,

and less than 12 g/dL in pre-menopausal women. A normochromic, normocytic anemia usually accompanies progressive CKD, and the overall prevalence of CKD-associated anemia is approximately 50%. Although anemia may be diagnosed in patients at any stage of CKD, there is a strong correlation between the prevalence of anemia and the severity of CKD. One quarter of stage 1 CKD patients, half of those stratified to CKD stages 2, 3, and 4 and three quarters of CKD patients starting dialysis suffer from anemia [21]. Anemia may develop early during the course of CKD due to inadequate production of erythro- poietin by the kidneys [22].

(c) Mineral and Bone Disorders

Renal excretory function plays an important role in maintaining the balance of calcium and phosphate. Bone metabolism abnormalities are initially caused by elevations in the phosphorous in which renal excretion is impaired by the declining GFR.

Progressive CKD results in the development of hyperphosphatemia and hypocalcemia. To compensate for hyperphosphatemia (that is, abnormally high serum phosphate levels), the parathyroid gland increases release of PTH or the parathyroid hormone which has several effects on the kidney. For one, it acts on bone in combination with vitamin D by increasing the release of calcium and initiating the activation and propagation of osteoclasts. Vitamin D has additional effects of increasing gut absorption of calcium and phosphorus as well as having a mild inhibitory effect on the release of PTH from the parathyroid gland. Moreover, secondary hyperparathyroidism is the compensatory increase in parathyroid production of PTH in response to the hypocalcemia and hyperphosphatemia caused by the declining renal function [23].

4. Prevention, Monitoring, and Treatment

(a) Medical

Complications related to CKD vary depending on the affected function of the kidney, therefore, medical treatment to each complication may also vary.

i. Hypertension

Patients without diabetes

For patients with proteinuric chronic kidney disease (urine ratio of albumin to creatinine $\geq$ 30 mg/mmol), antihypertensive therapy should include an angiotensin-converting enzyme or ACE inhibitor or an angiotensin-receptor blocker in cases of intolerance to ACE inhibitors. Also, blood pressure should be targeted to less than 130/80 mm Hg. On the other hand, for patients with nonproteinuric chronic kidney disease (albumin to creatinine ratio < 30 mg/mmol), antihypertensive therapy should include either an ACE inhibitor, an angiotensin-receptor blocker, a thiazide diuretic, a β-blocker (for patients aged 60 years or less) or a long-acting calcium-channel blocker.

Patients with diabetes

Antihypertensive therapy should include either an ACE inhibitor or an angiotensin-receptor blocker. Also, blood pressure should be targeted to less than 130 mm Hg systolic and less than 80 mm Hg diastolic.

ii. Anemia

Use of erythropoiesis-stimulating agents

For patients with anemia and adequate iron stores, erythropoiesis-stimulating agents should be initiated if their hemoglobin level falls below 100 g/L. The target hemoglobin level should be 110 g/L because the acceptable haemoglobin range is 100-120 g/L.

Use of iron therapy

For patients not receiving erythropoiesis-stimulating agents and who have a hemoglobin level < 110 g/L, iron should be administered to maintain a level of ferritin > 100 ng/mL and transferrin saturation > 20%.

iii. Mineral and Bone Disorders

Dietary phosphate restriction should be used continuously to treat hyperphosphatemia. If said dietary restriction fails to control hyperphosphatemia and if hypercalcemia is not present, therapy with calcium-containing phosphate binders (calcium carbonate or calcium acetate) should be initiated. Moreover, if hypercalcemia develops, the dose of calcium-containing phosphate binders or vitamin D analogues should be reduced.

(b) Non-medical

i. Smoking

Smoking should be discouraged to reduce the risk of developing CKD and ESRD, and to reduce the risk of cardiovascular disease.

ii. Weight Reduction

Obese (BMI > 30.0 kg/m^2) and overweight (BMI 25.0-29.9 kg/m^2) people should be encouraged to reduce their BMI to lower their risk of CKD and ESRD. Maintenance of a healthy body weight (BMI 18.5-24.9 kg/m^2; waist circumference < 102 cm for men, < 88 cm for women) is recommended to prevent hypertension or to reduce blood pressure in those with hypertension.

iii. Dietary protein control

A protein-controlled diet (0.80–1.0 g/kg/d) is recommended for adults with CKD. Dietary protein restriction of < 0.70 g/kg/day should include careful monitoring of clinical and biochemical markers of nutri-

tional deficiencies.

iv. Alcohol intake

To reduce blood pressure, alcohol consumption in both people with normal blood pressure and hypertensive people should be moderate. Healthy adults should limit alcohol consumption to 2 drinks or less per day and consumption should not exceed 14 standard drinks per week for men and 9 standard drinks per week for women.

v. Exercise

People without hypertension (to reduce the possibility of becoming hypertensive) or those with hypertension (to lower their blood pressure) should be encouraged to accumulate 30–60 minutes of moderate-intensity dynamic exercise (walking, jogging, cycling or swimming) 4–7 days per week.

vi. Dietary salt intake

To prevent hypertension, a dietary sodium intake of < 100 mmol/-day is recommended, in addition to a well-balanced diet. Patients with hypertension should limit their dietary sodium intake to 65-100 mmol/day [8].

5. Dialysis

(a) Peritoneal Dialysis

Peritoneal dialysis is the type of dialysis that use the lining of the patient's belly, or abdomen, to filter the blood and remove wastes, chemicals, and extra water from the body. During peritoneal dialysis, solutes and fluids are exchanged between the capillary blood and the intraperitoneal fluid through a biologic membrane which is known as the peritoneum. A mixture of minerals and sugar dissolved in water, called dialysis solution, travels

through a catheter into the belly. The sugar, which is called dextrose, draws wastes, chemicals, and extra water from the tiny blood vessels in the peritoneal membrane into the dialysis solution which contains electrolytes to facilitate correction of acid-base and electrolyte abnormalities [4]. After several hours, the used solution is drained from the abdomen through the tube, taking the wastes from the blood with it. Then the abdomen is refilled with fresh dialysis solution and the cycle is repeated. The process of draining and refilling is called an exchange [24].

There are two types of peritoneal dialysis available for CKD patients: Continuous Ambulatory Peritoneal Dialysis (CAPD) and Continuous Cycler-assisted Peritoneal Dialysis (CCPD).

CAPD does not require any machine and can actually be done in any clean, well-lit place. With CAPD, blood is always being cleaned by the circulation of the dialysis solution from a plastic bag through the catheter and into the patient's abdomen. The dialysis solution stays in the abdomen for several hours with the catheter sealed and the duration is called the dwell time. The next process is the drainage of the dialysis solution into an empty bag for disposal and then, fresh dialysis solution will be refilled in the abdomen so that the cleaning process can begin again. CAPD consists of 4 to 5 2-L dialysis exchanges per day in which the duration of the dwell time can last up to 4 to 6 hours or more, while the process of draining the used solution and replacing it with fresh one takes about 30 to 40 minutes. On the other hand, unlike CAPD, CCPD is a continuous treatment that requires a machine called a cycler to fill and empty the abdomen 3 to 5 times during the night while the patient sleeps. In the morning, the patient may begin one exchange with a dwell time that lasts the entire day. Additional exchange in the middle of the afternoon can also be done

without the cycler to increase the amount of waste removed and to reduce the amount of fluid left behind in the body [4, 24].

(b) Hemodialysis

Hemodialysis is the type of dialysis that cleans and filters the blood using a machine to temporarily rid the body of harmful wastes, extra salt, and extra water. It helps control blood pressure and helps the body keep the proper balance of important chemicals such as potassium, sodium, calcium, and bicarbonate. Hemodialysis uses a special filter called a dialyzer which is a canister connected to the machine that functions as an artificial kidney to clean the blood. During the treatment, the blood travels through tubes into the dialyzer in which wastes, extra salt and extra water are filtered out and then the cleaned blood flows through another set of tubes back into the body. Moreover, the hemodialysis machine monitors blood flow and removes wastes from the dialyzer. Hemodialysis is usually done three times a week in which each treatment lasts from 3 to 5 or more hours.

Several months before the first hemodialysis treatment, an access to the patient's bloodstream will need to be created. This access provides an efficient way for blood to be carried from the body to the dialyzer and back without causing discomfort to the patient. However, if the kidney disease has progressed quickly, the patient may not have time to get a permanent vascular access before starting hemodialysis treatments and may need to use a catheter as a temporary access. Some people use a catheter for long-term access as well. Catheters that will be needed for more than about 3 weeks are designed to be placed under the skin to increase comfort and reduce complications [4].

6. Kidney Transplantation

Kidney transplantation is the process in which a healthy kidney is surgically placed from another person into the patient's body. A surgeon places the new kidney inside the lower abdomen and connects its artery and vein to the artery and vein of the patient. The blood flows through the donated kidney, which makes urine, just like the functions of the failed kidneys when they were healthy. The new kidney may start working right away or may take up to a few weeks to make urine.

The patient may receive a kidney from a deceased donor, a person who has recently died, or from a living donor. A living donor may be related or unrelated to the patient who is usually a spouse or a friend. Moreover, if the patient doesn't have a living donor, they are placed on a waiting list for a deceased donor kidney. The transplant team considers three factors in matching kidneys with potential recipients which can help predict whether the patient's body's immune system will accept the new kidney or reject it:

(a) Blood type

Patient's blood type (A, B, AB, or O) must be compatible with the donor's.

(b) Human leukocyte antigens (HLAs)

Human cells carry six important HLAs in which three are inherited from each parent. Family members are most likely to have a complete match. However, the patient may still receive a kidney if the HLAs aren't a complete match as long as their blood type is compatible with the donor's and other tests show no problems with matching.

(c) Cross-matching antigens

Cross-matching is the last test before implanting an organ in which a small sample of the patient's blood will be mixed with a sample of the donor's blood in a tube to see if there's a reaction. If no reaction occurs, the result

is called a negative cross-match and the transplant operation can proceed [4].

B.   Philippine Society of Nephrology

The Philippine Society of Nephrology (PSN) is a non-stock, non-profit and a-political organization of physicians who specialize in kidney care and treatment of kidney disease. The society was founded on 1971 by a group of young nephrologists which were Dr. Filoteo Alano, President; Dr. Hilario Esguerra II, Vice President; Dr. Libertad Nazareno-Rosales, Secretary-Treasurer; and Dr. Ophelia Completo-Buot, Dr. Aurora Padolina-Perez, Dr. Ruben Basilio, Dr. Benjamin Atanacio, Dr. Adriano dela Paz, Dr. Elsa Jacinto, Dr. Cecilia Talusan and Dr. Antonio Talusan, Board Members. The association adheres to the Consitution of the Philippine College of Physicians and the Philippine Medical Association as one of its components [7, 25].

The society's main objectives are to promote and disseminate current knowledge and information in Nephrology; to commit itself to train, regulate, and support its members to be globally competitive, ethical, excellent and compassionate. Moreover, its role is to provide guidelines in the delivery of nephrologic care and ensures the strict implementation of these guidelines. It also aims to provide information on members' needs and problems, as well as expertise and recommendations for policy formulation regarding kidney disease.

PSN has done a number of health programs to promote awareness, prevention and treatment of renal disease. It held several symposiums in the country, offers a number postgraduate courses for training health professionals interested in learning different fields of nephrology (e.g. Managing the Difficult Dialysis Patient, The Resilience of the Filipino Kidney: Empowering Health Professionals, etc.) Moreover, it has done several medical missions like the PSN Typhoon Yolanda Dialysis Relief Operation in which members (nephrologists and dialysis nurses) volunteered, provided dialysis

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equipment, and gave the patients full treatment and a month's supply of the basic medicines needed.

Part of the organization's advocacies is the Deceased Organ Donation which objective is to increase the number of patients with ESRD undergoing deceased organ transplantation through education of health care professionals. So far, most of its projects revolve around the advancement of knowledge of the health professionals to provide best quality care for the patients with kidney disease [7].

C.   Patient Monitoring Systems

Patient monitoring is the continuous measurement of patient parameters such as heart rate and rhythm, respiratory rate, blood pressure, blood-oxygen saturation, and many other parameters. Electronic monitors are frequently used to collect and display physiological data when accurate and immediate decision-making is crucial for the patient. Moreover, such data can be collected using non-invasive sensors from less seriously ill patients in a hospital's medical-surgical units, labor and delivery suites, nursing homes, or patients' own homes to detect unexpected life-threatening conditions or to record routine but required data efficiently. Patient monitoring is usually perceived as something that watches for and warns against serious or life-threatening events in patients, critically ill or otherwise. Additional to this, patient monitoring may also provide physiological input data used to control directly connected life support devices [26].

IV. Design and Implementation

A. Context Diagram

The system will be implemented using the succeeding diagrams. The system will have five types of users: patient, health professional, moderator, local system administrator and global systems administrator. Each type of user will have their own unique functionalities and different restrictions on accessibility and modification in the system. The global systems administrator will be responsible for the maintenance of the system. Figure 1 shows the context diagram of the system.
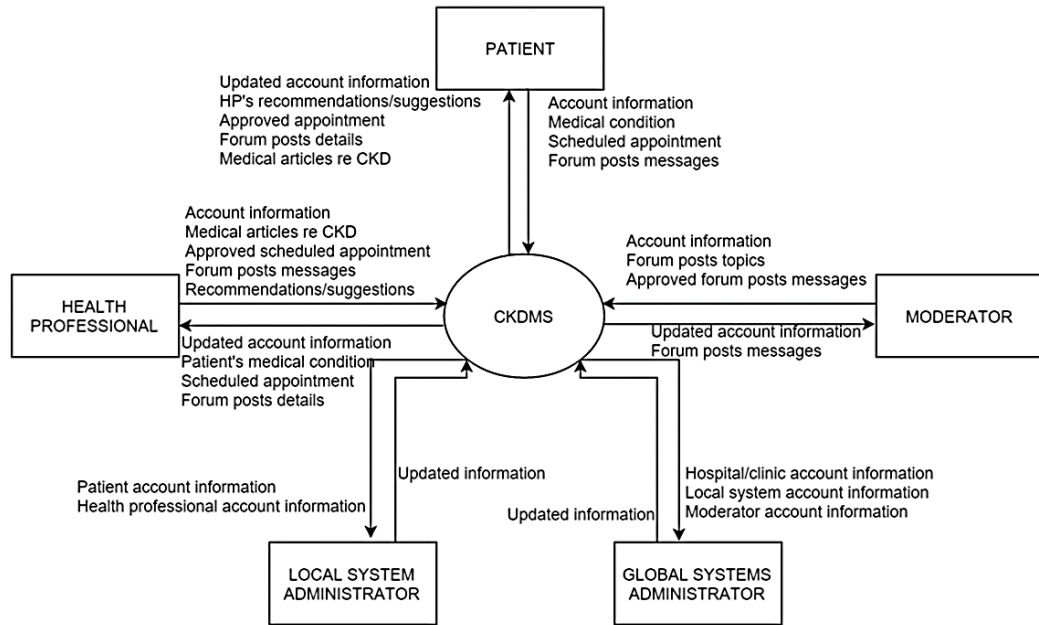

Figure 1: Context Diagram of CKDMS

B. Use Case Diagram

The system will feature five types of users. A patient can enter and update account information and medical condition, view charts, participate in forums, schedule appointment, send messages and browse/save medical articles. A health professional

can enter and update account information and patient's medical condition, view patient's charts, participate in forums, approve scheduled appointments, send messages and upload medical articles. A moderator, on top of being a health professional, can approve topics, messages and links in forums. A local system administrator can manage accounts of patients and health professionals in the local hospital, and update the schedule of health professionals. The global systems administrator can manage local administrator and moderator accounts.
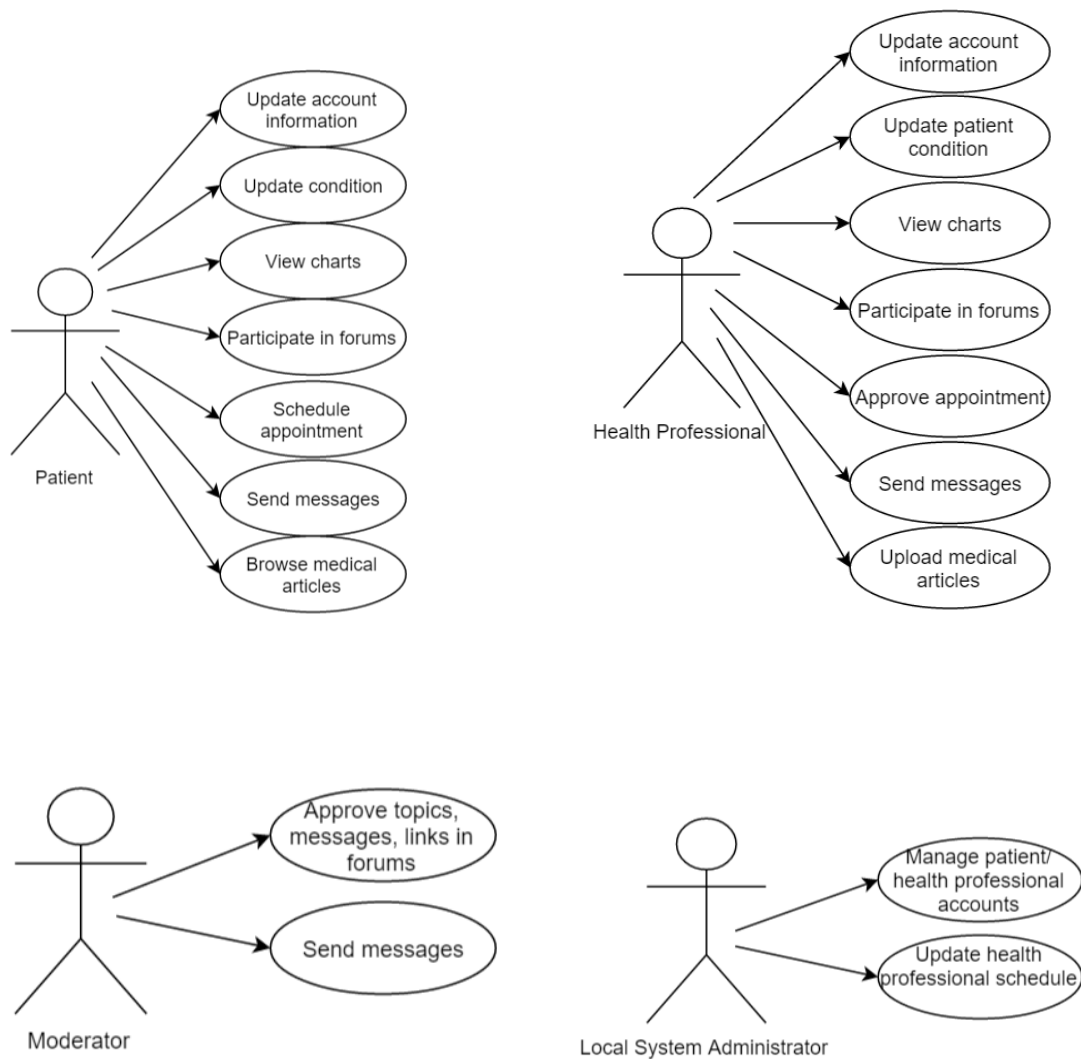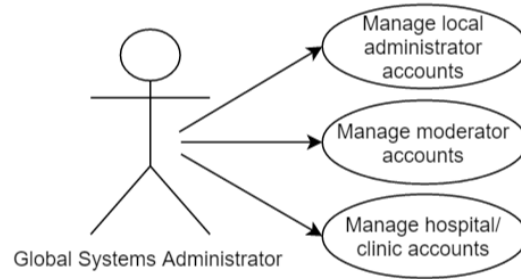
Figure 2: Use Case Diagram of CKDMS

C. Data Flow Diagram

The Data Flow Diagram shows the functionalities of the system. The patient can input medical record, view recommendations, schedule appointments, exchange messages with health professional, message in forums and view medical sources. The health professional can view patient record, give recommendations, approve scheduled appointments, exchange messages with patient, message in forums, and post medical resources. The moderator can regulate forums and approve resources. The local system administrator can manage health professional and patient accounts in a specific hospital/clinic. The global systems administrator can manage moderator accounts and local administrator accounts.
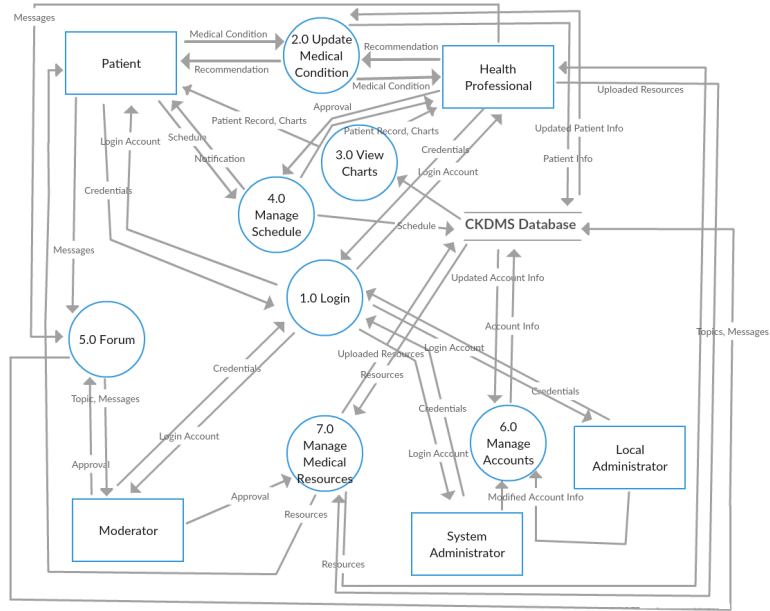
Figure 3: Data Flow Diagram of CKDMS
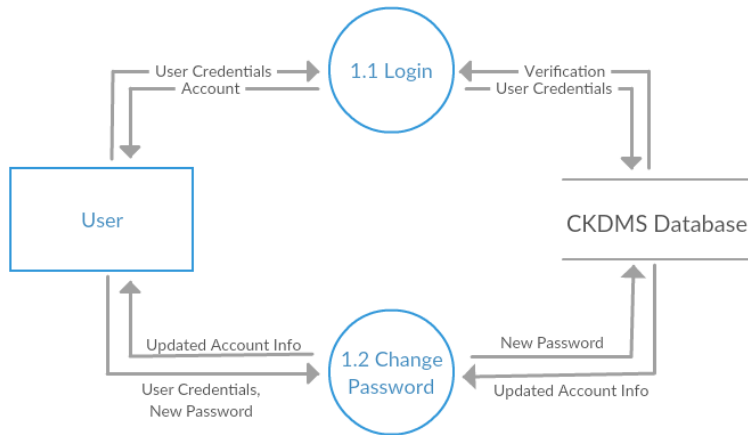

Figure 4: Sub-explosion for Login Function of CKDMS
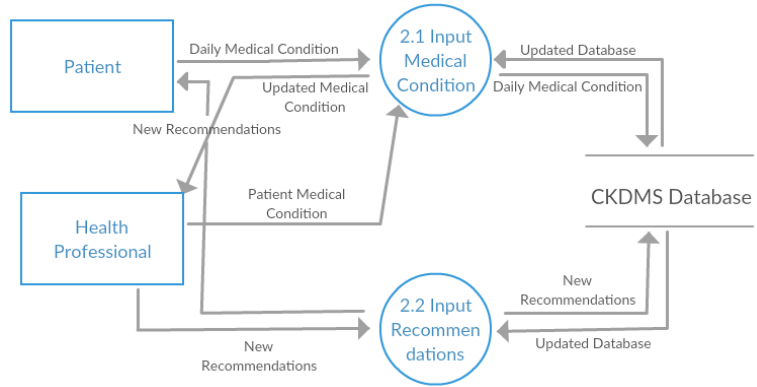
Figure 5: Sub-explosion for Update Medical Condition Function of CKDMS
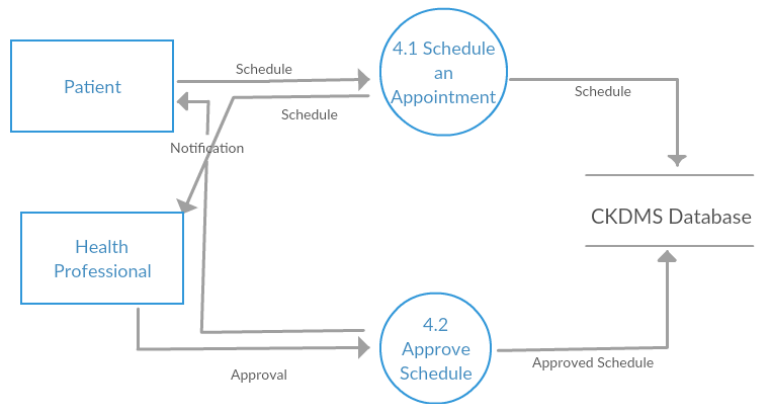
Figure 6: Sub-explosion for Manage Schedule Function of CKDMS
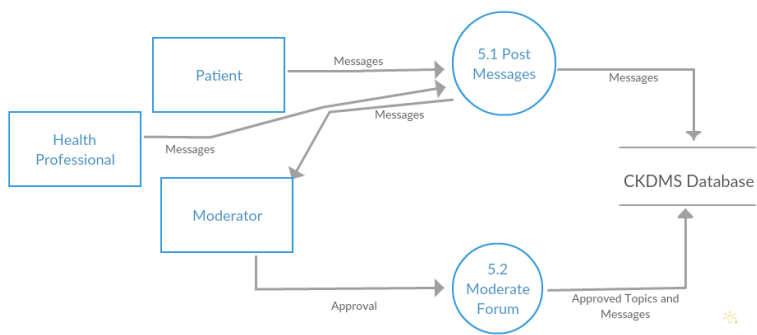
Figure 7: Sub-explosion for Forum Function of CKDMS
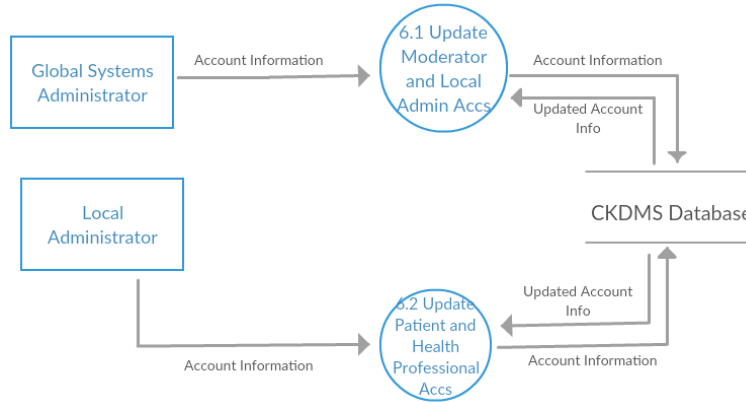
Figure 8: Sub-explosion for Manage Accounts Function of CKDMS
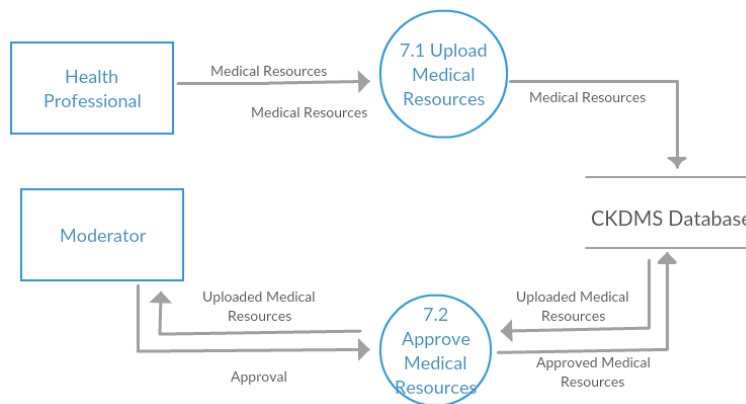
Figure 9: Sub-explosion for Manage Medical Resources Function of CKDMS

D. Entity Relationship Diagram

A database is necessary for the storage of all the user accounts, information, and online resources. This will also allow for saving private messages, forum messages and appointment schedules.
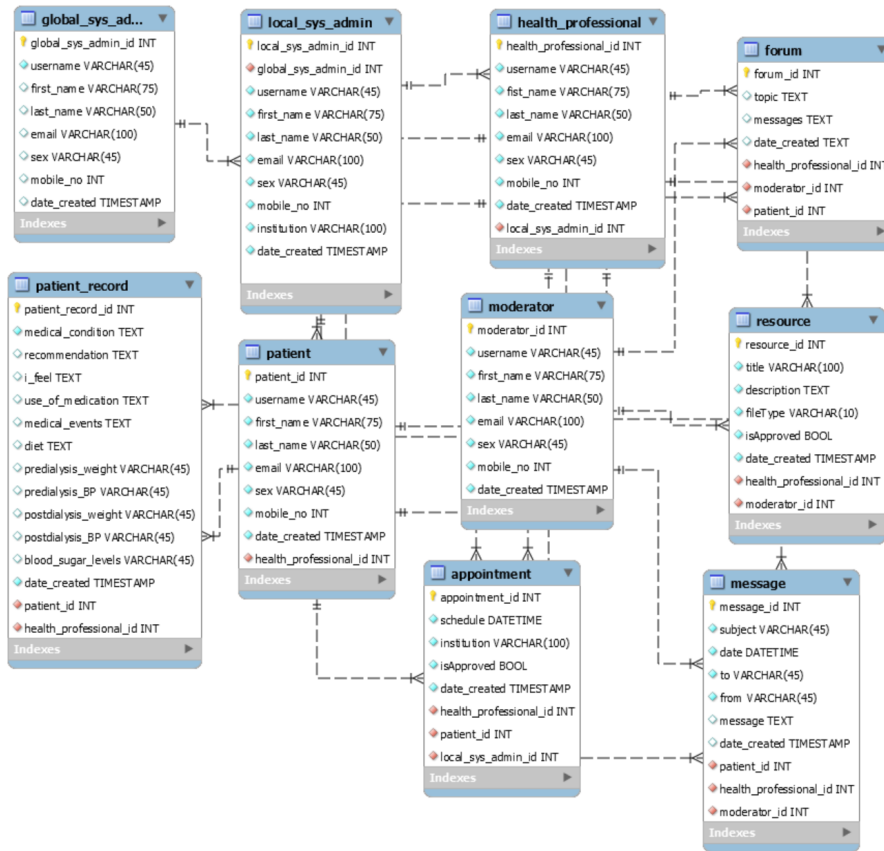
Figure 10: Entity Relationship Diagram of CKDMS

E. Data Dictionary

Attribute	Type	Description
id	int	unique identifier of the user
hospital_id	int	hospital id of the user
username	varchar	username of the user
password	char	password of the user
first_name	varchar	first name of the user
middle_name	varchar	middle name of the user
last_name	varchar	last name of the user
sex	enum	sex of the user
email	varchar	email address of the user
mobile_no	varchar	mobile number of the user
type	tinyint	user type
image_path	varchar	path of the user's profile picture
is_approved	tinyint	checks if user is approved or not
date_created	timestamp	date when user account is created

Table 3: user table

Attribute	Type	Description
id	int	unique identifier of the moderator
health_pro_id	int	unique identifier of the health professional
category_id	int	unique identifier of the category
reason	varchar	reason for moderator application
is_approved	tinyint	checks if health professional is approved or not
date_created	timestamp	date when moderator account is created

Table 4: moderator table

Attribute	Type	Description
id	int	unique identifier of the patient
health_pro_id	int	unique identifier of patient's health professional

Table 5: patient table

Attribute	Type	Description
id	int	unique identifier of the hospital
name	varchar	name of the hospital
address	varchar	address of the hospital

Table 6: hospital table

Attribute	Type	Description
id	int	unique identifier of the uploaded file
uploader_id	int	unique identifier of the uploader
title	varchar	title of the file
description	varchar	description of the file
name	varchar	filename
path	varchar	path of the image's location
type	varchar	filetype
is_approved	tinyint	checks if the uploaded file is approved or not
date_created	timestamp	date when file is uploaded

Table 7: uploads table

Attribute	Type	Description
id	int	unique identifier of the category
moderator_id	int	unique identifier of the moderator
name	varchar	name of the category
date_created	timestamp	date when category is created

Table 8: category table

Attribute	Type	Description
id	int	unique identifier of the post
category_id	int	unique identifier of the category of the post
author_id	int	unique identifier of the author of the post
title	varchar	title of the post
content	varchar	content of the post
is_approved	tinyint	checks if the post is approved or not
date_created	timestamp	date when post is created

Table 9: post table

Attribute	Type	Description
id	int	unique identifier of the reply
post_id	int	unique identifier of the post
category_id	int	unique identifier of the category of the post
user_id	int	unique identifier of the author of the reply
content	varchar	content of the reply
date_created	timestamp	date when reply is created

Table 10: reply table

Attribute	Type	Description
id	int	unique identifier of the event
patient_id	int	unique identifier of the patient
name	varchar	name of the event
date_diagnosed	date	date of the event
notes	varchar	notes of the event
recommendation	varchar	recommendation of health professional regarding the event
date_created	timestamp	date when event is created

Table 11: event table

Attribute	Type	Description
id	int	unique identifier of the appointment
health_pro_id	int	unique identifier of the health professional
patient_id	int	unique identifier of the patient
date	date	date of the appointment
time	time	time of the appointment
purpose	varchar	purpose of the appointment
is_approved	tinyint	checks if the appointment is approved or not
date_created	timestamp	date when appointment is created

Table 12: appointment table

Attribute	Type	Description
id	int	unique identifier of the monitored data
patient_id	int	unique identifier of the patient
bp_systolic	int	systolic blood pressure
bp_diastolic	int	diastolic blood pressure
blood_glucose	int	blood glucose
pulse	int	pulse
weight	int	weight
egfr	int	estimated glomerular filtration rate
uacr	int	urine albumin to creatinine ratio
hemoglobin	int	hemoglobin
cholesterol	int	cholesterol
calcium	int	calcium
phosphorus	int	phosphorus
ipth	int	intact parathyroid hormone
vitamin_d	int	vitamin d
date_created	timestamp	date when chart inputs are submitted

Table 13: monitor table

Attribute	Type	Description
id	int	unique identifier of the message
from_id	int	unique identifier of the sender
to_id	int	unique identifier of the receiver
content	varchar	content of the message
is_read	tinyint	checks if the message is read or not
date_created	timestamp	date when message is created

Table 14: message table

F.   System Architecture

The system will be implemented using PHP as the main language and CodeIgniter as the framework. HTML, CSS, JavaScript, and the Bootstrap framework will be used for the interface design. MySQL will be used in the database.
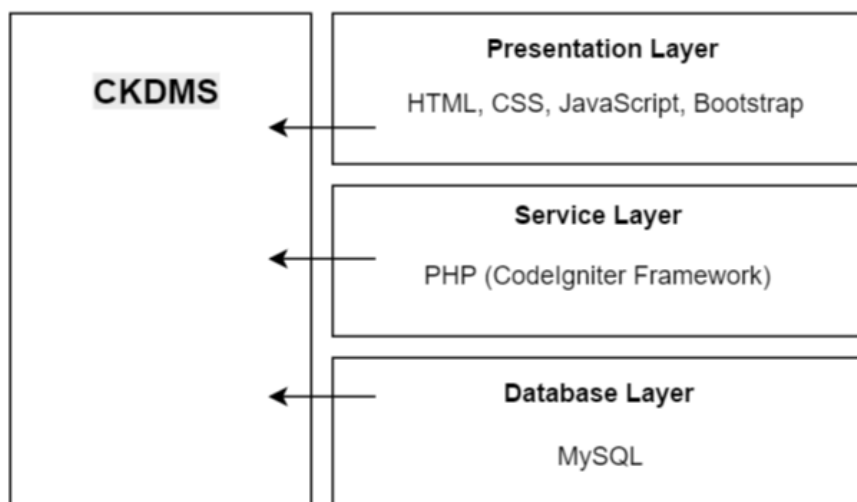
Figure 11: Context Diagram of CKDMS

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G. Technical Architecture

The minimum requirements for the server machine include:

- PHP version 5.6

- MySQL version 5

- Apache version 2.4

- 1 GB free disk space

- 2.4 MHz processor

- 500MB RAM

The minimum requirements for the client include:

- 1 GB RAM

- JavaScript-enabled browser

V. Results

A. General View

The Log In Page of CKDMS is shown in Figure 12. All approved users will enter the system through this page. Two types of user can sign up to the page: health professional and local system administrator. Before having access to the system, users must wait for the approval of local system administrator and global systems administrator respectively. (see Figures 13-14)

Figure 12: Log in Page of CKDMS

Figure 13: Sign Up Page of CKDMS (Health Professional)

Figure 14: Signup Page of CKDMS (Local System Administrator)

Upon logging in, users will be redirected to the CKDMS Home Page. Figure 15 shows the home page of the system which shows a brief description of chronic kidney disease. The header contains the name of the user and the hospital in which they are enrolled; Philippine Society of Nephrology and University of the Philippines Oblation logos in the middle; log out link and notifications button on the right. The tabs are link to the functions available for a specific type of user.
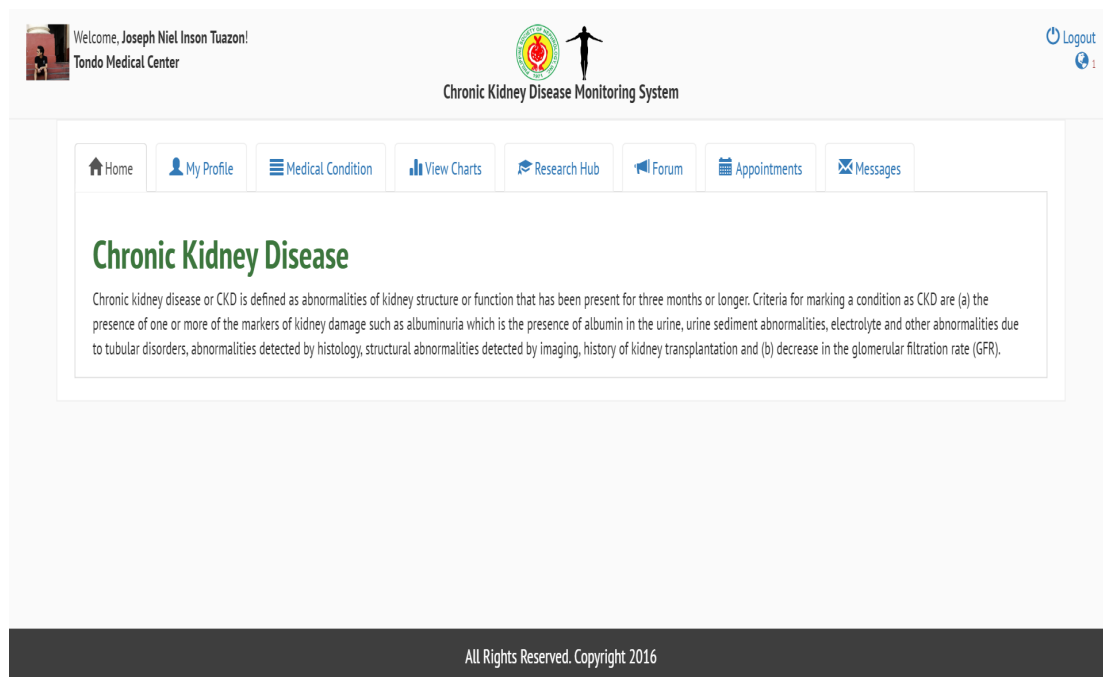
Figure 15: Home Page (Patient View) of CKDMS

My Profile shows the information the user has given in the sign up process such as name, sex, email address, etc. Additional to this, the user can change their password and upload new profile picture. This functionality is also available to local system and global system administrators. This is illustrated in Figure 16.
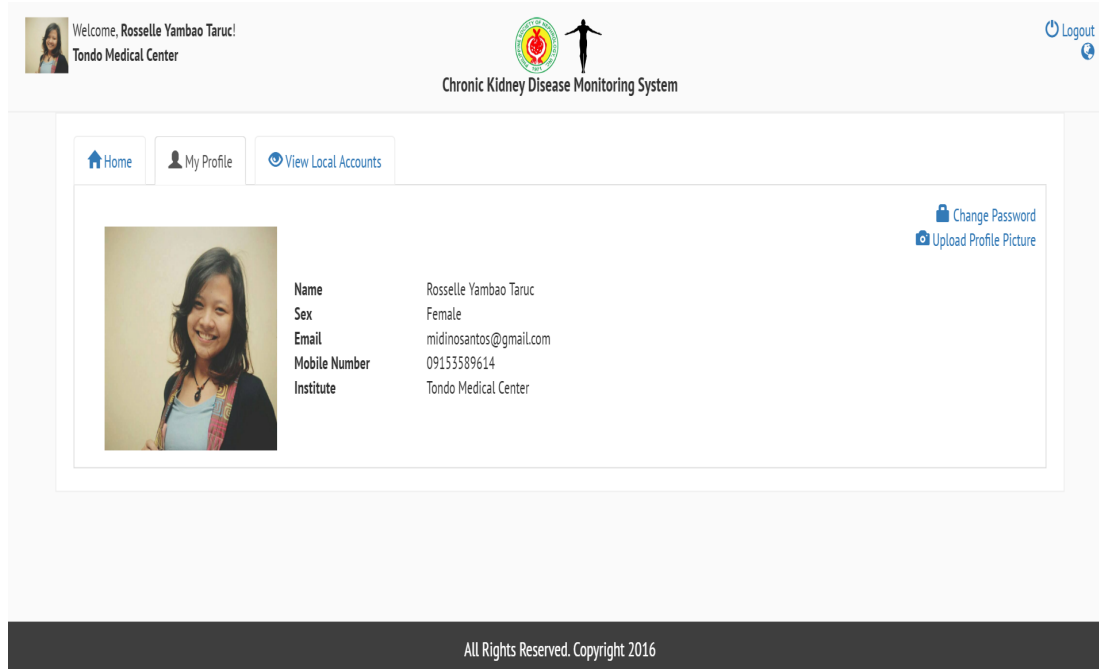
Figure 16: User Profile Page of CKDMS

Users may change their passwords by clicking the Change Password link. A popup, as shown in Figure 17, will be displayed in which the needed information must be entered. Users may also upload new profile picture by clicking the Upload Profile Picture link and selecting an image file, as shown in Figure 18.
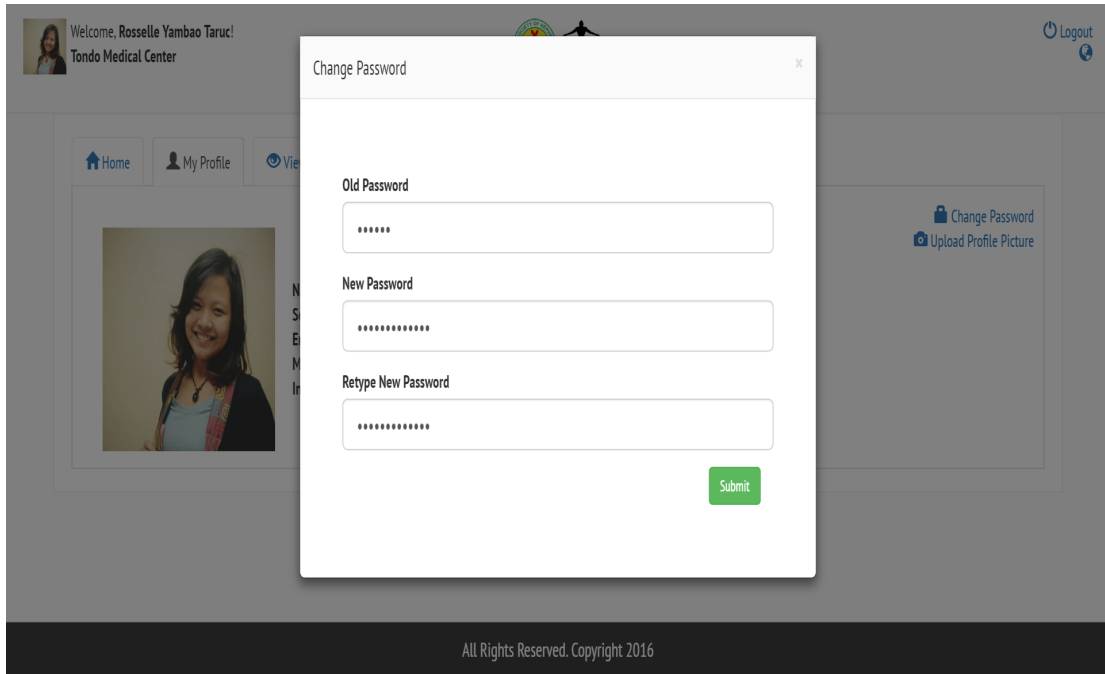
Figure 17: Change Password of CKDMS
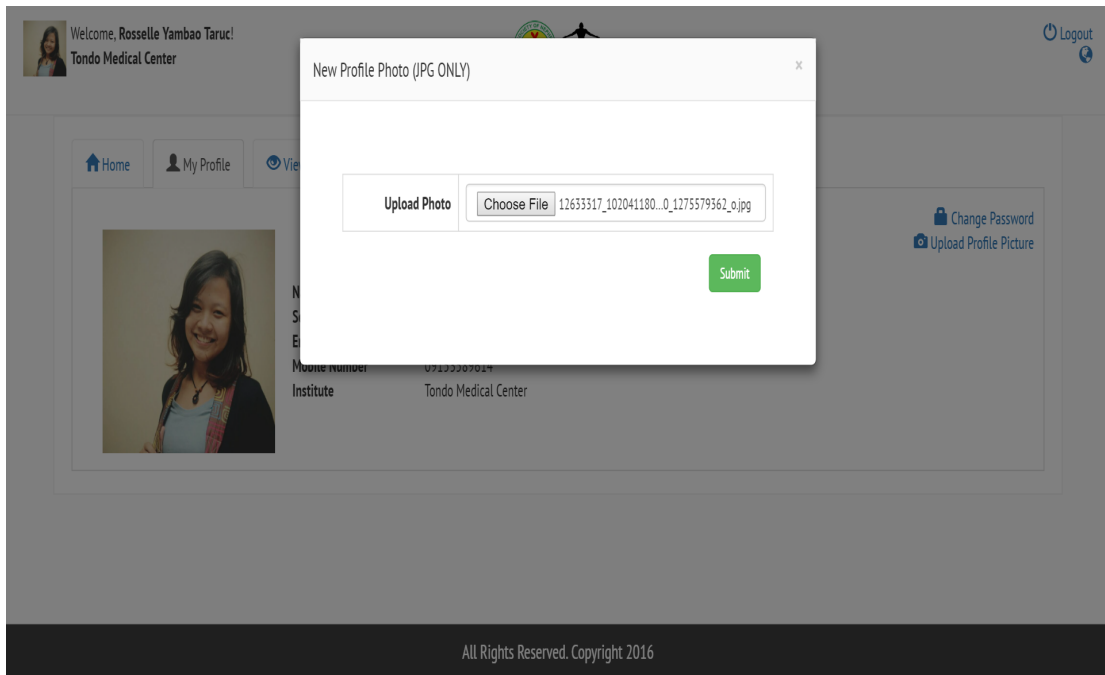
Figure 18: Upload Profile Picture of CKDMS

Research Hub, as shown in Figure 19, displays medically validated resources up-loaded by health professionals. Clicking on the panel of the chosen content will

redirect the user in a new tab containing the information of the resource. Moreover, searching for specific resources is also allowed. Also, contents can be viewed categorically by choosing any in the list of categories.
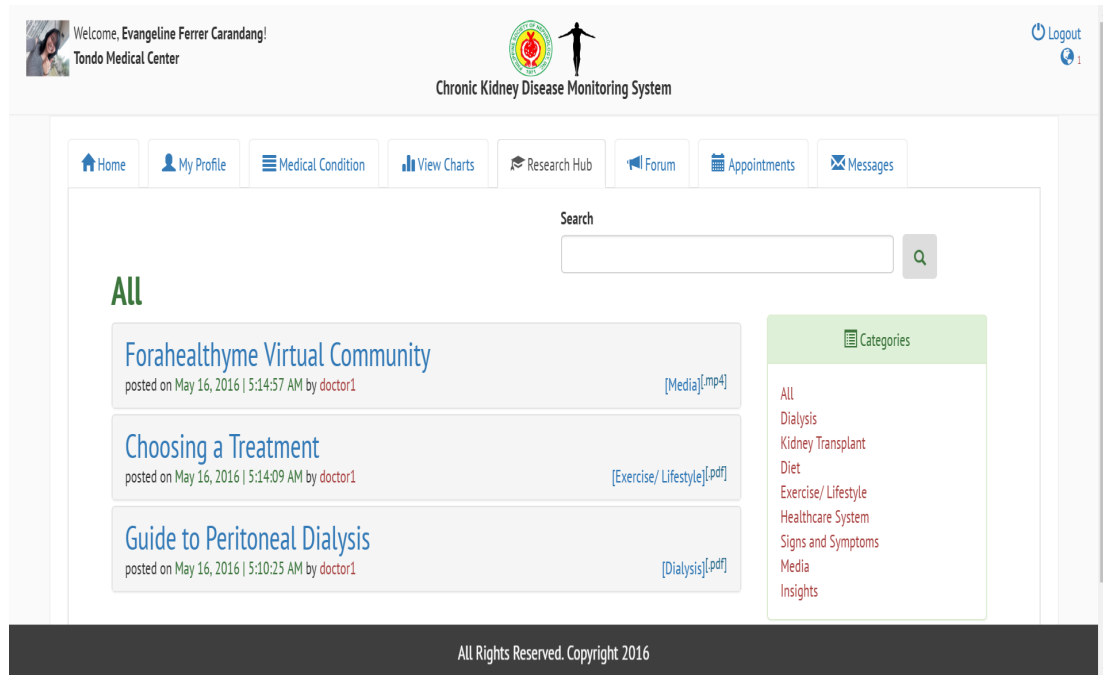
Figure 19: Research Hub (Non-Moderator View) of CKDMS

Forum page, as shown in Figure 20, displays approved posts from users of the system. Clicking on the panel of the chosen post will result to a dropdown that shows its whole content. Like in *Research Hub*, the *Forum* page enables searching posts with keywords, and viewing of content by categories.
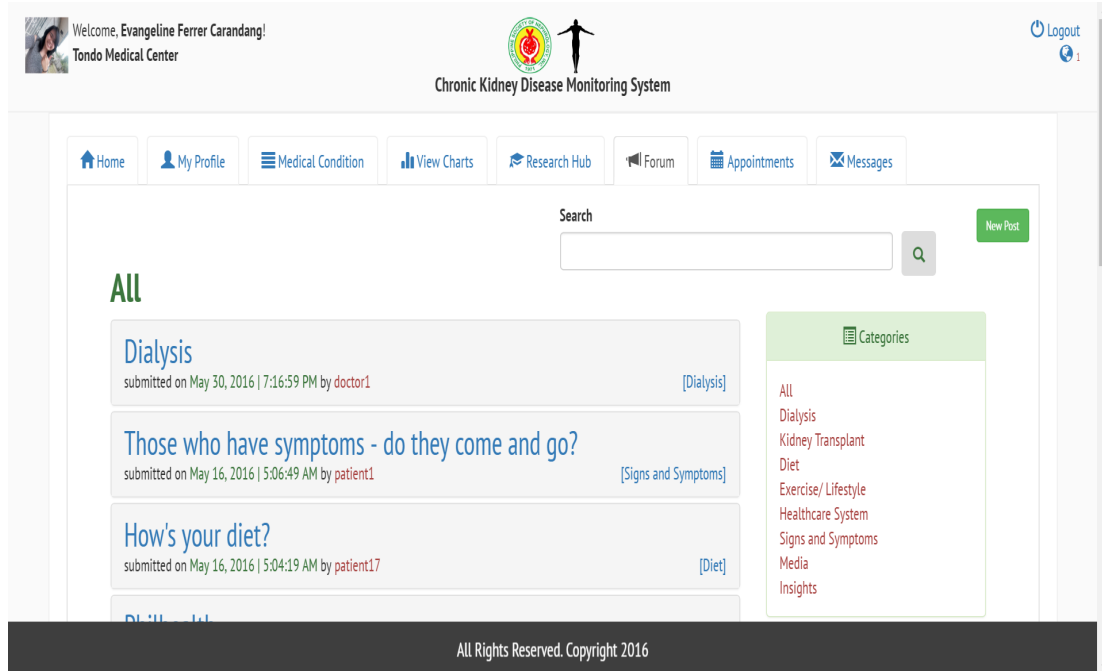
Figure 20: Forum Page (Non-Moderator View) of CKDMS

It also allows posting from both patients and health professionals. By clicking the New Post button on the top right corner, a popup will show (Figure 21) and all the necessary inputs for the post must be entered. *Messages* page displays the contacts of a user and their messages. (see Figure 22)
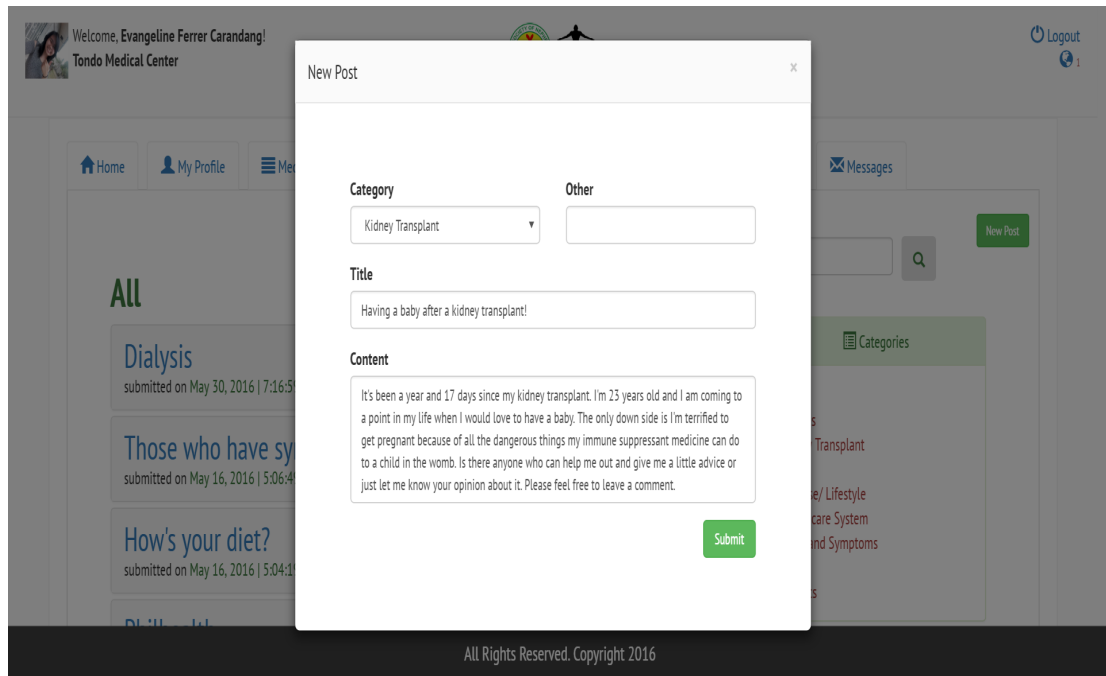
Figure 21: New Forum Post of CKDMS
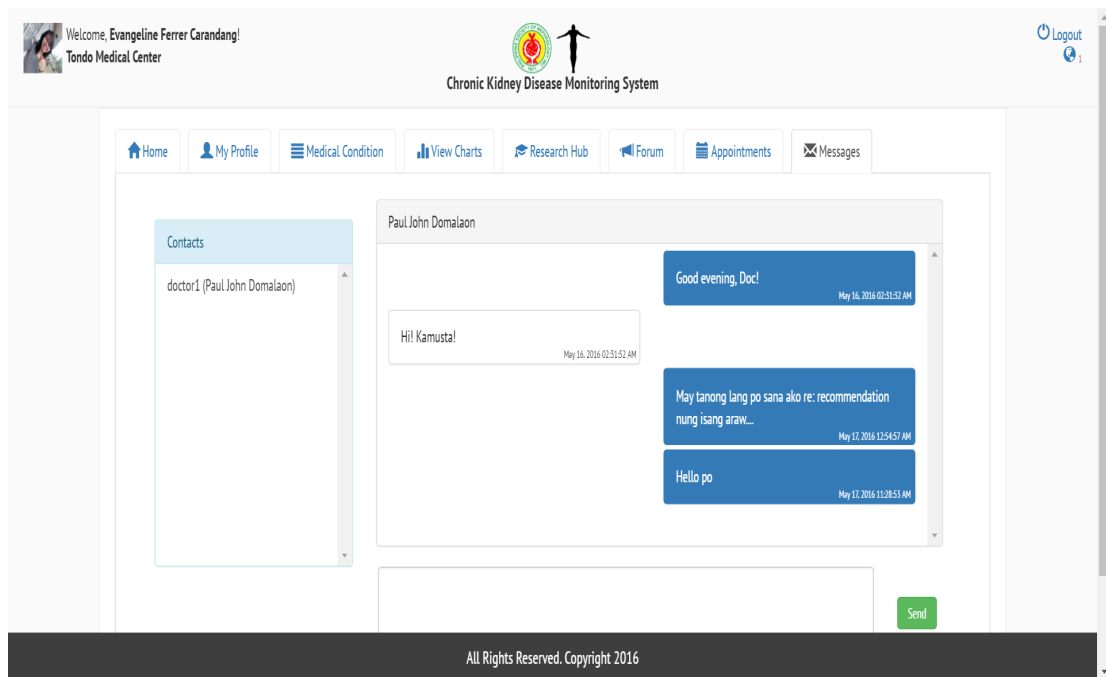
Figure 22: Messages Page of CKDMS
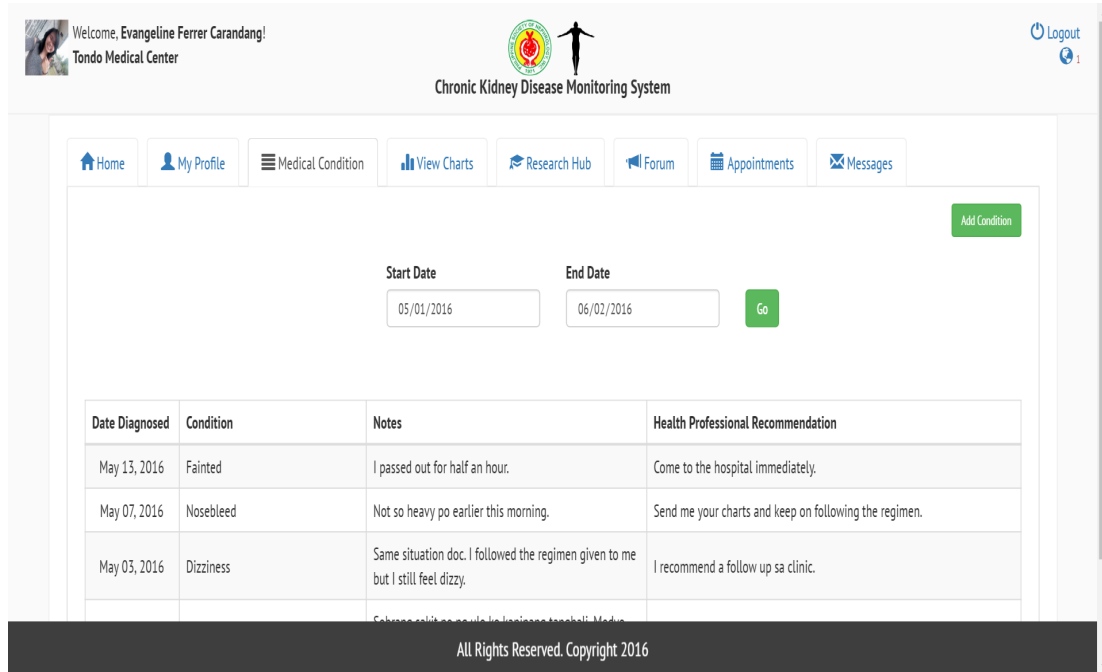
Figure 23 shows the Notifications dropdown which allows the users to be alerted on recent activities relevant to them.

Figure 23: Notifications of CKDMS

B.   Patient View

Medical Condition page displays the conditions or sudden events entered by the patient. Displayed conditions can be filtered by date in which the patient can choose the Start Date and the End Date. This is seen in Figure 24.

Figure 24: Medical Condition Page of CKDMS

The patient can also enter a new condition in case of a new event by clicking the Add Condition button at the top right corner. A popup will show, as displayed in Figure 25, in which the patient can enter their condition.
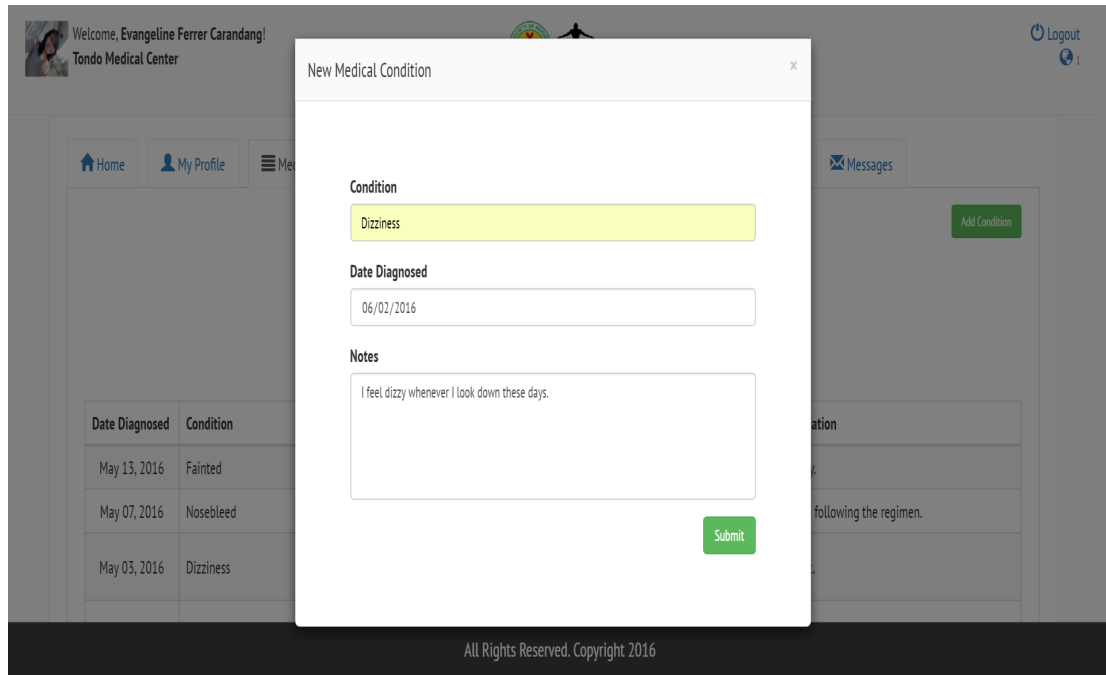
Figure 25: New Medical Condition of CKDMS

View Charts page displays the charts generated from the entered information of the patients for monitoring such as blood pressure, blood glucose, pulse, etc. Like the *Medical Condition* page, it also enables filtering of chart inputs by date. (see Figure 26)
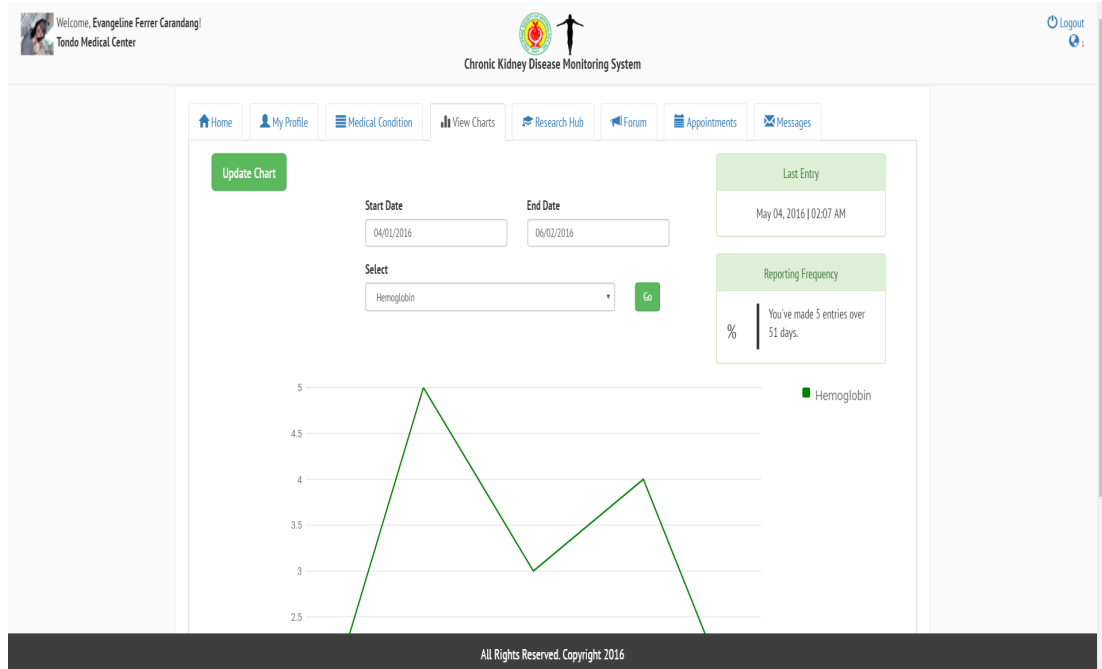
Figure 26: View Charts Page of CKDMS

The patient can also enter new data into the charts by clicking on the Update Chart button at the top left corner. A popup will show (Figure 27) where the patient can enter the necessary inputs and submit.
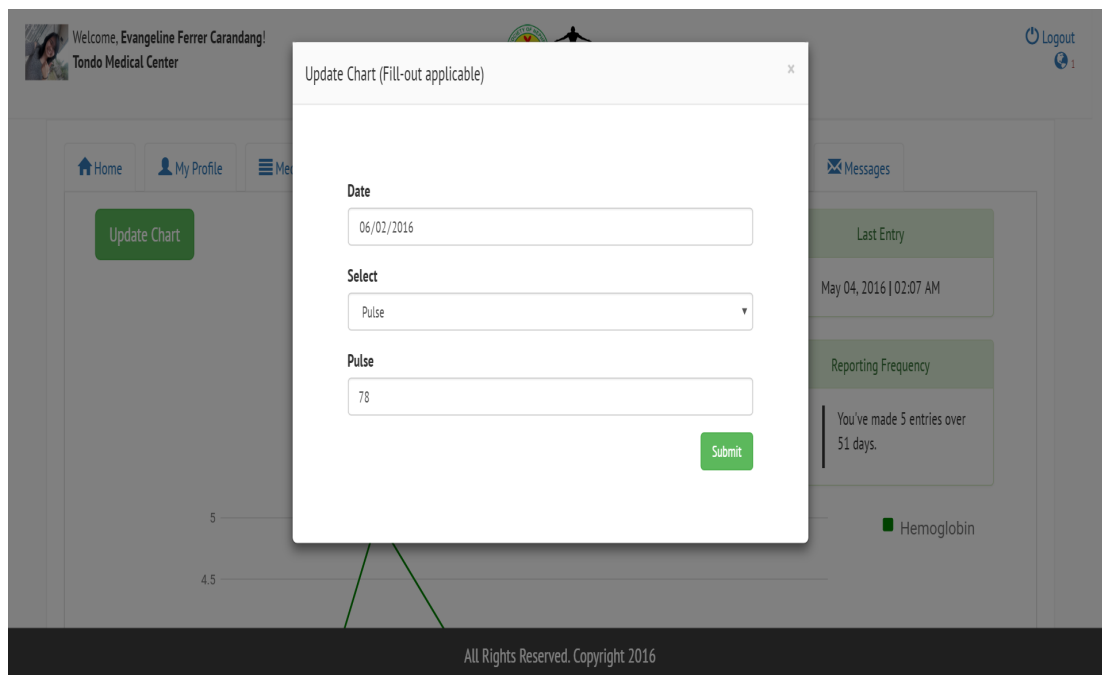
Figure 27: Update Charts of CKDMS

Appointments page for the patient displays the dates of scheduled consultations with the health professional and their status (e.g. pending, approved, disapproved). This is seen in Figure 28. The patient can schedule another appointment by clicking the Schedule an Appointment button at the top right corner of the page. A popup will show, as displayed in Figure 29, where the patient can enter all the required information and then submit.

Figure 28: Appointments Page (Patient View) of CKDMS
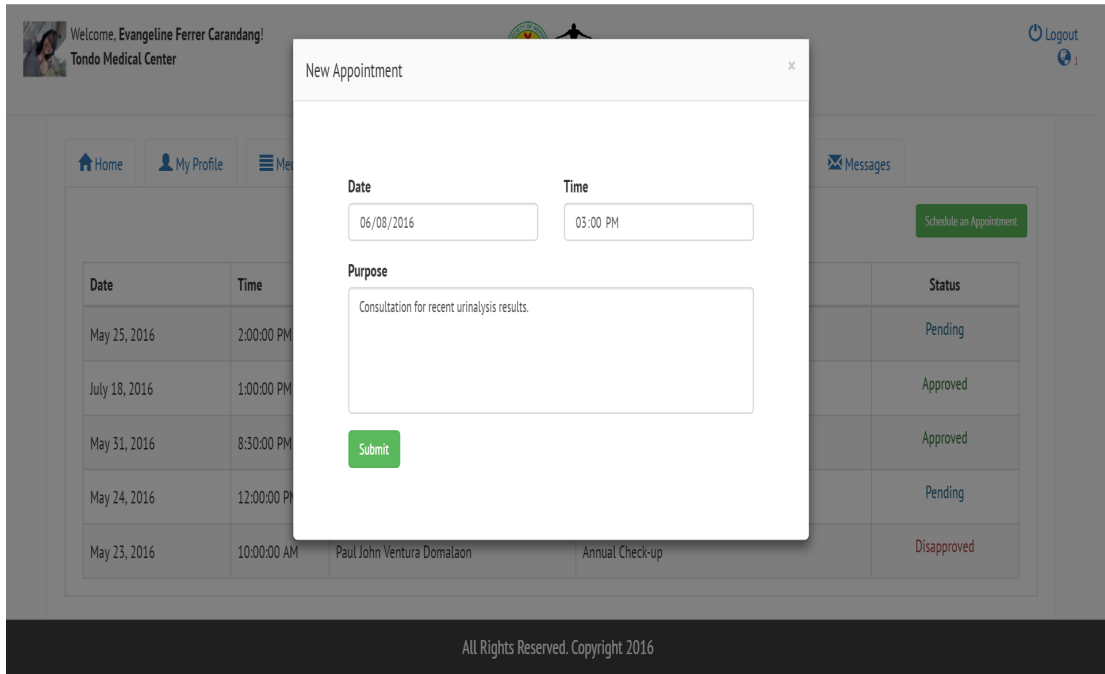
Figure 29: New Appointment of CKDMS

C.   Health Professional View

Sign up as Moderator. In the header is an additional Sign up as Moderator link which enables the health professinal to apply for moderator role. Upon clicking the link, a popup will show with a form to be filled out by the moderator applicant. (see Figures 30-31)
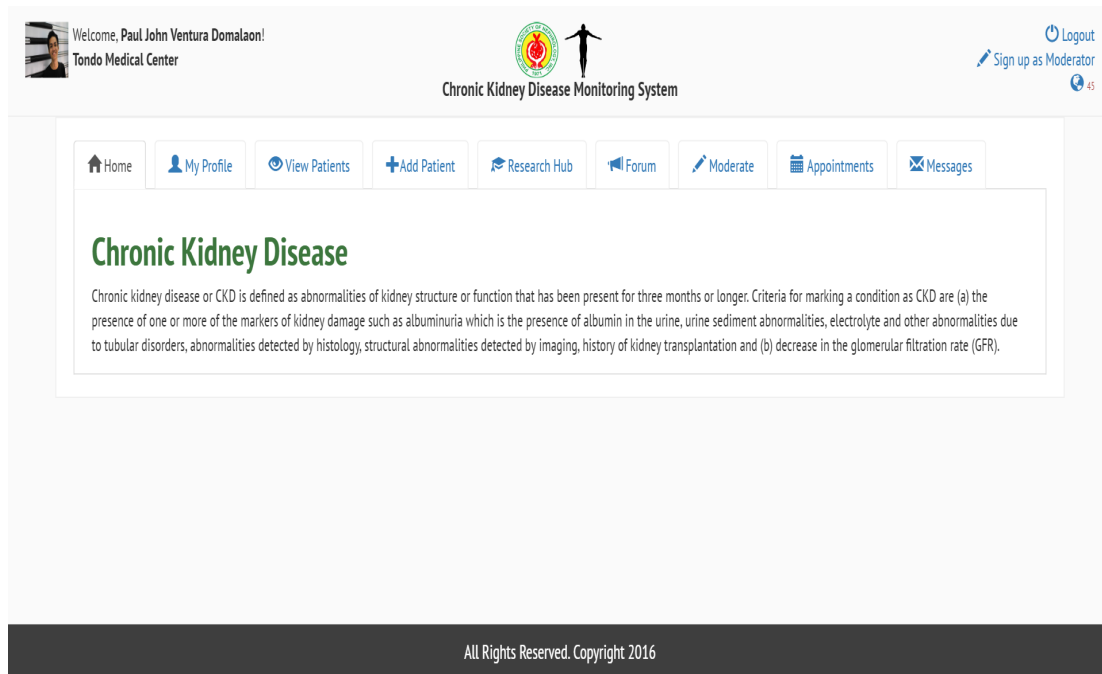
Figure 30: Home Page (Health Professional View) of CKDMS
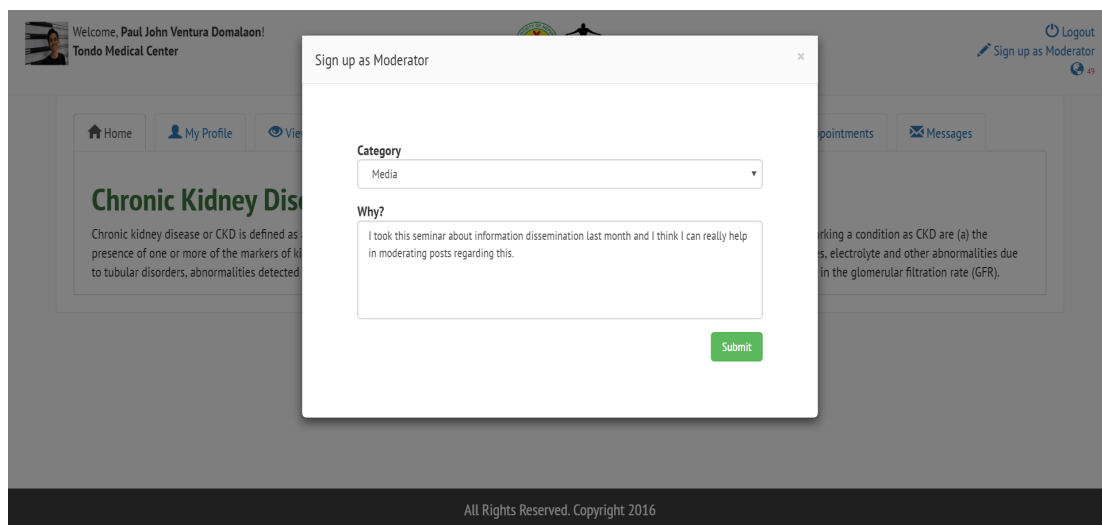
Figure 31: Sign Up as Moderator of CKDMS

Add Patient. The health professional is in charge of enrolling their patients to the system. *View Patients* page displays the patients of the health professional. The system enables searching of patients by name. Moreover, there are links that can be clicked to redirect to patient's medical condition and charts. (see Figures 32-33)

Figure 32: Add Patient Page of CKDMS

Figure 33: View Patients Page of CKDMS

Patient's Medical Condition page, as shown in Figure 34, enables the health professional to view the patient's entered condition/ sudden event, and add their recommendation. The health professional may also move the conditions to archive. (see Figure 35)
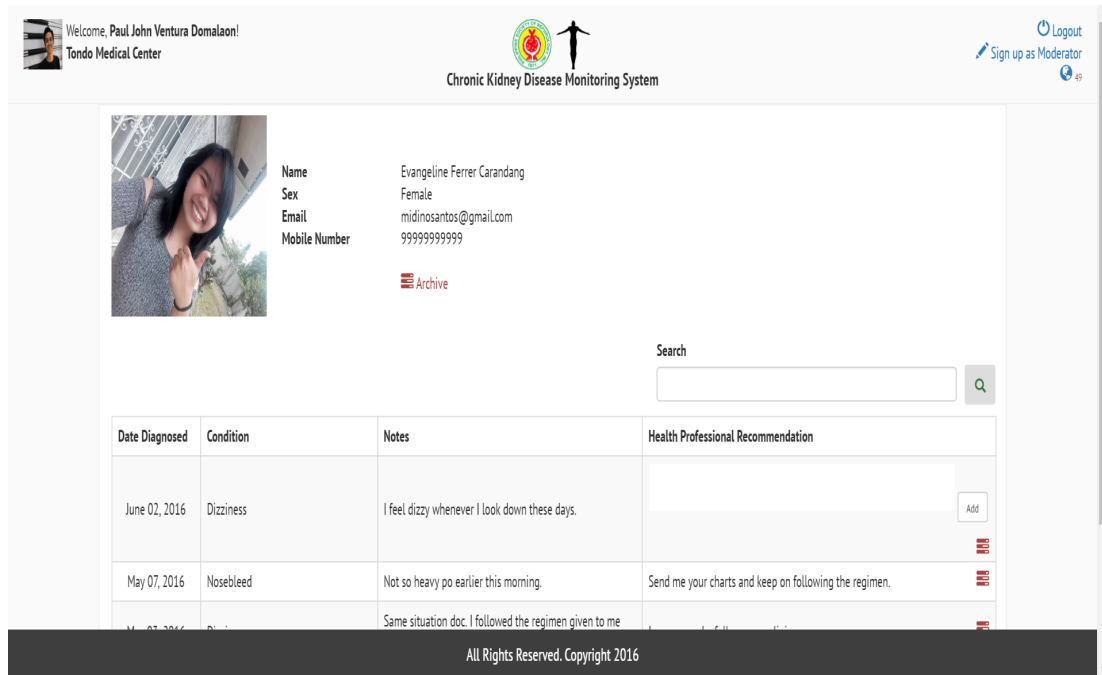
Figure 34: Patient's Medical Condition Page of CKDMS
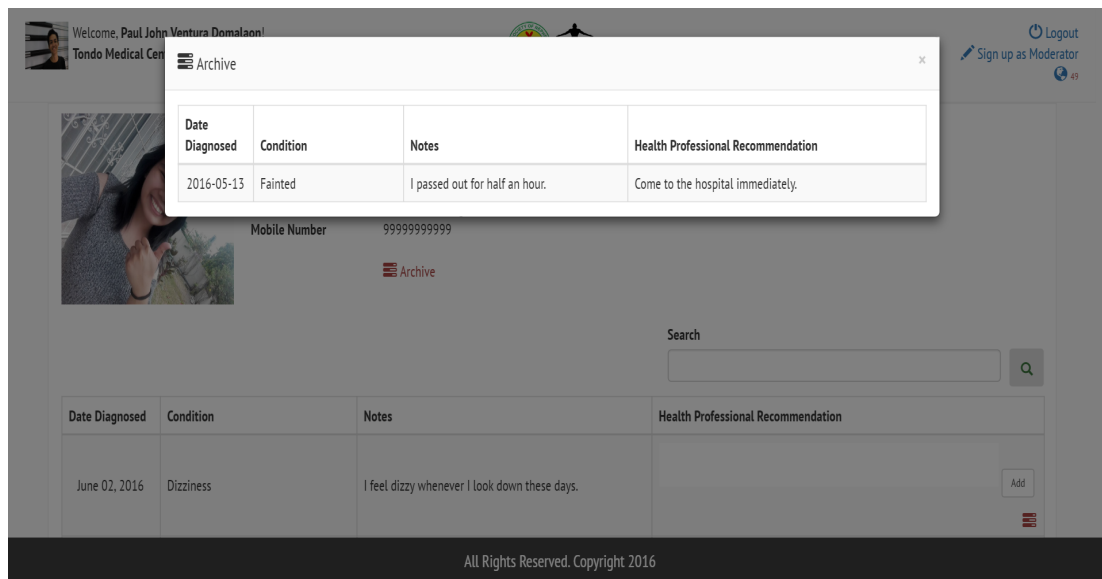
Figure 35: Patient's Medical Condition Archive of CKDMS

Patient's Charts page enables the health professional to view patient's generated charts from inputs of the data to be monitored (e.g. blood pressure, blood glucose, hemoglobin, etc.). This is illustrated in Figure 36.
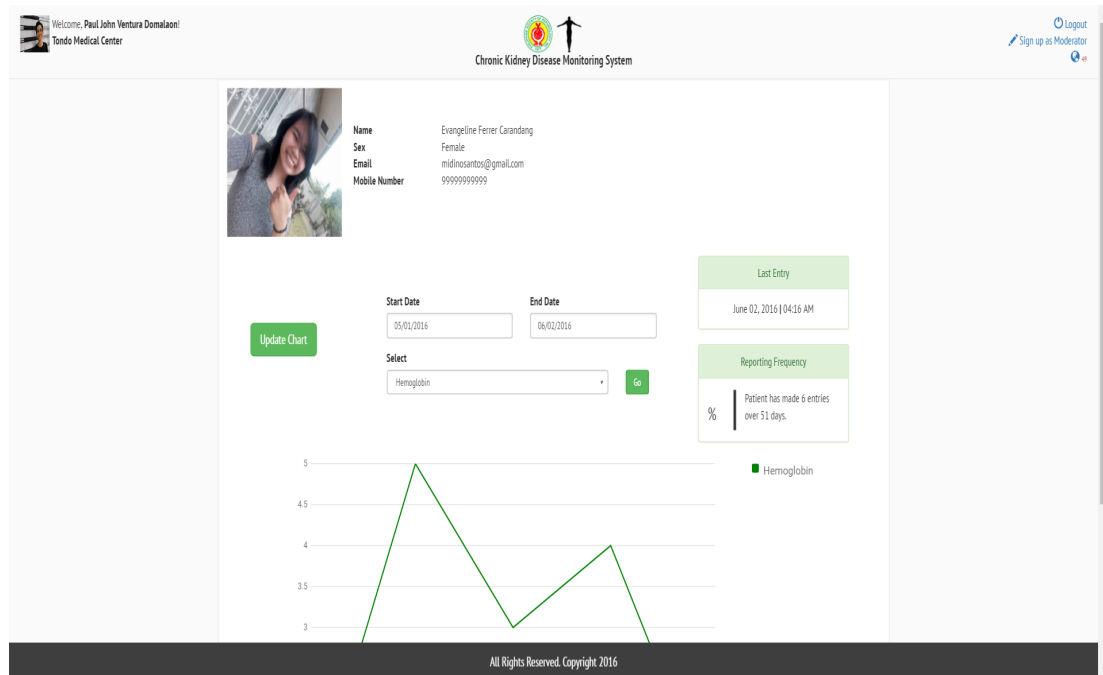
Figure 36: Patient's Charts Page of CKDMS

Uploading File. Only health professionals are allowed to upload medically validated resources. To upload a file in the *Research Hub*, the health professional can click the Upload File button at the top right corner of the page. A popup will appear, as shown in Figure 37, and the health professional can enter the necessary information, upload a file (.jpg, .mp4 and .pdf only), and submit.
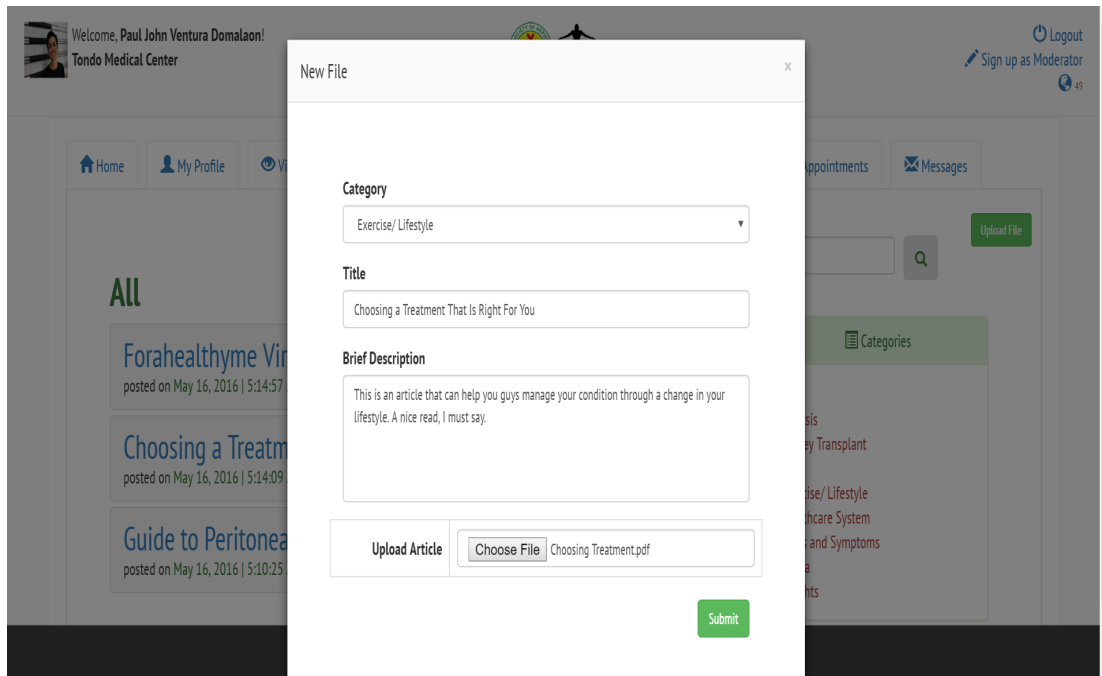
Figure 37: Upload New File of CKDMS

Appointments page in health professional's view displays the approved and requested schedules from their patients. The health professional may approve or disapprove requested appointments. (see Figure 38)
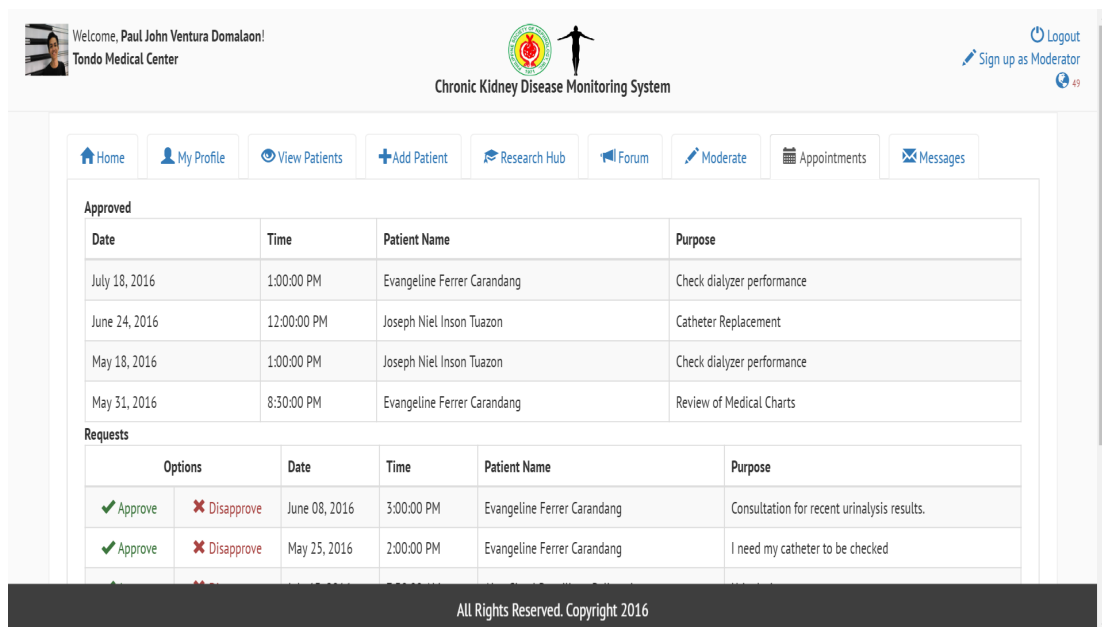
Figure 38: Appointments Page (Health Professional View) of CKDMS

Moderator Functions. As previously stated, a health professional may also sign up as a moderator. A moderator is in charge of keeping the contents of the *Forum* and *Research Hub* appropriate and credible for public viewing. *Moderate* page contains the forum posts (submitted by patients and other health professionals) and medical resources (submitted by health professionals). The moderator is in charge of approving submissions, and deletion of inappropriate ones. (see Figures 39-40)
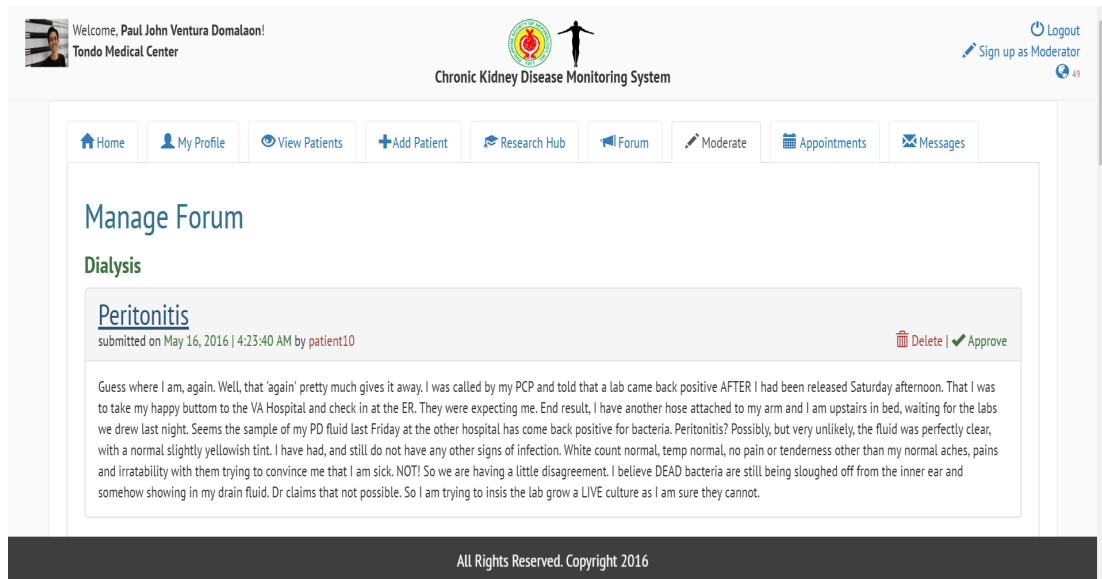
Figure 39: Moderate Page (Forum) of CKDMS
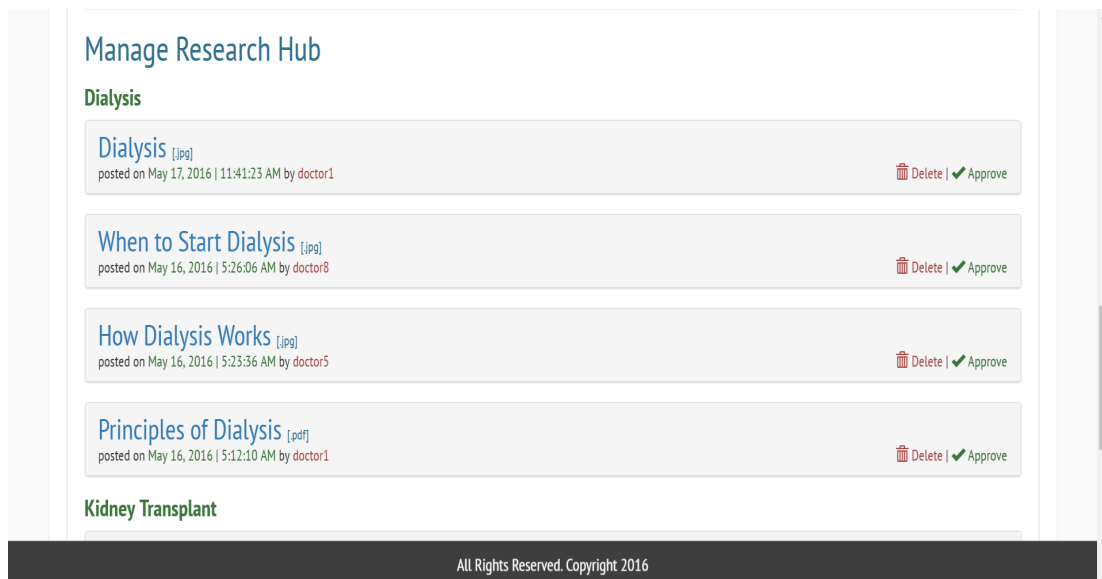
Figure 40: Moderate Page (Research Hub) of CKDMS

Forum page in moderator's view enables them to delete inappropriate replies, and delete posts that are not significant anymore/duplicate of old posts, etc. Just like in *Forum*, the system enables the moderator to delete insignificant/ irrelevant/ duplicate content in the *Research Hub.* (see Figures 41-42)
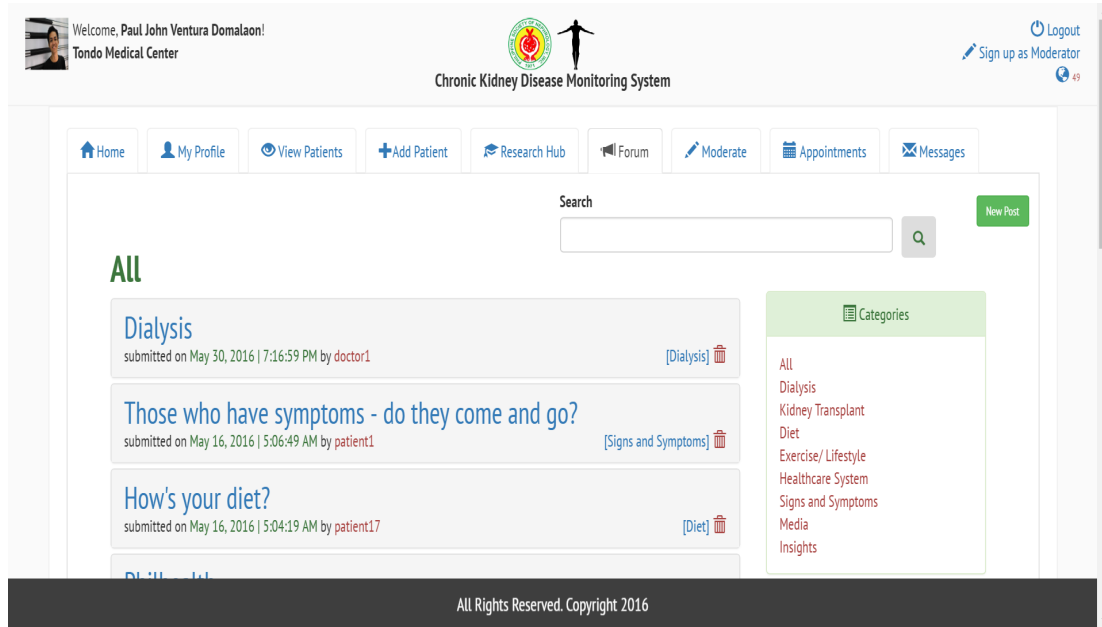
Figure 41: Forum (Moderator View) of CKDMS
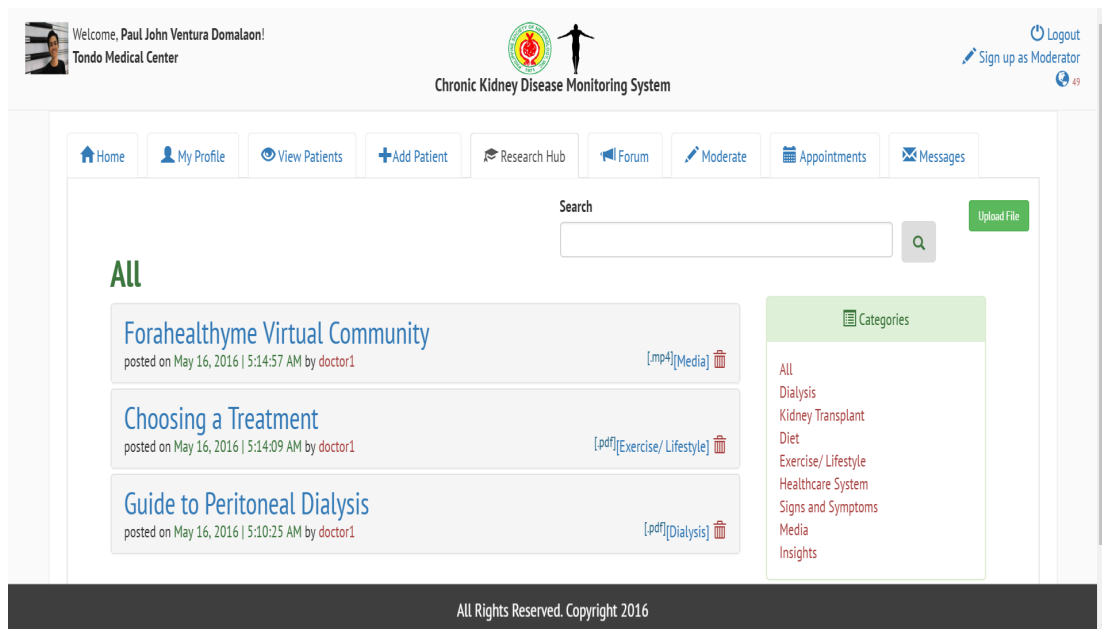
Figure 42: Research Hub (Moderator View) of CKDMS

D.   Local System Administrator View

Local system administrator is in charge of approving and disapproving of application in a specific hospital/clinic. In the *View Local Accounts* page as shown in Figure 43, the local admin can view all the users in the system under their hospital. The system also allows searching of a local user by name.
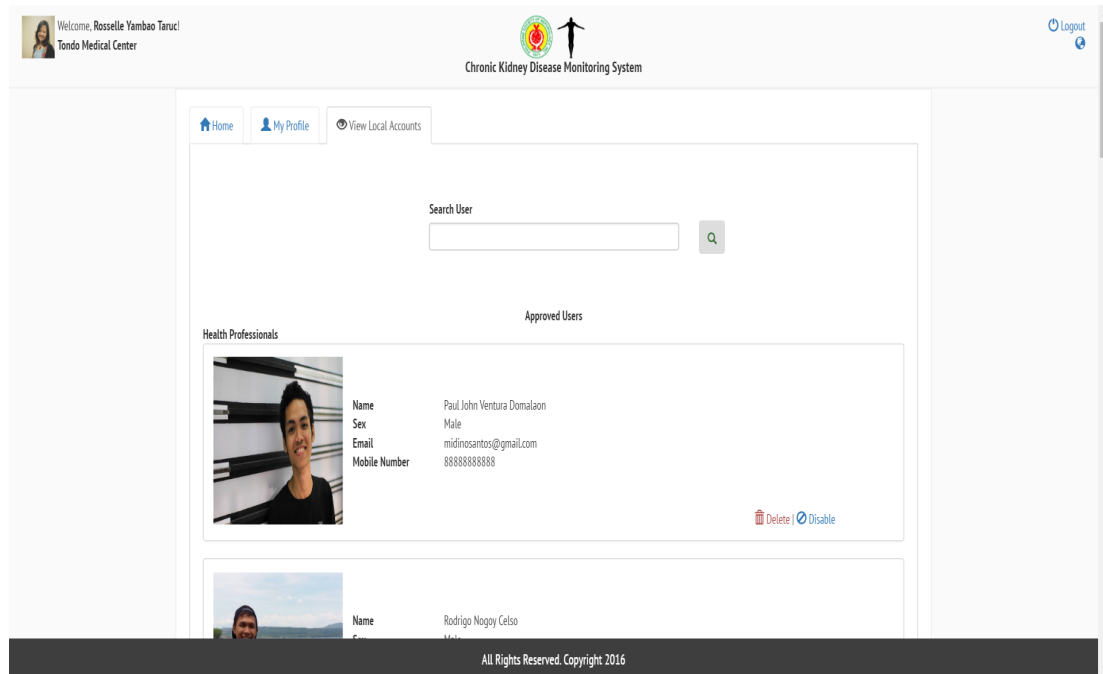
Figure 43: View Local Accounts Page of CKDMS

E.   Global Systems Administrator View

View Local System Administrators page displays all the local system administrators enrolled in the system. The global systems administrator can approve or delete requests from new hospitals/clinics. *View Moderators* page displays all the moderators for the system. Global systems administrator is also in charge of approving/disapproving moderator applications. *View All Users* page displays all the users in the system except for the patients in each hospital. It also has a search function which searches for a user by name or filters the users by their hospital. (see Figures 44-46)
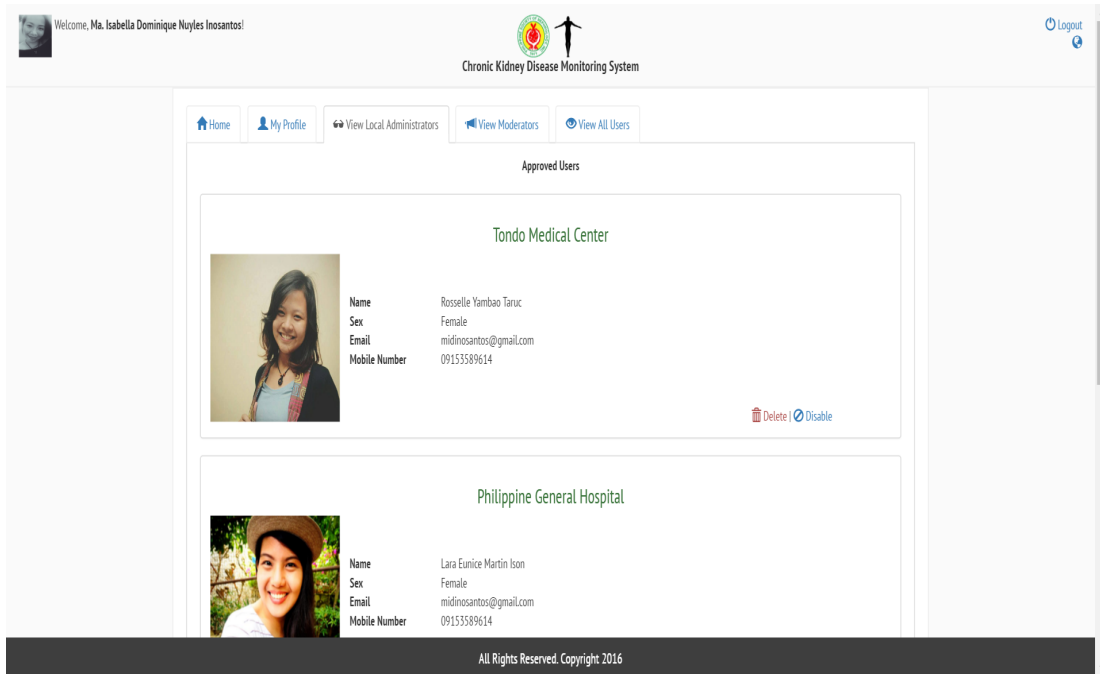
Figure 44: View Local System Administrators Page of CKDMS
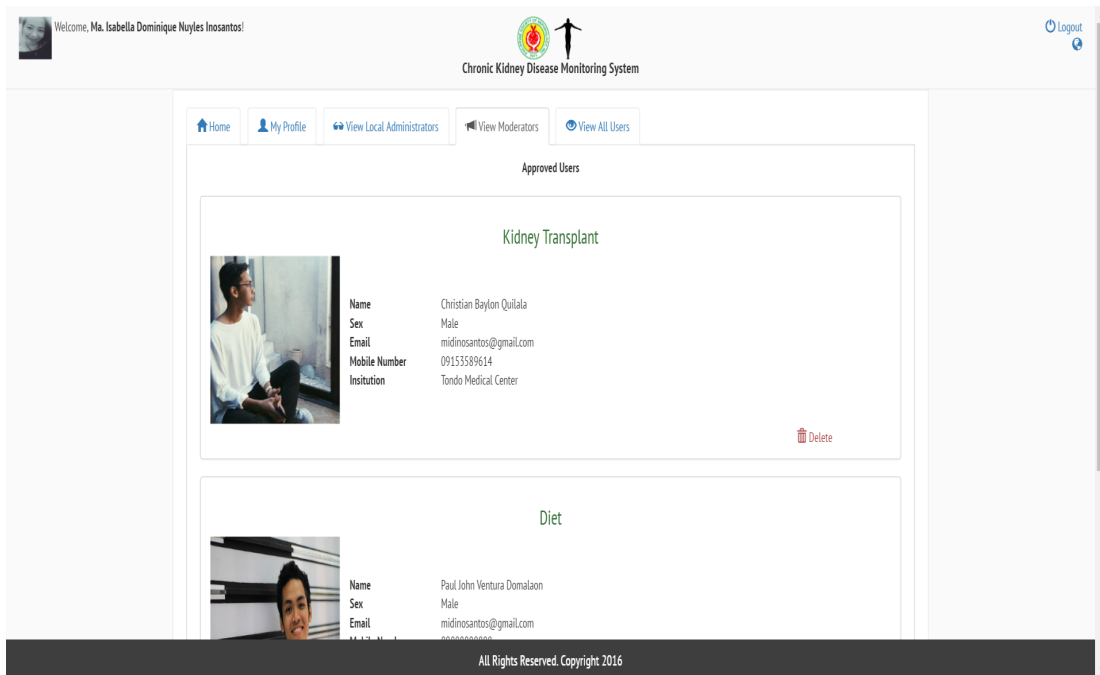
Figure 45: View Moderators Page of CKDMS
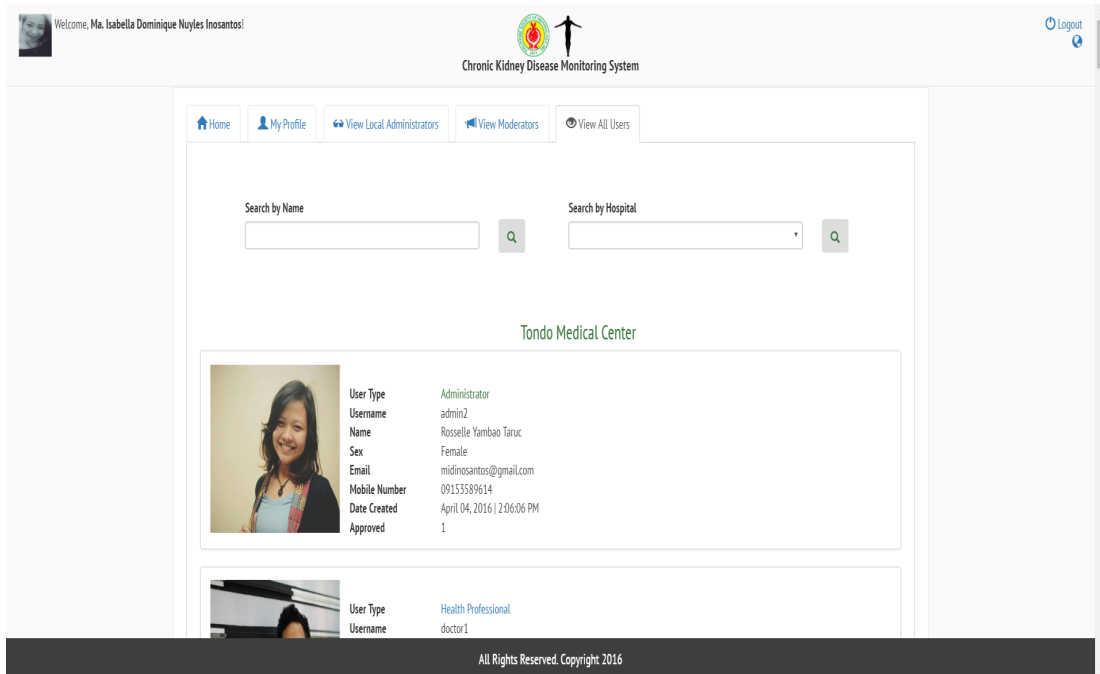
Figure 46: View All Users Page of CKDMS

VI.   Discussions

In developing the system, our research objective is to create an online monitoring system which mainly serves as a tool to supervise the condition of patients with chronic kidney disease which are also the target users of this system. Moreover, it also serves as a venue to promote dissemination of validated information regarding chronic kidney disease. The system also promotes interaction between patients and health professionals for better understanding of their condition particularly in our local setting.

With these given, the Chronic Kidney Disease Monitoring System is built to provide patients and health professionals with functionalities to help simplify and reduce the cost of regular monitoring process of CKD, to enable circulation of valid information, and to boost interaction among patients. It allows input of medical condition in case of any minor event happening which the health professional may give recommendations to. It also allows input of clinical logs such as blood pressure, blood glucose, pulse rate, hemoglobin, etc., and process them into graphs for easier analysis. Moreover, the system also allows upload and download of medically validated resources (images, videos, articles) for further education/understanding of CKD. It also allows posting of queries, different topics, and categories in the forum which are to be validated by the moderators. The system also has an internal messaging system which allows the patient to connect with their health professional instantly.

Compared to other systems that have been developed in relation with monitoring of chronic kidney disease, only CKDMS offers an internal messaging system that could help in communication between patients and health professional [11, 10, 13, 17].

CKDMS also incorporated a forum function which other systems failed to do so. This is an advantage when it comes to choosing which system to use in monitoring CKD for CKDMS actually boosts interaction among patients. Merolli et al. review about the correlation of social media and management of disease actually shows that

websites integrating earlier social functionality such as discussion forums, bulletin boards and chat tools improve intervention thinning rates, lead to better patient engagement/participation, and health outcomes because they enable care to be more tailored to the individual. Furthermore, the forum enables patients to ask solutions/ seek advice for specific conditions in which other patients and health professionals can respond to, and in which the patient can feel a strong sense of support offereed by the online environment [27]. However, the benefits of the system will be limited to those who are enrolled, that is why more patients, health professionals, and hospitals are encouraged to register to the system.

On the other hand, there are some disadvantages that users might encounter. Since the system is web-based, it is dependent on the users access to the Internet and a PC. A connection must be successfully established first to be able to get into the system. Most patients with chronic kidney disease are elderly persons, so the use of computers might not be very convenient to them. Also, there is no developed mobile counterpart of the system yet which can also ease up the process of sending information/ monitoring. The system also lacks the function of enabling administrators to post announcements for public/non-users view. Moreover, the system lacks the functionality of specifically entering dialysis regimens for patients.

As an alternative to traditional monitoring, CKDMS paves the way for patients to reduce the frequency of hospital visits, and consequently improving the their quality of life. CKDMS also made it possible for patients to be catered into a system that is localized to the Philippine setting.

In terms of development, CKDMS is designed with the CodeIgniter web framework and Bootstrap interface. CI framework is known for its object-oriented approach which made it easy to construct queries to extract values from the database given the built-in methods. Moreover, the use of Bootstrap for the front-end of the system made it user-friendly because of its simple and interactive design [28].

VII.   Conclusions

The Chronic Kidney Disease Monitoring System helps patients to manage their condition. Patients are able to have access to the system in which they can log in, edit profile information, view charts, view medical condition, schedule appointment with their health professional, interact with other patients and health professionals through forum, view and download medically validated resources, and send message to their health professional. On the other hand, health professional is in charge of creating his/her patient accounts. He/She can view patients' charts, view patients' medical condition, send message to patients and other health professionals, upload medically validated resources, approve appointments scheduled by a patient, sign up as forum moderator, and interact with other users through forum. Moreover, a health professional can act as a moderator for a certain category in the forum where he/she can manage the forum by approving relevant posts and monitoring the messages submitted to the forum. Another type of user includes the local system administrator which manage the accounts of the users in a clinic/hospital and the clinic/hospital's schedule also. Lastly, the global system administrator manages the accounts of all local administrators and their respective institutions, view all users enrolled in the system, and also manages the moderator accounts.

With all these, the system can provide patients with medically validated resources which can guide them to manage their condition better; enable patients to interact with other patients; enable the health professionals to obtain information which can be used to provide improved recommendations for the patients' condition.

VIII.   Recommendations

The Chronic Kidney Disease Monitoring System (CKDMS) is built to provide patients and health professionals with functionalities to simplify the monitoring process of CKD, and provide validated resources to educate patients with their condition.

The CKDMS accomplished all of these objectives. However, the system is limited to being a web application. Users who can't access the website on a regular basis must have an alternative way to monitor their condition (or in case of health professional users, their patients' condition). With these possible situation given, it is recommended to develop a CKDMS for Android which can be synchronized with the data on its web application counterpart.

Moreover, it is also recommended for the system to include caretakers/ creating a specific circle of care for patients because most people with chronic kidney disease are elderly persons and they might have a hard time inputting their conditions/ logs themselves. Furthermore, it is recommended also to enable administrators to post announcements for public/non-users view. This may help in attracting more patients/ health professionals/ hospitals to enrol in the system. And lastly, it is recommended to add a functionality of specifically entering dialysis regimens for patients for easier view of their prescribed treatment.

IX.   Bibliography

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X.   Appendix

A.   Source Codes

CKDMS_Controller.php

```php
<?php
defined('BASEPATH') OR exit('No direct script access allowed');
class CKDMS_Controller extends CI_Controller {
  private $userCookie;
  private $addUserCookie;
  public function __construct()
  {
    parent::__construct();
    if( $this->CKDMS_Model->hasUserCookie() ) :
      $this->userCookie = $this->CKDMS_Model->getUserCookie();
      $this->addUserCookie = $this->CKDMS_Model->constructAddUserCookie();
      $this->newMessageCookie = $this->CKDMS_Model->constructNewMessageCookie();
      $this->newAppointmentCookie = $this->CKDMS_Model->constructNewAppointmentCookie
    ();
      $this->newPostCookie = $this->CKDMS_Model->constructNewPostCookie();
      $this->newReplyCookie = $this->CKDMS_Model->constructNewReplyCookie();
      $this->newFileCookie = $this->CKDMS_Model->constructNewFileCookie();
      $this->newModCookie = $this->CKDMS_Model->constructNewModCookie();
      $this->newConditionCookie = $this->CKDMS_Model->constructNewConditionCookie();
      $this->newEntryCookie = $this->CKDMS_Model->constructNewEntryCookie();
      $this->newIntervalCookie = $this->CKDMS_Model->constructChartIntervalCookie();
      $this->searchUserCookie = $this->CKDMS_Model->constructSearchCookie();
      $this->searchTitleCookie = $this->CKDMS_Model->constructSearchTitleCookie();
    endif;
  }
  public function index()
  {
    $this->login();
  }
  public function login()
  {
    $data["content"] = "user.php";
    $data["cookie"] = $this->userCookie;
    $users = $this->CKDMS_Model->getUserList();
    foreach( $users as $user ) :
      $user->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $user->id );
      $user->password = $this->CKDMS_Model->getUserPassword( $user );
    endforeach;
    $data["user_list"] = $users;
    $local_admins = $this->CKDMS_Model->getLocalAdminList();
    foreach( $local_admins as $local_admin ) :
      $local_admin->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $local_admin->
    id );
      $local_admin->password = $this->CKDMS_Model->getUserPassword( $local_admin );
    endforeach;
    $data["local_admin_list"] = $local_admins;
    $health_pros = $this->CKDMS_Model->getHPList();
    foreach( $health_pros as $health_pro ) :
      $health_pro->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $health_pro->id
    );
      $health_pro->password = $this->CKDMS_Model->getUserPassword( $health_pro );
    endforeach;
    $data["health_pro_list"] = $health_pros;
    $patients = $this->CKDMS_Model->getPatientList();
    foreach( $patients as $patient ) :
      $patient->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $patient->id );
      $patient->password = $this->CKDMS_Model->getUserPassword( $patient );
    endforeach;
    $data["patient_list"] = $patients;
    $data["hospital_list"] = $this->CKDMS_Model->getHospitalList();
    $data["patient_ids"] = $this->CKDMS_Model->getPatientIDList();
    $data["messages"] = $this->CKDMS_Model->getMessages();
    $data["appointments"] = $this->CKDMS_Model->getAppointments();
    $data["forum"] = $this->CKDMS_Model->getForum();
```

```php
   $data["replies"] = $this->CKDMS_Model->getReplies();
   $data["files"] = $this->CKDMS_Model->getFiles();
   $data["moderator_list"] = $this->CKDMS_Model->getModeratorList();
   $data["category_list"] = $this->CKDMS_Model->getCategoryList();
   $data["condition_list"] = $this->CKDMS_Model->getConditionList();
   $data["monitor_list"] = $this->CKDMS_Model->getMonitoringList();
   $data["notifications"] = $this->CKDMS_Model->getNotifications();
     $this->load->view( 'mainpage.php', $data );
 }
public function signup()
 {
     $data["content"] = "signup/signup_page.php";
  $data["cookie"] = $this->addUserCookie;
     $this->load->view( 'mainpage.php', $data );
 }
public function signup_local_admin()
 {
     $data["content"] = "signup/signup_local_admin.php";
  $data["cookie"] = $this->addUserCookie;
     $this->load->view( 'mainpage.php', $data );
 }
public function signup_health_pro()
 {
     $data["content"] = "signup/signup_health_pro.php";
  $data["cookie"] = $this->addUserCookie;
  $hospitals = $this->CKDMS_Model->getHospitalList();
  $data["hospital_list"] = $hospitals;
     $this->load->view( 'mainpage.php', $data );
 }
 public function logout()
 {
       $this->CKDMS_Model->deleteUserCookie();
       redirect(base_url('login'));
 }
public function addUser() { $this->pageRouter(0); }
public function addUser_LA() { $this->pageRouter(21); }
public function addUser_HP() { $this->pageRouter(22); }
public function back() { $this->pageRouter(1); }
public function home() { $this->pageRouter(15); }
public function pendingAccount() { $this->pageRouter(30); }
public function pendingAccount2() { $this->pageRouter(33); }
public function invalidEmail() { $this->pageRouter(31); }
public function invalidEmail2() { $this->pageRouter(32); }
public function userProfile() { $this->pageRouter(13); }
public function changePassNVM() { $this->pageRouter(14); }
public function manageHealthPro() { $this->pageRouter(2); }
 public function manageLocalAdmin() { $this->pageRouter(3); }
public function manageMods() { $this->pageRouter(12); }
public function viewUsers() { $this->pageRouter(17); }
public function manageSchedule() { $this->pageRouter(18); }
 public function messages() { $this->pageRouter(4); }
public function viewPatients() { $this->pageRouter(5); }
public function addPatient() { $this->pageRouter(6); }
public function forum() { $this->pageRouter(7); }
public function manageForum() { $this->pageRouter(16); }
public function researchHub() { $this->pageRouter(8); }
public function viewAppointments() { $this->pageRouter(9); }
public function viewMedCon() { $this->pageRouter(10); }
public function viewCharts() { $this->pageRouter(11); }
private function pageRouter( $pageType )
{
 if ( $pageType != 1 ){
 }
 else{
  $this->addUserCookie->addUserAlert = 0;
 }
 if ( $pageType != 0 ){
 }
 else{
  set_cookie(
   "addUserCookie",
   base64_encode(json_encode($this->addUserCookie)), (60*60*24)
  );
```

```php
 $this->userCookie->pageType = $pageType;
 $this->CKDMS_Model->setUserCookie( (array) $this->userCookie );
 redirect( base_url('signup') );
}
if ($pageType != 2){
}
else{
 set_cookie(
  "searchUserCookie",
  base64_encode(json_encode($this->searchUserCookie)), (60*60*24)
 );
}
if ( $pageType != 21 ){
}
else{
 set_cookie(
  "addUserCookie",
  base64_encode(json_encode($this->addUserCookie)), (60*60*24)
 );
 $this->userCookie->pageType = $pageType;
 $this->CKDMS_Model->setUserCookie( (array) $this->userCookie );
 redirect( base_url('signup/local_admin') );
}
if ( $pageType != 22 ){
}
else{
 set_cookie(
  "addUserCookie",
  base64_encode(json_encode($this->addUserCookie)), (60*60*24)
 );
 $this->userCookie->pageType = $pageType;
 $this->CKDMS_Model->setUserCookie( (array) $this->userCookie );
 redirect( base_url('signup/health_pro') );
}
if ($pageType != 6){
}
else{
 set_cookie(
  "addUserCookie",
  base64_encode(json_encode($this->addUserCookie)), (60*60*24)
 );
}
if ($pageType != 4){
}
else{
 set_cookie(
  "newMessageCookie",
  base64_encode(json_encode($this->newMessageCookie)), (60*60*24)
 );
 set_cookie(
  "searchUserCookie",
  base64_encode(json_encode($this->searchUserCookie)), (60*60*24)
 );
}
if ($pageType != 5){
}
else{
 set_cookie(
  "newIntervalCookie",
  base64_encode(json_encode($this->newIntervalCookie)), (60*60*24)
 );
 set_cookie(
  "newEntryCookie",
  base64_encode(json_encode($this->newEntryCookie)), (60*60*24)
 );
 set_cookie(
  "searchUserCookie",
  base64_encode(json_encode($this->searchUserCookie)), (60*60*24)
 );
 set_cookie(
  "searchTitleCookie",
  base64_encode(json_encode($this->searchTitleCookie)), (60*60*24)
 );
}
```

```
if ($pageType != 9){
}
else{
 set_cookie(
  "newAppointmentCookie",
  base64_encode(json_encode($this->newAppointmentCookie)), (60*60*24)
 );
}
if ($pageType != 10){
}
else{
 set_cookie(
  "newConditionCookie",
  base64_encode(json_encode($this->newConditionCookie)), (60*60*24)
 );
 set_cookie(
  "newIntervalCookie",
  base64_encode(json_encode($this->newIntervalCookie)), (60*60*24)
 );
}
if ($pageType != 11){
}
else{
 set_cookie(
  "newEntryCookie",
  base64_encode(json_encode($this->newEntryCookie)), (60*60*24)
 );
 set_cookie(
  "newIntervalCookie",
  base64_encode(json_encode($this->newIntervalCookie)), (60*60*24)
 );
}
if ($pageType != 7){
}
else{
 set_cookie(
  "newPostCookie",
  base64_encode(json_encode($this->newPostCookie)), (60*60*24)
 );
 set_cookie(
  "newReplyCookie",
  base64_encode(json_encode($this->newReplyCookie)), (60*60*24)
 );
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
 set_cookie(
  "searchTitleCookie",
  base64_encode(json_encode($this->searchTitleCookie)), (60*60*24)
 );
}
if ($pageType != 8){
}
else{
 set_cookie(
  "newFileCookie",
  base64_encode(json_encode($this->newFileCookie)), (60*60*24)
 );
 set_cookie(
  "searchTitleCookie",
  base64_encode(json_encode($this->searchTitleCookie)), (60*60*24)
 );
}
if ($pageType != 12){
}
else{
 set_cookie(
  "searchUserCookie",
  base64_encode(json_encode($this->searchUserCookie)), (60*60*24)
 );
}
if ($pageType != 13){
}
```

```php
else{
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
}
if ($pageType != 14){
}
else{
 $this->userCookie->changePass = 0;
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
 $this->userProfile();
}
if ($pageType != 15){
}
else{
 set_cookie(
  "newModCookie",
  base64_encode(json_encode($this->newModCookie)), (60*60*24)
 );
}
if ($pageType != 17){
}
else{
 set_cookie(
  "searchUserCookie",
  base64_encode(json_encode($this->searchUserCookie)), (60*60*24)
 );
}
if ($pageType != 30){
}
else{
 $this->userCookie->isPendingAccount = 1;
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
}
if ($pageType != 33){
}
else{
 $this->userCookie->isPendingAccount = 0;
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
}
if ($pageType != 31){
}
else{
 $this->userCookie->forgotPasswordEmail = 1;
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
}
if ($pageType != 32){
}
else{
 $this->userCookie->forgotPasswordEmail = 0;
 set_cookie(
  "theUserCookie",
  base64_encode(json_encode($this->userCookie)), (60*60*24)
 );
}
$this->userCookie->pageType = $pageType;
$this->CKDMS_Model->setUserCookie( (array) $this->userCookie );
/* Redirect the page after setting the cookie configuration for the page */
redirect( base_url('login') );
}
public function processAddUser()
```

```
{
$hospital_name = $this->input->post('new_user_hospital_name');
$hospital_address = $this->input->post('new_user_hospital_address');
   $first_name = $this->input->post('new_user_first_name');
   $last_name = $this->input->post('new_user_last_name');
   $middle_name = $this->input->post('new_user_middle_name');
   $sex = $this->input->post('new_user_sex');
   $email = $this->input->post('new_user_email');
$mobile_no = $this->input->post('new_user_mobile_no');
$type = $this->input->post('new_user_type');
   $username = $this->input->post('new_user_username');
   $password = $this->input->post('new_user_password');
   $password_verify = $this->input->post('new_user_checker_password');
   $HP_id = $this->input->post('new_user_HP_id');
if($sex == "Female"){
 $image = "female_icon";
}
else{
 $image = "male_icon";
}
   $this->addUserCookie->first_name = $first_name;
   $this->addUserCookie->last_name = $last_name;
   $this->addUserCookie->middle_name = $middle_name;
$this->addUserCookie->hospital_name = $hospital_name;
$this->addUserCookie->hospital_address = $hospital_address;
$this->addUserCookie->sex = $sex;
$this->addUserCookie->email = $email;
$this->addUserCookie->mobile_no = $mobile_no;
   if( strlen($username) < 6){
     $this->addUserCookie->addUserAlert = 4; // SETTING OF COOKIE IS DONE BEFORE
   ROUTING IN User ROUTER
     // ROUTES BACK TO THE ADD User PAGE WITH THE ALERT TYPE 4
 if($this->userCookie->pageType == 21){
   $this->addUser_LA();
 }
 else if($this->userCookie->pageType == 22){
   $this->addUser_HP();
 }
 else if($this->userCookie->pageType == 6){
   $this->addPatient();
 }
   }
$this->addUserCookie->username = $username;
   if( strlen($password) < 6 || strlen($password_verify) < 6 ){
     $this->addUserCookie->addUserAlert = 5; // SETTING OF COOKIE IS DONE BEFORE
   ROUTING IN User ROUTER
     // ROUTES BACK TO THE ADD User PAGE WITH THE ALERT TYPE 5
 if($this->userCookie->pageType == 21){
   $this->addUser_LA();
 }
 else if($this->userCookie->pageType == 22){
   $this->addUser_HP();
 }
 else if($this->userCookie->pageType == 6){
   $this->addPatient();
 }
   }
$email_in_db = false;
foreach( $this->CKDMS_Model->getUserList() as $user ){
 if( $user->email == $email ){
 $email_in_db = true;
 }
}
if($email_in_db){
     $this->addUserCookie->addUserAlert = 6; // SETTING OF COOKIE IS DONE BEFORE
   ROUTING IN User ROUTER
     // ROUTES BACK TO THE ADD User PAGE WITH THE ALERT TYPE 5
 if($this->userCookie->pageType == 21){
   $this->addUser_LA();
 }
 else if($this->userCookie->pageType == 22){
   $this->addUser_HP();
 }
```

```php
else if($this->userCookie->pageType == 6){
 $this->addPatient();
}
 }
 $this->addUserCookie->password = $password;
 $this->addUserCookie->password_verify = $password_verify;
 if( $password === $password_verify ){
    $in_database = false;
foreach( $this->CKDMS_Model->getUserList() as $user ){
      if( $user->username == $username ){
         $in_database = true;
         break;
      }
}
    if( !$in_database ){
 if($type == 1){
  $array2["name"] = $hospital_name;
  $array2["address"] = $hospital_address;
  $hospital = json_decode(json_encode($array2));
  $this->CKDMS_Model->insertNewHospital($hospital);
  $ret_hospital = $this->CKDMS_Model->getHospitalID($hospital_name);
      }
 else if($type == 2){
  $ret_hospital = $this->CKDMS_Model->getHospitalID($hospital_name);
 }
 else if($type == 3){
  $ret_hospital = $this->input->post('new_user_hospital_id');
 }
 $array["hospital_id"] = $ret_hospital;
      $array["first_name"] = $first_name;
      $array["last_name"] = $last_name;
      $array["middle_name"] = $middle_name;
      $array["sex"] = $sex;
      $array["mobile_no"] = $mobile_no;
      $array["email"] = $email;
      $array["type"] = $type;
      $array["password"] = $password;
      $array["username"] = $username;
 $array["image_path"] = $image;
      $user = json_decode( json_encode( $array ) );
      $user->password = $this->CKDMS_Model->setUserPassword( $user );
      $this->CKDMS_Model->insertNewUser($user);
 if($type == 3){
   $array3["id"] = $this->CKDMS_Model->getPatientID($username);
   $array3["health_pro_id"] = $HP_id;
   $patient = json_decode( json_encode( $array3 ) );
   $this->CKDMS_Model->insertNewPatient($patient);
 }
      $this->addUserCookie->addUserAlert = 0; // SETTING OF COOKIE IS DONE BEFORE
ROUTING IN User ROUTER
 if($this->userCookie->pageType == 6){ //addpatient
  $local_admins = $this->CKDMS_Model->getLocalAdminList();
  foreach($local_admins as $local_admin){
   if($local_admin->hospital_id == $ret_hospital){
    $user_id = $local_admin->id;
   }
  }
  $message = "New user application to be approved";
  $array5["user_id"] = $user_id;
  $array5["content"] = $message;
  $notification = json_decode( json_encode($array5) );
  $this->CKDMS_Model->newNotification($notification);
  $this->viewPatients();
 }
 else{
  if($type == 2){
   $local_admins = $this->CKDMS_Model->getLocalAdminList();
   foreach($local_admins as $local_admin){
    if($local_admin->hospital_id == $ret_hospital){
     $user_id = $local_admin->id;
    }
   }
   $message = "New user application to be approved";
```

```php
      $array4["user_id"] = $user_id;
      $array4["content"] = $message;
      $notification = json_decode( json_encode($array4) );
      $this->CKDMS_Model->newNotification($notification);
     }
     else if($type == 1){
      $message = "New hospital application to be approved";
      $array4["user_id"] = 0;
      $array4["content"] = $message;
      $notification = json_decode( json_encode($array4) );
      $this->CKDMS_Model->newNotification($notification);
     }
     $this->back(); // ROUTES BACK TO THE VIEW User PAGE WITH THE ALERT TYPE 0 //
          healthpro & localadmin
    }
  }
      else{
        $this->addUserCookie->addUserAlert = 2; // SETTING OF COOKIE IS DONE BEFORE
    ROUTING IN User ROUTER
        // ROUTES BACK TO THE ADD User PAGE WITH THE ALERT TYPE 2
     if($this->userCookie->pageType == 21){
      $this->addUser_LA();
     }
     else if($this->userCookie->pageType == 22){
      $this->addUser_HP();
     }
     else if($this->userCookie->pageType == 6){
      $this->addPatient();
    }
     }
     }
     else{
        $this->addUserCookie->addUserAlert = 1; // SETTING OF COOKIE IS DONE BEFORE
    ROUTING IN User ROUTER
        // ROUTES BACK TO THE ADD User PAGE WITH THE ALERT TYPE 1
     if($this->userCookie->pageType == 21){
      $this->addUser_LA();
     }
     else if($this->userCookie->pageType == 22){
      $this->addUser_HP();
     }
     else if($this->userCookie->pageType == 6){
      $this->addPatient();
    }
     }
 }
public function processApproveAdmin( $encrypted_id )
 {
 $users = $this->CKDMS_Model->getUserList();
  foreach($users as $user){
   if($user->id == $encrypted_id){
     $email = $user->email;
   }
  }
 $this->CKDMS_Model->approveUser( $encrypted_id, $email );
 if($this->userCookie->pageType == 2){
  $this->manageHealthPro();
 }
 else{
  $this->manageLocalAdmin();
 }
 }
public function processDisableAdmin( $encrypted_id )
 {
   $this->CKDMS_Model->disableUser( $encrypted_id );
 if($this->userCookie->pageType == 2){
  $this->manageHealthPro();
 }
 else{
  $this->manageLocalAdmin();
 }
 }
 public function processDeleteAdmin( $encrypted_id ) //admin!!
```

```php
    {
      $this->CKDMS_Model->deleteUser( $encrypted_id );
      if($this->userCookie->pageType == 2){
      $this->manageHealthPro();
    }
    else{
      $this->manageLocalAdmin();
    }
    }
public function setRecepient($recepient){
  $this->newMessageCookie->to_id = $recepient;
  $this->CKDMS_Model->messageRead($recepient, $this->userCookie->id);
  $this->messages();
}
public function processSendMessage()
  {
  $array["from_id"] = $this->input->post('new_message_from');
  $array["to_id"] = $this->input->post('new_message_to');
  $array["content"] = $this->input->post('new_message_content');
  $message = json_decode( json_encode($array) );
  $this->CKDMS_Model->newMessage($message);
  $this->messages();
}
public function processAddAppointment()
  {
  $array["health_pro_id"] = $this->input->post('health_pro_id');
  $array["patient_id"] = $this->input->post('patient_id');
  $array["date"] = $this->input->post('a_date');
  $array["time"] = $this->input->post('a_time');
  $array["purpose"] = $this->input->post('a_purpose');
  $appointment = json_decode( json_encode($array) );
  $this->CKDMS_Model->newAppointment($appointment);
  $patients = $this->CKDMS_Model->getPatientIDList();
  foreach($patients as $patient){
   if($patient->id == $this->userCookie->id){
     $health_pro_id = $patient->health_pro_id;
   }
  }
  $message = "New appointment scheduled by " . $this->userCookie->userName . " to be
      approved";
  $array2["user_id"] = $health_pro_id;
  $array2["content"] = $message;
  $notification = json_decode( json_encode($array2) );
  $this->CKDMS_Model->newNotification($notification);
  $this->viewAppointments();
}
public function processApproveAppointment( $encrypted_id )
  {
    $this->CKDMS_Model->approveAppointment( $encrypted_id );
  $appointments = $this->CKDMS_Model->getAppointments();
  foreach($appointments as $appointment){
   if($appointment->id == $encrypted_id){
     $user_id = $appointment->patient_id;
   }
  }
  $message = "Your appointment is approved";
  $array2["user_id"] = $user_id;
  $array2["content"] = $message;
  $notification = json_decode( json_encode($array2) );
  $this->CKDMS_Model->newNotification($notification);
  $this->viewAppointments();
  }
public function processDisapproveAppointment( $encrypted_id )
  {
    $this->CKDMS_Model->disapproveAppointment( $encrypted_id );
  $appointments = $this->CKDMS_Model->getAppointments();
  foreach($appointments as $appointment){
   if($appointment->id == $encrypted_id){
     $user_id = $appointment->patient_id;
   }
  }
  $message = "Your appointment is not approved";
  $array2["user_id"] = $user_id;
```

```php
$array2["content"] = $message;
$notification = json_decode( json_encode($array2) );
$this->CKDMS_Model->newNotification($notification);
$this->viewAppointments();
}
public function processNewForumPost()
{
$array["author_id"] = $this->input->post('new_post_author_id');
$array["title"] = $this->input->post('new_post_title');
$array["content"] = $this->input->post('new_post_content');
$category_id = $this->input->post('new_category_id');
if($this->input->post('new_category') == ""){
 $array["category_id"] = $category_id;
}
else{
 $lol["name"] = $this->input->post('new_category');
 $cat = json_decode( json_encode($lol) );
 $category_id = $this->CKDMS_Model->insertNewCategory($cat);
 $array["category_id"] = $category_id;
}
if($this->input->post('is_mod') == 1){
 $array["is_approved"] = 1;
}
else{
 $moderator_list = $this->CKDMS_Model->getModeratorList();
 foreach($moderator_list as $moderator){
  if($moderator->category_id == $category_id){
   $user_id = $moderator->health_pro_id;
  }
 }
 if($user_id == ""){
  $user_id = 53; //PAUL
 }
 $message = "New forum post to be approved";
 $array2["user_id"] = $user_id;
 $array2["content"] = $message;
 $notification = json_decode( json_encode($array2) );
 $this->CKDMS_Model->newNotification($notification);
 $this->newPostCookie->is_notified = 1;
}
$post = json_decode( json_encode($array) );
$this->CKDMS_Model->newForumPost($post);
$this->forum();
}
public function processNewReply()
{
$array["post_id"] = $this->input->post('new_post_id');
$array["user_id"] = $this->input->post('new_post_user_id');
$array["content"] = $this->input->post('new_post_content');
$reply = json_decode( json_encode($array) );
$this->CKDMS_Model->newReply($reply);
$forum = $this->CKDMS_Model->getForum();
foreach($forum as $post){
 if($post->id == $this->input->post('new_post_id')){
  $user_id = $post->author_id;
 }
}
$message = $this->userCookie->userName . " replied to your post";
$array2["user_id"] = $user_id;
$array2["content"] = $message;
$notification = json_decode( json_encode($array2) );
$this->CKDMS_Model->newNotification($notification);
$this->forum();
}
public function processUploadArticle()
{
$date_time = date( "YmdHis" );
$target_path = $this->CKDMS_Model->moveFileUpload('file_to_upload', $date_time);
$file_type = pathinfo($target_path,PATHINFO_EXTENSION);
$array["title"] = $this->input->post('new_upload_title');
$array["uploader_id"] = $this->input->post('new_upload_user_id');
$array["category_id"] = $this->input->post('new_upload_category_id');
$category_id = $this->input->post('new_upload_category_id');
```

```php
$array["description"] = $this->input->post('new_upload_description');
$array["path"] = $target_path;
$array["type"] = $file_type;
$array["name"] = $date_time;
$file = json_decode( json_encode($array) );
$this->CKDMS_Model->newUploadedFile($file);
if($is_mod == 0){
 $moderator_list = $this->CKDMS_Model->getModeratorList();
 foreach($moderator_list as $moderator){
  if($moderator->category_id == $category_id){
   $user_id = $moderator->health_pro_id;
  }
 }
 if($user_id == ""){
  $user_id = 53; //PAUL
 }
 $message = "New medical resource to be approved";
 $array2["user_id"] = $user_id;
 $array2["content"] = $message;
 $notification = json_decode( json_encode($array2) );
 $this->CKDMS_Model->newNotification($notification);
 $this->newFileCookie->is_notified = 1;
}
$this->researchHub();
}
public function processOpenFile($file_id)
{
 $data["content"] = "user/open_file.php";
 $data["file_id"] = $file_id;
 $users = $this->CKDMS_Model->getUserList();
     foreach( $users as $user ) :
       $user->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $user->id );
       $user->password = $this->CKDMS_Model->getUserPassword( $user );
     endforeach;
   $data["user_list"] = $users;
 $files = $this->CKDMS_Model->getFiles();
 $data["files"] = $files;
 $data["hospital_list"] = $this->CKDMS_Model->getHospitalList();
 $data["notifications"] = $this->CKDMS_Model->getNotifications();
 $data["moderator_list"] = $this->CKDMS_Model->getModeratorList();
 $this->load->view( 'mainpage.php', $data );
}
public function processSignupMod()
{
 $array["health_pro_id"] = $this->input->post('new_moderator_id');
 $array["category_id"] = $this->input->post('new_category_id');
 $array["reason"] = $this->input->post('new_cat_why');
 $moderator = json_decode( json_encode($array) );
 $this->CKDMS_Model->newModerator($moderator);
 $message = "New moderator application to be approved";
 $array2["user_id"] = 0;
 $array2["content"] = $message;
 $notification = json_decode( json_encode($array2) );
 $this->CKDMS_Model->newNotification($notification);
 $this->home();
}
public function processApproveMod( $encrypted_id )
 {
 $moderators = $this->CKDMS_Model->getModeratorList();
 $users = $this->CKDMS_Model->getUserList();
 foreach($moderators as $moderator){
  if($moderator->id == $encrypted_id){
   $category_id = $moderator->category_id;
  }
  foreach($users as $user){
   if($user->id == $moderator->health_pro_id){
    $email = $user->email;
   }
  }
 }
 $this->CKDMS_Model->approveMod( $encrypted_id, $category_id, $email );
 $this->manageMods();
 }
```

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```
public function processDisableMod( $encrypted_id )
 {
    $this->CKDMS_Model->disableMod( $encrypted_id );
 $this->manageMods();
 }
 public function processDeleteMod( $encrypted_id )
 {
    $this->CKDMS_Model->deleteMod( $encrypted_id );
 $this->manageMods();
 }
public function processForgotPassword()
 {
 $email = $this->input->post('forgot_user_email');
  $in_database = false;
  foreach( $this->CKDMS_Model->getUserList() as $user ){
        if( $user->email == $email ){
           $in_database = true;
           break;
        }
  }
     if( !$in_database ){
    $this->invalidEmail();
     }
  else{
   $this->CKDMS_Model->forgotPasswordEmail($email);
   $this->userCookie->forgotPasswordEmail = 0;
   $this->back();
  }
 }
public function processUploadDP()
 {
    $this->CKDMS_Model->moveUploadImg('file_to_upload', $this->userCookie->id);
  $this->userCookie->img = $this->userCookie->id;
  $this->userProfile();
 }
public function processChangePass(){
 $old_password = $this->input->post('old_user_password');
 $new_password = $this->input->post('new_user_password');
 $new_password_verify = $this->input->post('new_user_password_verify');
 if($new_password != $new_password_verify){
  $this->userCookie->changePass = 2;
  $this->userProfile();
 }
 $users = $this->CKDMS_Model->getUserList();
     foreach( $users as $user ){
   if($user->id == $this->userCookie->id){
    $changed_user = $user;
    $user->deleteUri = $this->CKDMS_Model->makeDeleteIdUri( $user->id );
    $user->password = $this->CKDMS_Model->getUserPassword( $user );
    if($user->password != $old_password){
     $this->userCookie->changePass = 1;
     $this->userProfile();
    }
   }
  }
  $changed_user->password = $new_password;
  $encrypted_new_pass = $this->CKDMS_Model->setUserPassword( $changed_user );
  $this->userCookie->changePass = $encrypted_new_pass;
  $this->CKDMS_Model->updatePassword($this->userCookie->id, $encrypted_new_pass);
  $this->userProfile();
}
public function processApprovePost($encrypted_id)
 {
 $this->CKDMS_Model->approvePost($encrypted_id);
 $this->manageForum();
 }
public function processDeletePost($encrypted_id)
 {
 $this->CKDMS_Model->deletePost($encrypted_id);
 if($this->userCookie->pageType == 16){
  $this->manageForum();
 }
 else{
```

```php
   $this->forum();
  }
 }
public function processNewCondition()
{
 $array["patient_id"] = $this->input->post('new_condition_patient_id');
 $array["name"] = $this->input->post('new_condition_name');
 $array["date_diagnosed"] = $this->input->post('new_condition_date');
 $array["notes"] = $this->input->post('new_condition_notes');
 $condition = json_decode( json_encode($array) );
 $this->CKDMS_Model->newCondition($condition);
 $patients = $this->CKDMS_Model->getPatientIDList();
 foreach($patients as $patient){
  if($patient->id == $this->userCookie->id){
   $health_pro_id = $patient->health_pro_id;
  }
 }
 $message = "New medical condition from " . $this->userCookie->userName;
 $array2["user_id"] = $health_pro_id;
 $array2["content"] = $message;
 $notification = json_decode( json_encode($array2) );
 $this->CKDMS_Model->newNotification($notification);
 $this->viewMedCon();
}
public function processNewEntry()
{
 $patient_id = $this->input->post('new_entry_patient_id');
 $array["patient_id"] = $this->input->post('new_entry_patient_id');
 $array["bp_systolic"] = $this->input->post('new_entry_bp_systolic');
 $array["bp_diastolic"] = $this->input->post('new_entry_bp_diastolic');
 $array["blood_glucose"] = $this->input->post('new_entry_blood_glucose');
 $array["pulse"] = $this->input->post('new_entry_pulse');
 $array["weight"] = $this->input->post('new_entry_weight');
 $array["egfr"] = $this->input->post('new_entry_egfr');
 $array["uacr"] = $this->input->post('new_entry_uacr');
 $array["hemoglobin"] = $this->input->post('new_entry_hemoglobin');
 $array["cholesterol"] = $this->input->post('new_entry_cholesterol');
 $array["calcium"] = $this->input->post('new_entry_calcium');
 $array["phosphorus"] = $this->input->post('new_entry_phosphorus');
 $array["ipth"] = $this->input->post('new_entry_ipth');
 $array["vitamin_d"] = $this->input->post('new_entry_vitamin_d');
 $array["date_entered"] = $this->input->post('new_entry_date');
 $entry = json_decode( json_encode($array) );
 $this->CKDMS_Model->newChartEntry($entry);
 if($this->userCookie->userType == 3){
  $patients = $this->CKDMS_Model->getPatientIDList();
  foreach($patients as $patient){
   if($patient->id == $this->userCookie->id){
    $health_pro_id = $patient->health_pro_id;
   }
  }
  $message = $this->userCookie->userName . " updated their chart";
  $array2["user_id"] = $health_pro_id;
  $array2["content"] = $message;
  $notification = json_decode( json_encode($array2) );
  $this->CKDMS_Model->newNotification($notification);
  $this->viewCharts();
 }
 else {
  redirect(base_url("health_pro/view_patient_charts/{$patient_id}"));
 }
}
public function processGenerateChart()
{
 $patient_id = $this->input->post('chart_patient_id');
 $this->newIntervalCookie->patient_id = $this->input->post('chart_patient_id');
 $this->newIntervalCookie->type = $this->input->post('chart_type');
 $this->newIntervalCookie->start_date = $this->input->post('chart_start_date');
 $this->newIntervalCookie->end_date = $this->input->post('chart_end_date');
 if($this->userCookie->userType == 3){
  $this->viewCharts();
 }
 else {
```

```php
    set_cookie(
      "newIntervalCookie",
      base64_encode(json_encode($this->newIntervalCookie)), (60*60*24)
    );
    redirect(base_url("health_pro/view_patient_charts/{$patient_id}"));
  }
}
public function setIntervalMedCon()
{
  $this->newIntervalCookie->start_date = $this->input->post('medcon_start_date');
  $this->newIntervalCookie->end_date = $this->input->post('medcon_end_date');
  $this->viewMedCon();
}
public function viewPatientMedCon($patient_id)
{
  $data["content"] = "user/health professional/view_patient_medcon.php";
  $data["cookie"] = $this->userCookie;
  $data["patient_id"] = $patient_id;
  $data["user_list"] = $this->CKDMS_Model->getUserList();
  $data["condition_list"] = $this->CKDMS_Model->getConditionList();
  $data["hospital_list"] = $this->CKDMS_Model->getHospitalList();
  $data["notifications"] = $this->CKDMS_Model->getNotifications();
  $data["moderator_list"] = $this->CKDMS_Model->getModeratorList();
  $this->load->view( 'mainpage.php', $data );
}
public function viewPatientCharts($patient_id)
{
  $data["content"] = "user/health professional/view_patient_charts.php";
  $data["cookie"] = $this->userCookie;
  $data["patient_id"] = $patient_id;
  $data["user_list"] = $this->CKDMS_Model->getUserList();
  $data["monitor_list"] = $this->CKDMS_Model->getMonitoringList();
  $data["hospital_list"] = $this->CKDMS_Model->getHospitalList();
  $data["notifications"] = $this->CKDMS_Model->getNotifications();
  $data["moderator_list"] = $this->CKDMS_Model->getModeratorList();
  $this->load->view( 'mainpage.php', $data );
}
public function processAddRecommendation($event_id){
  $recommendation = $this->input->post('new_recommendation');
  $patient_id = $this->input->post('rec_patient_id');
  $this->CKDMS_Model->addRecommendation($event_id, $recommendation);
  $condition_list = $this->CKDMS_Model->getConditionList();
  foreach($condition_list as $condition){
   if($condition->id == $event_id){
    $user_id = $condition->patient_id;
   }
  }
  $message = "New recommendation for your entered condition";
  $array2["user_id"] = $user_id;
  $array2["content"] = $message;
  $notification = json_decode( json_encode($array2) );
  $this->CKDMS_Model->newNotification($notification);
  redirect(base_url("health_pro/view_patient_medcon/{$patient_id}"));
}
public function processDeleteReply($encrypted_id)
 {
  $this->CKDMS_Model->deleteReply($encrypted_id);
  $this->forum();
 }
public function processDownloadFile($file_id){
  $files = $this->CKDMS_Model->getFiles();
  foreach($files as $file){
   if($file->id == $file_id){
     if($file->type == 'jpg'){
     $filename = 'assets/uploads/jpg/' . $file->name . ".jpg";
     $fileType = "image/jpeg";
     }
     if($file->type == 'pdf'){
     $filename = 'assets/uploads/pdf/' . $file->name . ".pdf";
     $fileType = "application/pdf";
     }
     if($file->type == 'mp4'){
     $filename = 'assets/uploads/mp4/' . $file->name . ".mp4";
```

```php
    $fileType = "video/mp4";
   }
  header('Content-Description: File Transfer');
  header('Content-Type: application/octet-stream');
  header('Content-Disposition: attachment; filename='.basename($filename));
  header('Content-Transfer-Encoding: binary');
  header('Expires: 0');
  header('Cache-Control: must-revalidate, post-check=0, pre-check=0');
  header('Pragma: public');
  header('Content-Length: ' . filesize($filename));
  @ob_end_clean();
  readfile($filename);
  exit();
  }
 }
}
public function setForumCategory($category_id){
 $this->userCookie->forumCategory = $category_id;
 if($this->userCookie->pageType == 7){
  $this->forum();
 }
 else if($this->userCookie->pageType == 8){
  $this->researchHub();
 }
}
public function processTransferPatient(){
 $new_hp_id = $this->input->post('new_hp_id');
 $patient_id = $this->input->post('patient_id');
 $this->CKDMS_Model->transferPatient($new_hp_id, $patient_id);
 $this->viewPatients();
}
public function processDownloadChart($patient_id){
 //shoutout to ga! i love you hihi.
 if($this->userCookie->userType == 3){
  $this->viewCharts();
 }
 else {
  set_cookie(
    "newIntervalCookie",
    base64_encode(json_encode($this->newIntervalCookie)), (60*60*24)
   );
  redirect(base_url("health_pro/view_patient_charts/{$patient_id}"));
 }
}
public function processApproveFile($encrypted_id)
 {
 $this->CKDMS_Model->approveFile($encrypted_id);
 $this->manageForum();
 }
public function processDeleteFile($encrypted_id)
 {
 $this->CKDMS_Model->deleteFile($encrypted_id);
 if($this->userCookie->pageType == 16){
  $this->manageForum();
 }else{
  $this->researchHub();
 }
 }
public function processArchiveRecord($encrypted_id, $patient_id)
 {
 $this->CKDMS_Model->archiveRecord($encrypted_id);
 redirect(base_url("health_pro/view_patient_medcon/{$patient_id}"));
 }
public function processClearNotification()
 {
 $this->CKDMS_Model->clearNotifications($this->userCookie->id);
 $this->pageRouter($this->userCookie->pageType);
 }
public function processSearchUser()
 {
 $this->searchUserCookie->user = $this->input->post('search_name');
 $this->searchUserCookie->hospital = $this->input->post('search_hospital');
 if($this->userCookie->pageType == 17){
```

```php
 $this->viewUsers();
 }
 else if($this->userCookie->pageType == 5){
  $this->viewPatients();
 }
 else if($this->userCookie->pageType == 2){
  $this->manageHealthPro();
 }
 else if($this->userCookie->pageType == 4){
  $this->messages();
 }
 }
 public function processSearchTitle()
  {
  $this->searchTitleCookie->title = $this->input->post('search_title');
  if($this->userCookie->pageType == 7){
   $this->forum();
  }
  else if($this->userCookie->pageType == 8){
   $this->researchHub();
  }
  else{
   set_cookie(
     "searchTitleCookie",
     base64_encode(json_encode($this->searchTitleCookie)), (60*60*24)
    );
   $patient_id = $this->input->post('patient_id');
   redirect(base_url("health_pro/view_patient_medcon/{$patient_id}"));
  }
  }
 public function processPostFileNotified()
  {
  if($this->userCookie->pageType == 7){
   $this->newPostCookie->is_notified = 0;
   $this->forum();
  }
  if($this->userCookie->pageType == 8){
   $this->newFileCookie->is_notified = 0;
   $this->researchHub();
  }
  }
}
```

CKDMS_Model.php

```php
<?php
defined('BASEPATH') OR exit('No direct script access allowed');
class CKDMS_Model extends CI_Model {
 private $email_config;
  public function __construct()
  {
    parent::__construct();
    $this->email_config["smtp_host"] = 'ssl://smtp.gmail.com';
    $this->email_config["smtp_port"] = '465';
    $this->email_config["smtp_user"] = 'ckdmsup@gmail.com';
    $this->email_config["smtp_pass"] = 'helloupmanila';
    set_time_limit(0);
  }
/*
| ENCRYPTION FUNCTIONS
|
| encrypt( data, password, iv )
|  - custom encrypt function
|
| decrypt( data, password, iv )
|  - custom decrypt function
*/
  public function encrypt( $data, $password, $iv )
  {
    return openssl_encrypt($data, 'aes-256-cbc', $password, OPENSSL_RAW_DATA, $iv );
  }
  public function decrypt( $data, $password, $iv )
```

```php
  {
    return openssl_decrypt($data, 'aes-256-cbc', $password, OPENSSL_RAW_DATA, $iv );
  }
/*
| COOKIE FUNCTIONS
*/
  public function getUserCookie()
  {
    $password = base64_encode(md5(date('l jS \of F Y')));
    $iv = substr(base64_encode(md5(date("Ymd"))),0,16);
    $unserialized_cookie = base64_decode(get_cookie("theUserCookie"));
    $decrypted_cookie = $this->CKDMS_Model->decrypt( $unserialized_cookie, $password,
     $iv );
    $cookie = json_decode($decrypted_cookie);
    return $cookie;
  }
  public function setUserCookie( $array )
  {
    $password = base64_encode(md5(date('l jS \of F Y')));
    $iv = substr(base64_encode(md5(date("Ymd"))),0,16);
    $json = json_encode( $array );
    $encrypted_cookie = $this->CKDMS_Model->encrypt( $json, $password, $iv );
    $encoded_cookie = base64_encode($encrypted_cookie);
    set_cookie( "theUserCookie", $encoded_cookie, (60*60*24) );
  }
  public function hasUserCookie()
  {
    return (get_cookie("theUserCookie")) ? true : false;
  }
  public function deleteUserCookie()
  {
    delete_cookie("theUserCookie");
  delete_cookie("addUserCookie");
  delete_cookie("newMessageCookie");
  delete_cookie("newPostCookie");
  delete_cookie("newReplyCookie");
  delete_cookie("newModCookie");
  delete_cookie("newFileCookie");
  delete_cookie("newAppointmentCookie");
  delete_cookie("newEntryCookie");
  delete_cookie("newIntervalCookie");
  delete_cookie("newModCookie");
  delete_cookie("newConditionCookie");
  delete_cookie("searchUserCookie");
  }
  public function constructAddUserCookie()
  {
    $array["hospital_name"] = "";
  $array["hospital_address"] = "";
    $array["first_name"] = "";
    $array["last_name"] = "";
    $array["middle_name"] = "";
    $array["sex"] = "";
    $array["email"] = "";
    $array["mobile_no"] = "";
    $array["type"] = "";
    $array["username"] = "";
    $array["password"] = "";
    $array["password_verify"] = "";
  $array["addUserAlert"] = "";
    return json_decode(json_encode($array));
  }
 public function constructNewMessageCookie()
  {
  $array["from_id"] = "";
  $array["to_id"] = "";
    $array["content"] = "";
  return json_decode(json_encode($array));
 }
 public function constructNewAppointmentCookie()
  {
  $array["a_date"] = "";
  $array["a_time"] = "";
```

```php
    $array["a_purpose"] = "";
 return json_decode(json_encode($array));
}
public function constructNewPostCookie()
 {
 $array["author_id"] = "";
 $array["title"] = "";
    $array["content"] = "";
 $array["is_notified"] = 0;
 return json_decode(json_encode($array));
}
public function constructNewReplyCookie()
 {
 $array["user_id"] = "";
 $array["post_id"] = "";
    $array["content"] = "";
 return json_decode(json_encode($array));
}
public function constructNewFileCookie()
 {
 $array["uploader_id"] = "";
 $array["category_id"] = "";
 $array["title"] = "";
    $array["description"] = "";
 $array["is_notified"] = 0;
 return json_decode(json_encode($array));
}
public function constructNewModCookie()
 {
 $array["user_id"] = "";
 $array["category"] = "";
 return json_decode(json_encode($array));
}
public function constructNewConditionCookie()
 {
 $array["patient_id"] = "";
 $array["name"] = "";
 $array["date_diagnosed"] = "";
 $array["notes"] = "";
 $array["recommendation"] = "";
 return json_decode(json_encode($array));
}
public function constructNewEntryCookie()
 {
 $array["patient_id"] = "";
 $array["bp_systolic"] = "";
 $array["bp_diastolic"] = "";
 $array["blood_glucose"] = "";
 $array["pulse"] = "";
 $array["weight"] = "";
 $array["egfr"] = "";
 $array["uacr"] = "";
 $array["hemoglobin"] = "";
 $array["cholesterol"] = "";
 $array["calcium"] = "";
 $array["phosphorus"] = "";
 $array["ipth"] = "";
 $array["vitamin_d"] = "";
 $array["entry_date"] = "";
 return json_decode(json_encode($array));
}
public function constructChartIntervalCookie()
 {
 $array["patient_id"] = "";
 $array["type"] = "bp";
 $array["start_date"] = "";
 $array["end_date"] = "";
 return json_decode(json_encode($array));
}
public function constructSearchCookie()
 {
 $array["user"] = "";
 $array["hospital"] = "";
```

```php
  return json_decode(json_encode($array));
 }
 public function constructSearchTitleCookie()
  {
  $array["title"] = "";
  return json_decode(json_encode($array));
 }
/*
| USER FUNCTIONS
*/
 public function getUserList()
  {
  $query = $this->db->get('user');
  return $query->result();
  }
 public function getLocalAdminList()
 {
  $query = $this->db->get_where('user', array('type' => 1));
  return $query->result();
 }
 public function getHPList()
 {
  $query = $this->db->get_where('user', array('type' => 2));
  return $query->result();
 }
 public function getPatientList()
 {
  $query = $this->db->get_where('user', array('type' => 3));
  return $query->result();
 }
 public function getHospitalList()
  {
  $query = $this->db->get('hospital');
  return $query->result();
  }
 public function getPatientIDList()
  {
  $query = $this->db->get('patient');
  return $query->result();
  }
 public function getMessages()
  {
  $query = $this->db->get('message');
  return $query->result();
  }
 public function getAppointments()
  {
  $query = $this->db->get('appointment');
  return $query->result();
  }
 public function getForum()
  {
  $query = $this->db->get('post');
  return $query->result();
  }
 public function getReplies()
  {
  $query = $this->db->get('reply');
  return $query->result();
  }
 public function getFiles()
  {
  $query = $this->db->get('uploads');
  return $query->result();
  }
 public function getModeratorList()
  {
  $query = $this->db->get('moderator');
  return $query->result();
  }
 public function getCategoryList()
  {
  $query = $this->db->get('category');
```

```
 return $query->result();
 }
public function getConditionList()
 {
 $query = $this->db->get('event');
 return $query->result();
 }
public function getMonitoringList()
 {
 $query = $this->db->get('monitor');
 return $query->result();
 }
public function getHospitalID( $hospital_name )
{
 $query = $this->db->get_where('hospital', array('name' => $hospital_name));
 foreach($query->result() as $row){
  return $row->id;
 }
}
public function getPatientID( $patient_uname )
{
 $query = $this->db->get_where('user', array('username' => $patient_uname));
 foreach($query->result() as $row){
  return $row->id;
 }
}
 public function getUserPassword( $user )
 {
   $encrypt_password = base64_encode(md5($user->first_name));
   $encrypt_iv = substr(base64_encode(md5($user->last_name)),0,16);
   return $this->CKDMS_Model->decrypt( base64_decode($user->password),
   $encrypt_password, $encrypt_iv );
 }
 public function setUserPassword( $user )
 {
   $encrypt_password = base64_encode(md5($user->first_name));
   $encrypt_iv = substr(base64_encode(md5($user->last_name)),0,16);
   return base64_encode($this->CKDMS_Model->encrypt( $user->password,
   $encrypt_password, $encrypt_iv ));
 }
 public function makeDeleteIdUri( $id )
 {
   return urlencode(base64_encode($id));
 }
 public function unmakeDeleteIdUri( $id )
 {
   return base64_decode(urldecode($id));
 }
public function insertNewUser( $user )
 {
 $this->db->insert('user', (array) $user);
}
 public function deleteUser( $id )
 {
   $this->db->delete( 'user', array( "id" => $id ) );
 }
public function approveUser( $id, $email )
 {
 $data = array('is_approved' => 1);
 $this->db->update('user', $data, array('id' => $id));
 $html = "Your account has been verified and approved. You now have access to the
     Chronic Kidney Disease Monitoring System." .
   "<br><br><br><br> CKDMS Admin | UP Manila, Philippines <br> ckdmsup@gmail.com <br
       > 09153589614 | 2753035";
 $this->load->library( 'email' );
 $config['protocol']    = 'smtp';
 $config['smtp_host']   = $this->email_config["smtp_host"];
 $config['smtp_port']   = $this->email_config["smtp_port"];
 $config['smtp_user']   = $this->email_config["smtp_user"];
 $config['smtp_pass']   = $this->email_config["smtp_pass"];
 $config['smtp_timeout'] = '100';
 $config['charset']     = 'utf-8';
 $config['newline']     = "\r\n";
```

```php
 $config['mailtype']    = 'html';
 $config['validation']  = TRUE;
 $this->email->initialize( $config );
 $this->email->from( $config['smtp_user'], 'CKDMS Admin' );
 $this->email->to( $email );
 $this->email->subject( "System Application" );
 $this->email->message( $html );
 $this->email->send();
 echo $this->email->print_debugger();
 }
public function disableUser( $id )
 {
 $data = array('is_approved' => 0);
 $this->db->update('user', $data, array('id' => $id));
 }
public function updatePassword( $id, $encrypted_new_pass )
 {
 $data = array('password' => $encrypted_new_pass);
 $this->db->update('user', $data, array('id' => $id));
 }
public function insertNewHospital( $hospital )
 {
 $this->db->insert('hospital', (array) $hospital);
}
public function insertNewPatient( $patient )
 {
 $this->db->insert('patient', (array) $patient);
}
public function newMessage( $message )
 {
 $this->db->insert('message', (array) $message);
}
public function newAppointment( $appointment )
 {
 $this->db->insert('appointment', (array) $appointment);
}
public function approveAppointment( $id )
 {
 $data = array('is_approved' => 1);
 $this->db->update('appointment', $data, array('id' => $id));
 }
public function disapproveAppointment( $id )
 {
 $data = array('is_approved' => 2);
 $this->db->update('appointment', $data, array('id' => $id));
 }
public function newForumPost( $post )
 {
 $this->db->insert('post', (array) $post);
}
public function newReply( $reply )
 {
 $this->db->insert('reply', (array) $reply);
}
public function moveFileUpload( $input_name, $file_name )
 {
    $ext = pathinfo( $_FILES[$input_name]['name'], PATHINFO_EXTENSION );
    $filename = "{$file_name}.{$ext}";
 $destination_path = getcwd() . "/assets/uploads/$ext/";
 if(!is_dir($destination_path)){
  mkdir($destination_path);
 }
    $target_path = $destination_path . $filename;
    move_uploaded_file( $_FILES[$input_name]['tmp_name'], $target_path );
    return $target_path;
 }
public function newUploadedFile( $file )
 {
 $this->db->insert('uploads', (array) $file);
}
public function newModerator( $moderator )
 {
 $this->db->insert('moderator', (array) $moderator);
```

```php
}
public function approveMod( $moderator_id, $category_id, $email )
 {
 $data = array('is_approved' => 1);
 $this->db->update('moderator', $data, array('id' => $moderator_id));
 $html = "Your application has been approved.";
 $this->load->library( 'email' );
 $config['protocol']    = 'smtp';
 $config['smtp_host']  = $this->email_config["smtp_host"];
 $config['smtp_port']  = $this->email_config["smtp_port"];
 $config['smtp_user']  = $this->email_config["smtp_user"];
 $config['smtp_pass']  = $this->email_config["smtp_pass"];
 $config['smtp_timeout'] = '100';
 $config['charset']    = 'utf-8';
 $config['newline']    = "\r\n";
 $config['mailtype']    = 'html';
 $config['validation']  = TRUE;
 $this->email->initialize( $config );
 $this->email->from( $config['smtp_user'], 'CKDMS Admin' );
 $this->email->to( $email );
 $this->email->subject( "Moderator Application" );
 $this->email->message( $html );
 $this->email->send();
 echo $this->email->print_debugger();
 }
public function disableMod( $id )
 {
 $data = array('is_approved' => 0);
 $this->db->update('moderator', $data, array('id' => $id));
 }
public function deleteMod( $id )
 {
 $this->db->delete( 'moderator', array( "id" => $id ) );
 }
public function forgotPasswordEmail($email){
 $html = "To reset your password, click the link below. Good luck.";
 $this->load->library( 'email' );
 $config['protocol']    = 'smtp';
 $config['smtp_host']  = $this->email_config["smtp_host"];
 $config['smtp_port']  = $this->email_config["smtp_port"];
 $config['smtp_user']  = $this->email_config["smtp_user"];
 $config['smtp_pass']  = $this->email_config["smtp_pass"];
 $config['smtp_timeout'] = '100';
 $config['charset']    = 'utf-8';
 $config['newline']    = "\r\n";
 $config['mailtype']    = 'html';
 $config['validation']  = TRUE;
 $this->email->initialize( $config );
 $this->email->from( $config['smtp_user'], 'CKDMS Admin' );
 $this->email->to( $email );
 $this->email->subject( "Forgotten Password" );
 $this->email->message( $html );
 $this->email->send();
 echo $this->email->print_debugger();
}
public function moveUploadImg( $input_name, $user_id )
 {
    $ext = pathinfo( $_FILES[$input_name]['name'], PATHINFO_EXTENSION );
    $filename = "{$user_id}.{$ext}";
 $destination_path = getcwd() . "/assets/images/users/";
 if(!is_dir($destination_path)){
  mkdir($destination_path);
 }
    $target_path = $destination_path . $filename;
    move_uploaded_file( $_FILES[$input_name]['tmp_name'], $target_path );
 $data = array('image_path' => $user_id);
 $this->db->update('user', $data, array('id' => $user_id));
 }
public function approvePost( $post_id )
 {
 $data = array('is_approved' => 1);
 $this->db->update('post', $data, array('id' => $post_id));
 $query = $this->db->get_where('post', array('id' => $post_id));
```

```
 foreach($query->result() as $row){
  $category_id = $row->category_id;
 }
 $this->db->update('category', $data, array('id' => $category_id));
}
public function deletePost( $post_id )
 {
 $this->db->delete('post', array('id' => $post_id));
}
public function newCondition( $condition )
 {
 $this->db->insert('event', (array) $condition);
}
public function newChartEntry( $entry )
 {
 $this->db->insert('monitor', (array) $entry);
}
public function addRecommendation($event_id, $recommendation)
{
 $data = array('recommendation' => $recommendation);
 $this->db->update('event', $data, array('id' => $event_id));
}
public function deleteReply( $reply_id )
 {
 $this->db->delete('reply', array('id' => $reply_id));
}
public function transferPatient($new_hp_id, $patient_id)
{
 $data = array('health_pro_id' => $new_hp_id);
 $this->db->update('patient', $data, array('id' => $patient_id));
}
public function approveFile( $file_id )
 {
 $data = array('is_approved' => 1);
 $this->db->update('uploads', $data, array('id' => $file_id));
}
public function deleteFile( $file_id )
 {
 $this->db->delete('uploads', array('id' => $file_id));
}
public function insertNewCategory( $cat )
 {
 $this->db->insert('category', (array) $cat);
 $query = $this->db->get_where('category', array('name' => $cat->name));
 foreach($query->result() as $row){
  return $row->id;
 }
}
public function archiveRecord( $condition_id )
 {
 $data = array('is_archived' => 1);
 $this->db->update('event', $data, array('id' => $condition_id));
}
public function getNotifications()
 {
 $query = $this->db->get('notification');
 return $query->result();
 }
public function clearNotifications($user_id)
 {
 $this->db->delete('notification', array('user_id' => $user_id));
 }
public function newNotification($notification)
 {
 $this->db->insert('notification', (array) $notification);
 }
public function messageRead( $from_id, $to_id )
 {
 $data = array('is_read' => 1);
 $this->db->update('message', $data, array('from_id' => $from_id, 'to_id' => $to_id)
     );
}
}
```

mainpage.php

```php
<!doctype>
<html>
<head>
  <title>Chronic Kidney Disease Monitoring System</title>
  <link rel="shortcut icon" href="<?=base_url('assets/images/PSN.ico')?>">
 <link rel="stylesheet" href="<?=base_url('assets/css/bootstrap.min.css')?>">
  <link rel="stylesheet" href="<?=base_url('assets/css/app.css')?>">
</head>
<body>
  <header class="admin-topbar clearfix">
  <div class="row">
  <?php
  if(isset($cookie->isLoggedIn)){
   if($cookie->isLoggedIn == 1){ ?>
  <div class="col-xs-4">
  <div style="display:inline; margin-right:5px" class="pull-left"><?php $filename = '
      assets/images/users/' . $cookie->img . ".jpg"; ?>
  <img src="<?=base_url($filename)?>" width="50" height="50">
  </div>
  <span class="pull-left">Welcome, <strong><?=$cookie->userName?></strong>!<br>
  <strong><?php foreach( $hospital_list as $hospital){
     if($hospital->id == $cookie->hospitalID){
     echo $hospital->name;
     }}
     $is_mod = 0;
     ?></strong></span>
   <?php foreach( $moderator_list as $moderator){
     if($moderator->health_pro_id == $cookie->id && $moderator->is_approved == 1){
     $is_mod = 1;
     }}?>
  </div>
  <div class="col-xs-4" align="center">
  <img src="<?=base_url('assets/images/PSN_Logo.png')?>" class="logo">
   <img src="<?=base_url('assets/images/UP.png')?>" class="logo">
   <h4><strong>Chronic Kidney Disease Monitoring System</strong></h4>
  </div>
  <?php }
   else{ ?>
    <div class="col-xs-12" align="center">
    <img src="<?=base_url('assets/images/PSN_Logo.png')?>" class="logo">
    <img src="<?=base_url('assets/images/UP.png')?>" class="logo">
    <h4><strong>Chronic Kidney Disease Monitoring System</strong></h4>
  </div>
  <?php }
  } else{ ?>
   <div class="col-xs-12" align="center">
   <img src="<?=base_url('assets/images/PSN_Logo.png')?>" class="logo">
   <img src="<?=base_url('assets/images/UP.png')?>" class="logo">
   <h4><strong>Chronic Kidney Disease Monitoring System</strong></h4>
   </div>
 <?php } ?>
 <?php if(isset($cookie->isLoggedIn)){
  if($cookie->isLoggedIn == 1){ ?>
 <div class="col-xs-4">
 <span class="pull-right">
  <a href="<?=base_url('logout')?>"> <span class="glyphicon glyphicon-off"></span>
      Logout</a> </span>
  <br>
  <?php if($cookie->userType == 2){ ?>
    <div>
     <a class="pull-right" data-toggle="modal" data-target="#moderator_modal"><span
         class="glyphicon glyphicon-pencil"></span> Sign up as Moderator</a>
     <!-- Modal -->
    <div class="modal fade" id="moderator_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">Sign up as Moderator</h4>
       </div>
       <div class="modal-body">
        <!-- FORM!!! -->
        <?php
        if(get_cookie("newModCookie")) {
```

```php
       $newModArray = json_decode(base64_decode(get_cookie("newModCookie")));
       $newModArray->health_pro_id = $cookie->id;
      }
      ?>
      <form method="POST"
        action="<?=base_url('signup/moderator')?>"
        class="manage-user-form row"
        autocomplete="false"
        >
      <div class="form-group col-xs-12">
       <label for="new_post_title">Category</label>
       <select name="new_category_id"
         id="new_category_id"
         class="form-control">
         <option value=null selected disabled></option>
         <?php foreach( $category_list as $category ){ ?>
         <option value="<?=$category->id?>"><?=$category->name?></option>
         <?php } ?>
        </select>
      </div>
      <div class="form-group col-xs-12">
       <label for="new_post_content">Why?</label>
       <textarea name="new_cat_why"
           rows="5"
           id="new_cat_why"
           class="form-control"
           value="<?=$newModArray->category?>"
           ></textarea>
      </div>
      <input type='hidden' name='new_moderator_id' value="<?=$newModArray->
          health_pro_id?>" />
      <div class="col-xs-12">
       <button type="submit" class="btn btn-success pull-right">Submit</button>
      </div>
       </form>
      </div>
     </div>
    </div>
   </div>
  </div><br>
 <?php }
  $notification_count = 0;
  foreach($notifications as $notification){
   if($notification->user_id == $cookie->id){
    $notification_count++;
   }}
   ?>
 <div class="dropdown pull-right">
 <a class="dropdown-toggle" data-toggle="dropdown">
  <span class="glyphicon glyphicon-globe"></span>
  <?php if($notification_count != 0){ ?>
  <p class="text-danger" style="display:inline; font-size:10px;"><?=
      $notification_count?></p>
  <?php } ?>
 </a>
  <ul class="dropdown-menu">
  <?php foreach($notifications as $notification){
   if($notification->user_id == $cookie->id){ ?>
    <li><a href="#"><?=$notification->content?></a></li>
  <?php }} ?>
   <hr>
   <li><a href="<?=base_url("clear_notifications")?>"><p class="text-danger">Clear
       Notifications</p></a></li>
  </ul>
 </div>
 </div>
 <?php } }?>
</div>
</header>
 <section class="container">
   <section id="main" class="row">
     <?php include_once($content) ?>
   </section>
 </section>
 <footer class="black-background container">
   <h4 class="text-center">All Rights Reserved. Copyright 2016</h4>
```

```
      </footer>
  <script src="<?=base_url('assets/js/jquery.min.js')?>"></script>
  <script src="<?=base_url('assets/js/bootstrap.min.js')?>"></script>
  <script src="<?=base_url('assets/js/jquery.js')?>"></script>
  <script src="<?=base_url('assets/js/responsive-calendar.js')?>"></script>
  <script src="<?=base_url('assets/js/responsive-calendar.min.js')?>"></script>
  <!-- script src="<?=base_url('assets/js/angular.min.js')?>"></script>
   <script src="<?=base_url('assets/js/ui-bootstrap-tpls.min.js')?>"></script -->
   <script src="<?=base_url('assets/js/app.js')?>"></script>
</body>
</html>
```

user.php

```php
<?php
  if( !$this->CKDMS_Model->hasUserCookie() || sizeof($cookie) == 0 ){
    $array = array(
     "isLoggedIn" => 0,
     "isPendingAccount" => 0,
     "forgotPasswordEmail" => 0,
     "pageType" => 0
    );
    $this->CKDMS_Model->setUserCookie($array);
    $cookie = json_decode(json_encode($array)); // cookie is initialized in the
    controller
  }
 if( $_SERVER['REQUEST_METHOD'] == 'POST' && $cookie->isLoggedIn == 0 ){
  $username = $_POST['user_username'];
  $password = $_POST['user_password'];
  foreach( $user_list as $user ){
     if( $user->username === $username && $user->password === $password){
     if($user->is_approved == '1'){
      $array =
          array(
            "isLoggedIn" => 1,
            "pageType" => 15,
      "id"=>$user->id,
            "userType" => $user->type,
            "userName" => "{$user->first_name} {$user->middle_name} {$user->last_name
    }",
            "hospitalID" => $user->hospital_id,
      "img"=>$user->image_path,
      "changePass" => 0,
      "forumCategory" => "0"
         );
       $this->CKDMS_Model->setUserCookie($array);
     redirect( base_url('home') );
     }
     else if($user->is_approved == '0'){
     redirect( base_url('pending_account') );
     }
    }
  }
 }
  if ( !!$cookie->isLoggedIn){
  include_once('user/home.php');
 }
 else{
    include_once('user/login_page.php');
  }
```

signup_page.php

```html
<html>
<body align="center">
<a href="<?=base_url('addHP')?>"><span class="glyphicon glyphicon-user"></span> Sign
    up as Health Professional</a><br>
OR<br>
<a href="<?=base_url('addLA')?>"><span class="glyphicon glyphicon-home"></span> Enrol
     your Hospital</a><br>
 <a href="<?=base_url("login")?>">
 <button class="btn btn-lg btn-default pull-right">Login</button>
 </a>
```

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

signup_local_admin.php

```php
<html>
<body>
<?php
  if(get_cookie("addUserCookie")) {
     $addUserArray = json_decode(base64_decode(get_cookie("addUserCookie")));
     $addUserArray->type = 1;
  }
?>
<?php if( $addUserArray->addUserAlert == 1 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Passwords should be the same. </
    div>
<?php } else if( $addUserArray->addUserAlert == 2 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Username is already taken. Try a
    different one. </div>
<?php } else if( $addUserArray->addUserAlert == 3 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> First name and/or last name
    should be at least 6 characters. </div>
<?php } else if( $addUserArray->addUserAlert == 4 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Username should be at least 6
    characters. </div>
<?php } else if( $addUserArray->addUserAlert == 5 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Password/s should be at least 6
    characters. </div>
<?php } else if( $addUserArray->addUserAlert == 6 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Email is already taken. Enter a
    different one. </div>
<?php } ?>
<form method="POST"
   action="<?=base_url('user/add')?>"
   class="manage-user-form row"
   autocomplete="false"
   >
 <div class="form-group col-xs-12">
    <label for="new_user_hospital_name">Hospital Name</label>
    <input name="new_user_hospital_name"
       type="text"
       id="new_user_hospital_name"
       class="form-control"
       value="<?=$addUserArray->hospital_name?>"
       >
  </div>
 <div class="form-group col-xs-12">
    <label for="new_user_hospital_address">Hospital Address</label>
    <input name="new_user_hospital_address"
       type="text"
       id="new_user_hospital_address"
       class="form-control"
       value="<?=$addUserArray->hospital_address?>"
       >
  </div>
  <div class="form-group col-xs-4">
    <label for="new_user_first_name">First Name</label>
    <input name="new_user_first_name"
       type="text"
       id="new_user_first_name"
       class="form-control"
       value="<?=$addUserArray->first_name?>"
       >
  </div>
  <div class="form-group col-xs-4">
    <label for="new_user_last_name">Last Name</label>
    <input name="new_user_last_name"
       type="text"
       id="new_user_last_name"
       class="form-control"
       value="<?=$addUserArray->last_name?>"
       >
  </div>
 <div class="form-group col-xs-4">
    <label for="new_user_middle_name">Middle Name</label>
    <input name="new_user_middle_name"
       type="text"
       id="new_user_middle_name"
```

```
              class="form-control"
              value="<?=$addUserArray->middle_name?>"
              >
      </div>
    <div class="form-group col-xs-12">
      <label for="new_user_sex">Sex</label>
      <select name="new_user_sex"
        id="new_user_sex"
        class="form-control">
          <option value="none"></option>
          <option value="Male">Male</option>
          <option value="Female">Female</option>
      </select>
    </div>
    <div class="form-group col-xs-12">
        <label for="new_user_email">Email Address</label>
        <input name="new_user_email"
            type="text"
            id="new_user_email"
            class="form-control"
            value="<?=$addUserArray->email?>"
            >
      </div>
    <div class="form-group col-xs-12">
        <label for="new_user_mobile_no">Mobile Number</label>
        <input name="new_user_mobile_no"
            type="text"
            id="new_user_mobile_no"
            class="form-control"
            value="<?=$addUserArray->mobile_no?>"
            >
      </div>
      <div class="form-group col-xs-12">
        <label for="new_user_username">Username</label>
        <input name="new_user_username"
            type="text"
            id="new_user_username"
            class="form-control"
            value="<?=$addUserArray->username?>"
            >
      </div>
      <div class="form-group col-xs-12">
        <label for="new_user_password">Password</label>
        <input name="new_user_password"
            type="password"
            id="new_user_password"
            class="form-control"
            value="<?=$addUserArray->password?>"
            >
      </div>
      <div class="form-group col-xs-12">
        <label for="new_user_checker_password">Retype Password</label>
        <input name="new_user_checker_password"
            type="password"
            id="new_user_checker_password"
            class="form-control"
            value="<?=$addUserArray->password_verify?>"
            >
      </div>
    <input type='hidden' name='new_user_type' value='1' />
      <div class="col-xs-12">
        <button type="submit" class="btn btn-success">Submit</button>
      </div>
</form>
 <a href="<?=base_url("login")?>">
 <button class="btn btn-lg btn-default pull-right">Login</button>
 </a>
 </body>
 </html>
```

signup_health_pro.php

```
<html>
<body>
<?php
  if(get_cookie("addUserCookie")) {
    $addUserArray = json_decode(base64_decode(get_cookie("addUserCookie")));
```

```php
      $addUserArray ->type = 2;
    }
?>
<?php if( $addUserArray ->addUserAlert == 1 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Passwords should be the same. </
    div>
<?php } else if( $addUserArray ->addUserAlert == 2 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Username is already taken. Try a
    different one. </div>
<?php } else if( $addUserArray ->addUserAlert == 3 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> First name and/or last name
    should be at least 6 characters. </div>
<?php } else if( $addUserArray ->addUserAlert == 4 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Username should be at least 6
    characters. </div>
<?php } else if( $addUserArray ->addUserAlert == 5 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Password/s should be at least 6
    characters. </div>
<?php } else if( $addUserArray ->addUserAlert == 6 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Email is already taken. Enter a
    different one. </div>
<?php } ?>
<form method="POST"
    action="<?=base_url('user/add')?>"
    class="manage-user-form row"
    autocomplete="false"
    >
 <div class="form-group col-xs-12">
  <label for="new_user_hospital_name">Hospital Name</label>
  <select name="new_user_hospital_name"
    id="new_user_hospital_name"
    class="form-control">
     <option value=null selected disabled></option>
     <?php foreach( $hospital_list as $hospital ){?>
     <option value="<?=$hospital ->name?>"><?=$hospital ->name?></option>
     <?php }?>
  </select>
 </div>
 <div class="form-group col-xs-4">
    <label for="new_user_first_name">First Name</label>
    <input name="new_user_first_name"
        type="text"
        id="new_user_first_name"
        class="form-control"
        value="<?=$addUserArray ->first_name?>"
        >
  </div>
  <div class="form-group col-xs-4">
    <label for="new_user_last_name">Last Name</label>
    <input name="new_user_last_name"
        type="text"
        id="new_user_last_name"
        class="form-control"
        value="<?=$addUserArray ->last_name?>"
        >
  </div>
 <div class="form-group col-xs-4">
    <label for="new_user_middle_name">Middle Name</label>
    <input name="new_user_middle_name"
        type="text"
        id="new_user_middle_name"
        class="form-control"
        value="<?=$addUserArray ->middle_name?>"
        >
  </div>
 <div class="form-group col-xs-12">
  <label for="new_user_sex">Sex</label>
  <select name="new_user_sex"
    id="new_user_sex"
    class="form-control">
     <option value=null selected disabled></option>
     <option value="Male">Male</option>
     <option value="Female">Female</option>
  </select>
 </div>
 <div class="form-group col-xs-12">
    <label for="new_user_email">Email Address</label>
    <input name="new_user_email"
```

```
                type="text"
                id="new_user_email"
                class="form-control"
                value="<?=$addUserArray->email?>"
                >
    </div>
   <div class="form-group col-xs-12">
       <label for="new_user_mobile_no">Mobile Number</label>
       <input name="new_user_mobile_no"
                type="text"
                id="new_user_mobile_no"
                class="form-control"
                value="<?=$addUserArray->mobile_no?>"
                >
    </div>
    <div class="form-group col-xs-12">
       <label for="new_user_username">Username</label>
       <input name="new_user_username"
                type="text"
                id="new_user_username"
                class="form-control"
                value="<?=$addUserArray->username?>"
                >
    </div>
    <div class="form-group col-xs-12">
       <label for="new_user_password">Password</label>
       <input name="new_user_password"
                type="password"
                id="new_user_password"
                class="form-control"
                value="<?=$addUserArray->password?>"
                >
    </div>
    <div class="form-group col-xs-12">
       <label for="new_user_checker_password">Retype Password</label>
       <input name="new_user_checker_password"
                type="password"
                id="new_user_checker_password"
                class="form-control"
                value="<?=$addUserArray->password_verify?>"
                >
    </div>
   <input type='hidden' name='new_user_type' value='<?=$addUserArray->type?>' />
    <div class="col-xs-12">
       <button type="submit" class="btn btn-success">Submit</button>
    </div>
</form>
 <a href="<?=base_url("back")?>">
 <button class="btn btn-lg btn-default pull-right">Login</button>
 </a>
 </body>
 </html>
```

login_page.php

```
<div class="alert alert-info" role="alert"> You must first log in to continue.
 <a href="<?=base_url("add")?>" class='pull-right'><span class="glyphicon glyphicon-
    pencil"></span> Signup </a>
</div>
 <?php if( $cookie->isPendingAccount == 1 ) { ?>
    <div class="alert alert-warning fade in">
    <a href="<?=base_url('pending_account_nvm')?>" class="close" data-dismiss="alert"
        aria-label="close">&times;</a>
    Account is pending approval. Wait for confirmation email.
    </div>
 <?php } ?>
<form method="POST"
    action="<?=base_url('login')?>"
    class="login-form"
  style="margin-bottom: 0px"
>
  <div class="form-group">
    <label for="user_username">Username</label>
    <input name="user_username"
        type="text"
        id="user_username"
        class="form-control input-lg"
        >
```

```
      </div>
      <div class="form-group">
        <label for="user_password">Password</label>
        <input name="user_password"
            type="password"
            id="user_passwosrd"
            class="form-control input-lg"
            >
      </div>
      <button type="submit" class="btn btn-lg btn-default">Login</button>
  </form>
  <a style="margin-left: 335px;" data-toggle="modal" data-target="#forgotPasswordModal
      ">Forgot Password?</a>
    <!-- Modal -->
  <?php if( $cookie->forgotPasswordEmail == 1 ) { ?>
    <div class="modal fade in" style="display:block;" id="forgotPasswordModal" role="
        dialog">
  <?php } else { ?>
    <div class="modal fade in" id="forgotPasswordModal" role="dialog">
  <?php } ?>
    <div class="modal-dialog">
      <!-- Modal content-->
      <div class="modal-content">
        <div class="modal-header">
          <button type="button" class="close" data-dismiss="modal"><a href="<?=base_url('
              invalid_email_nvm')?>">&times;</a></button>
          <h4 class="modal-title">Forgot Password</h4>
        </div>
        <div class="modal-body">
        <?php if( $cookie->forgotPasswordEmail == 1 ) { ?>
          <div class="alert alert-danger fade in">
          <a href="#" class="close" data-dismiss="alert" aria-label="close">&times;</a>
          <strong>Error!</strong> Invalid Email Address
          </div>
        <?php } ?>
          <!-- FORM!!! -->
          <form method="POST"
            action="<?=base_url('forgot_password')?>"
            class="manage-user-form row"
            autocomplete="false"
            >
            <div class="form-group col-xs-12">
              <label for="new_post_title">Enter email address</label>
              <input name="forgot_user_email"
                  type="text"
                  id="forgot_user_email"
                  class="form-control"
                  value=""
                  >
            </div>
            <div class="col-xs-12">
              <button type="submit" class="btn btn-success pull-right">Submit</button>
            </div>
          </form>
        </div>
      </div>
    </div>
  </div>
```

home.php

```
<?php $message_count = 0;
    foreach($messages as $message){
      if($message->to_id == $cookie->id && $message->is_read == 0){
        $message_count++;
      }}?>
<ul class="nav nav-tabs admin-homepage-nav">
  <li class="<?php if($cookie->pageType == 15) echo "active"; ?>">
    <a href="<?=base_url("home")?>"><span class="glyphicon glyphicon-home"></span> Home
        </a>
  </li>
  <li class="<?php if($cookie->pageType == 13) echo "active"; ?>">
    <a href="<?=base_url("profile")?>"><span class="glyphicon glyphicon-user"></span>
        My Profile</a>
  </li>
  <?php if($cookie->userType == 0){ //GLOBAL SYS ADMIN FUNCTIONS?>
```

```php
  <li class="<?php if($cookie->pageType == 3) echo "active"; ?>">
   <a href="<?=base_url("admin/manage_local_admin")?>"><span class="glyphicon
      glyphicon-sunglasses"></span> View Local Administrators</a>
  </li>
  <li class="<?php if($cookie->pageType == 12) echo "active"; ?>">
   <a href="<?=base_url("admin/manage_moderator")?>"><span class="glyphicon glyphicon-
      bullhorn"></span> View Moderators</a>
  </li>
  <li class="<?php if($cookie->pageType == 17) echo "active"; ?>">
   <a href="<?=base_url("admin/view_users")?>"><span class="glyphicon glyphicon-eye-
      open"></span> View All Users</a>
  </li>
  <?php }
  if($cookie->userType == 1) { //LOCAL SYS ADMIN FUNCTIONS?>
  <li class="<?php if($cookie->pageType == 2) echo "active"; ?>">
     <a href="<?=base_url("admin/manage_health_pro")?>"><span class="glyphicon
     glyphicon-eye-open"></span> View Local Accounts</a>
   </li>
  <!--<li class="<?php if($cookie->pageType == 18) echo "active"; ?>">
     <a href="<?=base_url("admin/manage_schedule")?>"><span class="glyphicon glyphicon
     -calendar"></span> Manage Schedule</a>
   </li>-->
  <?php }
  if($cookie->userType == 2){ //HEALTH PRO FUNCTIONS?>
  <li class="<?php if($cookie->pageType == 5) echo "active"; ?>">
   <a href="<?=base_url("health_pro/view_patients")?>"><span class="glyphicon
      glyphicon-eye-open"></span> View Patients</a>
  </li>
   <li class="<?php if($cookie->pageType == 6) echo "active"; ?>">
   <a href="<?=base_url("health_pro/add_patient")?>"><span class="glyphicon glyphicon-
      plus"></span>Add Patient</a>
  </li>
  <?php }
  if($cookie->userType == 3){//PATIENT FUNCTIONS?>
  <li class="<?php if($cookie->pageType == 10) echo "active"; ?>">
   <a href="<?=base_url("view_med_con")?>"><span class="glyphicon glyphicon-align-
      justify"></span> Medical Condition</a>
  </li>
  <li class="<?php if($cookie->pageType == 11) echo "active"; ?>">
   <a href="<?=base_url("charts")?>"><span class="glyphicon glyphicon-stats"></span>
      View Charts</a>
  </li>
  <?php }
  if($cookie->userType == 2 || $cookie->userType == 3){ //HEALTH PRO + PATIENT
      FUNCTIONS?>
  <li class="<?php if($cookie->pageType == 8) echo "active"; ?>">
   <a href="<?=base_url("research_hub")?>"><span class="glyphicon glyphicon-education
      "></span> Research Hub</a>
  </li>
  <li class="<?php if($cookie->pageType == 7) echo "active"; ?>">
   <a href="<?=base_url("forum")?>"><span class="glyphicon glyphicon-bullhorn"></span>
        Forum</a>
  </li>
  <?php if($is_mod == 1) { //MODERATOR FUNCTION?>
  <li class="<?php if($cookie->pageType == 16) echo "active"; ?>">
     <a href="<?=base_url("manage_forum")?>"><span class="glyphicon glyphicon-pencil
     "></span> Moderate</a>
   </li>
  <?php } ?>
  <li class="<?php if($cookie->pageType == 9) echo "active"; ?>">
   <a href="<?=base_url("appointments")?>"><span class="glyphicon glyphicon-calendar
      "></span> Appointments</a>
  </li>
  <li class="<?php if($cookie->pageType == 4) echo "active"; ?>">
   <a href="<?=base_url("messages")?>"><span class="glyphicon glyphicon-envelope"></
      span> Messages
   <?php if($message_count != 0){ ?>
   <p class="text-danger" style="display:inline; font-size:13px;">(<?=$message_count
      ?>)</p>
   <?php } ?> </a>
  </li>
  <?php } //UNIVERSAL FUNCTIONS?>
</ul>
```

```php
<div class="admin-homepage-contents">
<?php
  switch($cookie->pageType)
  {
    case 2:
      include_once("admin/manage_health_pro.php");
      break;
     case 3:
      include_once("admin/manage_local_admin.php");
      break;
   case 4:
    include_once("messages.php");
      break;
   case 5:
    include_once("health professional/view_patients.php");
    break;
   case 6:
    include_once("health professional/add_patient.php");
    break;
   case 7:
    include_once("forum.php");
    break;
   case 8:
    include_once("research_hub.php");
    break;
   case 9:
    include_once("view_appointments.php");
    break;
   case 10:
    include_once("patient/view_med_con.php");
    break;
   case 11:
    include_once("patient/view_charts.php");
    break;
   case 12:
    include_once("admin/manage_moderator.php");
    break;
   case 13:
    include_once("user_profile.php");
    break;
   case 15:
    include_once("homepage.php");
    break;
   case 16:
    include_once("health professional/manage_forum.php");
    break;
   case 17:
    include_once("admin/view_users.php");
    break;
   case 18:
    include_once("admin/manage_schedule.php");
    break;
 }
?>
</div>
```

home.php

```php
<?php $message_count = 0;
    foreach($messages as $message){
     if($message->to_id == $cookie->id && $message->is_read == 0){
     $message_count++;
     }}?>
<ul class="nav nav-tabs admin-homepage-nav">
 <li class="<?php if($cookie->pageType == 15) echo "active"; ?>">
  <a href="<?=base_url("home")?>"><span class="glyphicon glyphicon-home"></span> Home
    </a>
 </li>
 <li class="<?php if($cookie->pageType == 13) echo "active"; ?>">
  <a href="<?=base_url("profile")?>"><span class="glyphicon glyphicon-user"></span>
    My Profile</a>
 </li>
 <?php if($cookie->userType == 0){ //GLOBAL SYS ADMIN FUNCTIONS?>
  <li class="<?php if($cookie->pageType == 3) echo "active"; ?>">
  <a href="<?=base_url("admin/manage_local_admin")?>"><span class="glyphicon
    glyphicon-sunglasses"></span> View Local Administrators</a>
 </li>
```

```php
<li class="<?php if($cookie->pageType == 12) echo "active"; ?>">
 <a href="<?=base_url("admin/manage_moderator")?>"><span class="glyphicon glyphicon-
    bullhorn"></span> View Moderators</a>
</li>
<li class="<?php if($cookie->pageType == 17) echo "active"; ?>">
 <a href="<?=base_url("admin/view_users")?>"><span class="glyphicon glyphicon-eye-
    open"></span> View All Users</a>
</li>
<?php }
if($cookie->userType == 1) { //LOCAL SYS ADMIN FUNCTIONS?>
<li class="<?php if($cookie->pageType == 2) echo "active"; ?>">
   <a href="<?=base_url("admin/manage_health_pro")?>"><span class="glyphicon
   glyphicon-eye-open"></span> View Local Accounts</a>
 </li>
<!--<li class="<?php if($cookie->pageType == 18) echo "active"; ?>">
   <a href="<?=base_url("admin/manage_schedule")?>"><span class="glyphicon glyphicon
   -calendar"></span> Manage Schedule</a>
 </li>-->
<?php }
if($cookie->userType == 2){ //HEALTH PRO FUNCTIONS?>
<li class="<?php if($cookie->pageType == 5) echo "active"; ?>">
 <a href="<?=base_url("health_pro/view_patients")?>"><span class="glyphicon
    glyphicon-eye-open"></span> View Patients</a>
</li>
 <li class="<?php if($cookie->pageType == 6) echo "active"; ?>">
 <a href="<?=base_url("health_pro/add_patient")?>"><span class="glyphicon glyphicon-
    plus"></span>Add Patient</a>
</li>
<?php }
if($cookie->userType == 3){//PATIENT FUNCTIONS?>
<li class="<?php if($cookie->pageType == 10) echo "active"; ?>">
 <a href="<?=base_url("view_med_con")?>"><span class="glyphicon glyphicon-align-
    justify"></span> Medical Condition</a>
</li>
<li class="<?php if($cookie->pageType == 11) echo "active"; ?>">
 <a href="<?=base_url("charts")?>"><span class="glyphicon glyphicon-stats"></span>
    View Charts</a>
</li>
<?php }
if($cookie->userType == 2 || $cookie->userType == 3){ //HEALTH PRO + PATIENT
    FUNCTIONS?>
<li class="<?php if($cookie->pageType == 8) echo "active"; ?>">
 <a href="<?=base_url("research_hub")?>"><span class="glyphicon glyphicon-education
    "></span> Research Hub</a>
</li>
<li class="<?php if($cookie->pageType == 7) echo "active"; ?>">
 <a href="<?=base_url("forum")?>"><span class="glyphicon glyphicon-bullhorn"></span>
    Forum</a>
</li>
<?php if($is_mod == 1) { //MODERATOR FUNCTION?>
<li class="<?php if($cookie->pageType == 16) echo "active"; ?>">
   <a href="<?=base_url("manage_forum")?>"><span class="glyphicon glyphicon-pencil
   "></span> Moderate</a>
 </li>
<?php } ?>
<li class="<?php if($cookie->pageType == 9) echo "active"; ?>">
 <a href="<?=base_url("appointments")?>"><span class="glyphicon glyphicon-calendar
    "></span> Appointments</a>
</li>
<li class="<?php if($cookie->pageType == 4) echo "active"; ?>">
 <a href="<?=base_url("messages")?>"><span class="glyphicon glyphicon-envelope"></
    span> Messages
 <?php if($message_count != 0){ ?>
 <p class="text-danger" style="display:inline; font-size:13px;">(<?=$message_count
    ?>)</p>
 <?php } ?> </a>
</li>
<?php } //UNIVERSAL FUNCTIONS?>
</ul>
<div class="admin-homepage-contents">
<?php
  switch($cookie->pageType)
  {
```

```
        case 2:
          include_once("admin/manage_health_pro.php");
          break;
        case 3:
          include_once("admin/manage_local_admin.php");
          break;
    case 4:
     include_once("messages.php");
          break;
    case 5:
     include_once("health professional/view_patients.php");
     break;
    case 6:
     include_once("health professional/add_patient.php");
     break;
    case 7:
     include_once("forum.php");
     break;
    case 8:
     include_once("research_hub.php");
     break;
    case 9:
     include_once("view_appointments.php");
     break;
    case 10:
     include_once("patient/view_med_con.php");
     break;
    case 11:
     include_once("patient/view_charts.php");
     break;
    case 12:
     include_once("admin/manage_moderator.php");
     break;
    case 13:
     include_once("user_profile.php");
     break;
    case 15:
     include_once("homepage.php");
     break;
    case 16:
     include_once("health professional/manage_forum.php");
     break;
    case 17:
     include_once("admin/view_users.php");
     break;
    case 18:
     include_once("admin/manage_schedule.php");
     break;
 }
?>
</div>
```

homepage.php

```
<html>
<body>
<h1 class="text-success"><strong>Chronic Kidney Disease</strong></h1>
Chronic kidney disease or CKD is defined as abnormalities of kidney structure or
    function that has been present for three months or longer. Criteria for marking a
     condition as CKD are (a) the presence of one or more of the markers of kidney
    damage such as albuminuria which is the presence of albumin in the urine, urine
    sediment abnormalities, electrolyte and other abnormalities due to tubular
    disorders, abnormalities detected by histology, structural abnormalities detected
     by imaging, history of kidney transplantation and (b) decrease in the glomerular
    filtration rate (GFR).
</body>
</html>
```

user_profile.php

```
<div class="container">
 <!--CHANGE PASSWORD-->
 <a class="pull-right" style="margin-right: 60px" data-toggle="modal" data-target="#
    newPasswordModal"><span class="glyphicon glyphicon-lock"></span> Change Password
    </a><br>
 <?php if( $cookie->changePass == 1 || $cookie->changePass == 2 ) { ?>
```

```
 <div class="modal fade in" style="display:block;" id="newPasswordModal" role="
     dialog">
<?php } else { ?>
<div class="modal fade in" id="newPasswordModal" role="dialog">
 <div class="modal-dialog">
<?php } ?>
   <!-- Modal content-->
   <div class="modal-content">
    <div class="modal-header">
     <button type="button" class="close" data-dismiss="modal"><a href="<?=base_url('
         change_pass_nvm')?>">&times;</a></button>
     <h4 class="modal-title">Change Password</h4>
    </div>
    <div class="modal-body">
    <?php if( $cookie->changePass == 1 ) { ?>
     <div class="alert alert-danger fade in">
     <a href="#" class="close" data-dismiss="alert" aria-label="close">&times;</a>
     <strong>Error!</strong> Invalid old password. Try again.
     </div>
    <?php } else if( $cookie->changePass == 2 ) { ?>
     <div class="alert alert-danger fade in">
     <a href="#" class="close" data-dismiss="alert" aria-label="close">&times;</a>
     <strong>Error!</strong> Passwords do not match. Try again.
    </div> <?php } ?>
     <!-- FORM!!! -->
     <form method="POST"
       action="<?=base_url('change_password')?>"
       class="manage-user-form row"
       autocomplete="false"
       >
     <div class="form-group">
      <label for="old_user_password">Old Password</label>
      <input name="old_user_password"
         type="password"
         id="old_user_passwosrd"
         class="form-control input-lg"
         >
     </div>
     <div class="form-group">
      <label for="new_user_password">New Password</label>
      <input name="new_user_password"
         type="password"
         id="new_user_passwosrd"
         class="form-control input-lg"
         >
     </div>
     <div class="form-group">
      <label for="new_user_password_verify">Retype New Password</label>
      <input name="new_user_password_verify"
         type="password"
         id="new_user_password_verify"
         class="form-control input-lg"
         >
     </div>
     <div class="col-xs-12">
      <button type="submit" class="btn btn-success pull-right">Submit</button>
     </div>
    </form>
   </div>
  </div>
 </div>
</div>
<!--PROFILE PIC-->
<a class="pull-right" style="margin-right: 60px" data-toggle="modal" data-target="#
    DPModal"><span class="glyphicon glyphicon-camera"></span> Upload Profile Picture
    </a>
 <!-- Modal -->
 <div class="modal fade" id="DPModal" 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">New Profile Photo (JPG ONLY)</h4>
    </div>
    <div class="modal-body">
     <!-- FORM!!! -->
     <form method="POST"
       action="<?=base_url('upload_dp')?>"
```

```
                          class="manage-user-form row"
                          enctype="multipart/form-data"
                          autocomplete="false"
                          >
                       <table class="table table-bordered">
                        <tbody>
                        <tr>
                        <td>
                        <label for="file_to_upload"
                            class="no-margin pull-right">
                         Upload Photo
                        </label>
                        </td>
                        <td>
                        <input type="file"
                            name="file_to_upload"
                            id="file_to_upload"
                            class="form-control"
                            ng-required="true"
                            >
                        </td>
                        </tr>
                        </tbody>
                       </table>
                       <div class="col-xs-12">
                        <button type="submit" class="btn btn-success pull-right">Submit</button>
                       </div>
                      </form>
                     </div>
                    </div>
                   </div>
                  </div>
                 <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images/
                     users/' . $cookie->img . ".jpg"; ?>
                 <img src="<?=base_url($filename)?>" width="200" height="200">
                 </div>
                 <br><br>
                 <div class="col-xs-10">
                 <?php foreach($user_list as $user){
                  if($user->id == $cookie->id){ ?>
                   <div class="col-xs-2">
                   <strong>Name<br>
                     Sex<br>
                     Email<br>
                     Mobile Number
                     <?php if($cookie->userType != 0){ ?>
                     Institute <?php } ?>
                   </strong>
                   </div>
                   <div class="col-xs-6">
                    <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
                    <?=$user->sex?><br>
                    <?=$user->email?><br>
                    <?=$user->mobile_no?><br>
                    <?php if($cookie->userType != 0){ ?>
                     <?php foreach( $hospital_list as $hospital){
                     if($hospital->id == $cookie->hospitalID){
                     echo $hospital->name;
                    }}}?>
                   </div>
                  <?php }
                } ?>
                  </div>
                </div>
```

research_hub.php

```
<?php
if(get_cookie("searchTitleCookie")) {
 $searchTitleArray = json_decode(base64_decode(get_cookie("searchTitleCookie")));
}
foreach($category_list as $category){
    foreach($moderator_list as $moderator){
     if($moderator->health_pro_id == $cookie->id){
      if($category->id == $moderator->category_id){
       $currCategory = $category->id;
```

```php
        }
      }
    }
  }
if(get_cookie("newFileCookie")) {
  $newFileArray = json_decode(base64_decode(get_cookie("newFileCookie")));
}
  if( $newFileArray->is_notified == 1) { ?>
    <div class="alert alert-warning fade in">
    <a href="<?=base_url('post_file_notified')?>" class="close" data-dismiss="alert"
        aria-label="close">&times;</a>
    Your post is waiting for approval.
    </div>
<?php } ?>
<form method="POST"
 action="<?=base_url('search_title')?>"
 class="manage-user-form"
 style="margin-right:50px; margin-top:0px;"
 autocomplete="false"
>
 <div class="form-group col-xs-10">
 <label for="search_title">Search</label>
 <input name="search_title"
    type="text"
    id="search_title"
    class="form-control"
    value="<?=$searchTitleArray->title?>"
    >
 </div>
 <div class="col-xs-2">
  <button type="submit" class="btn" style="margin-top:26px; margin-left:-20px;height:
      40px;"><span class="glyphicon glyphicon-search text-success"></span></button>
 </div>
</form>
<div class="container">
 <?php
 if($cookie->userType == 2){ ?>
    <button type="button" class="btn btn-success btn-sm pull-right" style="margin-
        right: 60px; margin-top:-60px;" data-toggle="modal" data-target="#
        researchModal">Upload File</button>
    <!-- Modal -->
  <div class="modal fade" id="researchModal" 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">New File</h4>
      </div>
      <div class="modal-body">
       <!-- FORM!!! -->
       <?php
       if(get_cookie("newFileCookie")) {
        $newFileArray = json_decode(base64_decode(get_cookie("newFileCookie")));
        $newFileArray->uploader_id = $cookie->id;
       }
       ?>
       <form method="POST"
         action="<?=base_url('upload_article')?>"
         class="manage-user-form row"
         enctype="multipart/form-data"
         autocomplete="false"
         >
       <div class="form-group col-xs-12">
        <label for="new_upload_category_id">Category</label>
        <select name="new_upload_category_id"
          id="new_upload_category_id"
          class="form-control">
          <option value=null selected disabled></option>
         <?php foreach( $category_list as $category ){?>
          <option value="<?=$category->id?>"><?=$category->name?></option>
         <?php }?>
        </select>
       </div>
       <div class="form-group col-xs-12">
        <label for="new_upload_title">Title</label>
        <input name="new_upload_title"
           type="text"
```

```
                    id="new_upload_title"
                    class="form-control"
                    value="<?=$newFileArray->title?>"
                    >
            </div>
            <div class="form-group col-xs-12">
             <label for="new_upload_description">Brief Description</label>
             <textarea name="new_upload_description"
                    rows="5"
                    id="new_upload_description"
                    class="form-control"
                    value="<?=$newFileArray->description?>"
                    ></textarea>
            </div>
            <table class="table table-bordered">
             <tbody>
              <tr>
               <td>
                <label for="file_to_upload"
                    class="no-margin pull-right"
                    >
                 Upload Article
                </label>
               </td>
               <td>
                <input type="file"
                    name="file_to_upload"
                    id="file_to_upload"
                    class="form-control"
                    ng-required="true"
                    >
               </td>
              </tr>
             </tbody>
            </table>
            <input type='hidden' name='new_upload_user_id' value="<?=$newFileArray->
                uploader_id?>" />
            <div class="col-xs-12">
             <button type="submit" class="btn btn-success pull-right">Submit</button>
            </div>
           </form>
         </div>
        </div>
      </div>
     </div>
 <br>
 <?php } ?>
<div class="panel-group col-xs-8">
 <?php foreach($category_list as $category){
  if($category->id == $cookie->forumCategory){ ?>
   <h1 class="text-success" style="margin-top:-20px"><strong><?=$category->name?></
       strong></h1>
  <?php }
 } if($cookie->forumCategory == 0){ ?>
   <h1 class="text-success" style="margin-top:-20px"><strong>All</strong></h1>
 <?php } ?>
 <?php
  $uploader_username = "deactivated";
  for($i = count($files)-1; $i>=0; $i--){
   if($files[$i]->is_approved == 1){
   if($searchTitleArray->title == ""){
   if($cookie->forumCategory == 0){
  //foreach($files[$i]s as $files[$i]){
    foreach($user_list as $user){
     if($user->id == $files[$i]->uploader_id){
      $uploader_username = $user->username;
     }
    }
 ?>
   <div class="panel panel-default">
    <div class="panel-heading">
    <a target="_blank" href="<?=base_url("open_file/{$files[$i]->id}")?>">
    <h1 class="panel-title" style="display:inline"><?=$files[$i]->title?> </h1>
    </a><br>
    posted on <p style="display:inline;" class="text-success"><?php echo date('F d, Y
        | g:i:s A', strtotime($files[$i]->date_created)); ?></p> by <p style="
        display:inline;" class="text-danger"><?=$uploader_username?></p>
```

```php
    <span class="pull-right">
    <?php foreach($category_list as $category){
      if($category->id == $files[$i]->category_id){ ?>
       <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
     <?php }
    }?>
    <?php if(($is_mod == 1 && $files[$i]->category_id == $currCategory) || $cookie->
        id == 53){ ?>
     <a href="<?=base_url("mod/process_delete_file/{$files[$i]->id}")?>" class="text-
        danger"><span class="glyphicon glyphicon-trash"></span></a>
    </span>
    <?php } ?>
    <span class="pull-right"><h5 class="inline text-info" style="display:inline
        ">[.<?=$files[$i]->type?>]</h5>
   </div>
  </div>
<?php }
  else if($files[$i]->category_id == $cookie->forumCategory){
    foreach($user_list as $user){
     if($user->id == $files[$i]->uploader_id){
      $uploader_username = $user->username;
     }
    } ?>
     <div class="panel panel-default">
      <div class="panel-heading">
      <a target="_blank" href="<?=base_url("open_file/{$files[$i]->id}")?>">
      <h1 class="panel-title" style="display:inline"><?=$files[$i]->title?> </h1>
      </a><br>
      posted on <p style="display:inline;" class="text-success"><?php echo date('F d
        , Y | g:i:s A', strtotime($files[$i]->date_created)); ?></p> by <p style="
        display:inline;" class="text-danger"><?=$uploader_username?></p>
      <span class="pull-right">
      <?php foreach($category_list as $category){
        if($category->id == $files[$i]->category_id){ ?>
         <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
       <?php }
      }?>
      <?php if(($is_mod == 1 && $files[$i]->category_id == $currCategory) || $cookie
          ->id == 53){ ?>
       <a href="<?=base_url("mod/process_delete_file/{$files[$i]->id}")?>" class="
          text-danger"><span class="glyphicon glyphicon-trash"></span></a>
      </span>
      <?php } ?>
      <span class="pull-right"><h5 class="inline text-info" style="display:inline
          ">[.<?=$files[$i]->type?>]</h5>
     </div>
    </div>
  <?php
} }
  else{
   if((strpos(strtolower($files[$i]->title), strtolower($searchTitleArray->title)))
      !== false){
    foreach($user_list as $user){
     if($user->id == $files[$i]->uploader_id){
      $uploader_username = $user->username;
     }
    } ?>
     <div class="panel panel-default">
      <div class="panel-heading">
      <a target="_blank" href="<?=base_url("open_file/{$files[$i]->id}")?>">
      <h1 class="panel-title" style="display:inline"><?=$files[$i]->title?> </h1>
      </a><br>
      posted on <p style="display:inline;" class="text-success"><?php echo date('F d
        , Y | g:i:s A', strtotime($files[$i]->date_created)); ?></p> by <p style="
        display:inline;" class="text-danger"><?=$uploader_username?></p>
      <span class="pull-right">
      <?php foreach($category_list as $category){
        if($category->id == $files[$i]->category_id){ ?>
         <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
       <?php }
      }?>
      <?php if(($is_mod == 1 && $files[$i]->category_id == $currCategory) || $cookie
          ->id == 53){ ?>
       <a href="<?=base_url("mod/process_delete_file/{$files[$i]->id}")?>" class="
```

```
                    text-danger"><span class="glyphicon glyphicon-trash"></span></a>
                </span>
                <?php } ?>
                <span class="pull-right"><h5 class="inline text-info" style="display:inline
                    ">[.<?=$files[$i]->type?>]</h5>
                </div>
            </div>
        <?php }
        }
        }
    } ?>
    </div>
    <div class="col-xs-3">
    <br>
    <div class="panel panel-success">
     <div class="panel-heading text-center"><span class="glyphicon glyphicon-list-alt
         "></span> Categories</div>
     <div class="panel-body">
     <a href="<?=base_url("set_category/0")?>" class="text-danger">All</a><br>
     <?php foreach($category_list as $category){
      if($category->is_approved == 1){?>
       <a href="<?=base_url("set_category/{$category->id}")?>" class="text-danger"><?=
           $category->name?></a><br>
     <?php }} ?>
     </div>
    </div>
    </div>
</div>
```

forum.php

```
<?php
if(get_cookie("searchTitleCookie")) {
 $searchTitleArray = json_decode(base64_decode(get_cookie("searchTitleCookie")));
}
foreach($category_list as $category){
 foreach($moderator_list as $moderator){
  if($moderator->health_pro_id == $cookie->id){
   if($category->id == $moderator->category_id){
    $currCategory = $category->id;
    }
  }
 }
}
if(get_cookie("newPostCookie")) {
 $newPostArray = json_decode(base64_decode(get_cookie("newPostCookie")));
}
 if( $newPostArray->is_notified == 1) { ?>
  <div class="alert alert-warning fade in">
  <a href="<?=base_url('post_file_notified')?>" class="close" data-dismiss="alert"
      aria-label="close">&times;</a>
  Your post is waiting for approval.
  </div>
<?php } ?>
<form method="POST"
 action="<?=base_url('search_title')?>"
 class="manage-user-form"
 style="margin-right:50px; margin-top:0px;"
 autocomplete="false"
 >
 <div class="form-group col-xs-10">
 <label for="search_title">Search</label>
 <input name="search_title"
     type="text"
     id="search_title"
     class="form-control"
     value="<?=$searchTitleArray->title?>"
     >
 </div>
 <div class="col-xs-2">
  <button type="submit" class="btn" style="margin-top:26px; margin-left:-20px;height:
      40px;"><span class="glyphicon glyphicon-search text-success"></span></button>
 </div>
</form>
<div class="container">
```

```
  <button type="button" class="btn btn-success btn-sm pull-right" style="margin-right
      : 60px; margin-top:-60px;" data-toggle="modal" data-target="#myModal">New Post
      </button>
  <!-- Modal -->
  <div class="modal fade" id="myModal" 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">New Post</h4>
     </div>
     <div class="modal-body">
      <!-- FORM!!! -->
      <?php
      if(get_cookie("newPostCookie")) {
       $newPostArray = json_decode(base64_decode(get_cookie("newPostCookie")));
      }
      ?>
      <form method="POST"
       action="<?=base_url('new_forum_post')?>"
       class="manage-user-form row"
       autocomplete="false"
       >
      <div class="form-group col-xs-6">
       <label for="new_category_id">Category</label>
       <select name="new_category_id"
         id="new_category_id"
         class="form-control">
         <option value=null selected disabled></option>
         <?php foreach( $category_list as $category ){?>
         <option value="<?=$category->id?>"><?=$category->name?></option>
         <?php }?>
       </select>
      </div>
      <div class="form-group col-xs-6">
       <label for="new_category">Other</label>
       <input name="new_category"
         type="text"
         id="new_category"
         class="form-control"
         value=""
         >
      </div>
      <div class="form-group col-xs-12">
       <label for="new_post_title">Title</label>
       <input name="new_post_title"
         type="text"
         id="new_post_title"
         class="form-control"
         value="<?=$newPostArray->title?>"
         >
      </div>
      <div class="form-group col-xs-12">
       <label for="new_post_content">Content</label>
       <textarea name="new_post_content"
         rows="5"
         id="new_post_content"
         class="form-control"
         value="<?=$newPostArray->content?>"
         ></textarea>
      </div>
      <input type='hidden' name='new_post_author_id' value="<?=$cookie->id?>" />
      <input type='hidden' name='is_mod' value="<?=$is_mod?>" />
      <div class="col-xs-12">
       <button type="submit" class="btn btn-success pull-right">Submit</button>
      </div>
     </form>
    </div>
   </div>
  </div>
 </div>
<br>
 <div class="panel-group col-xs-8" id="accordion">
 <?php foreach($category_list as $category){
  if($category->id == $cookie->forumCategory){ ?>
   <h1 class="text-success" style="margin-top:-20px"><strong><?=$category->name?></
      strong></h1>
```

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```php
 <?php }
} if($cookie->forumCategory == 0){ ?>
  <h1 class="text-success" style="margin-top:-20px"><strong>All</strong></h1>
<?php } ?>
 <?php $username = "deactivated";
  for($i = count($forum)-1; $i>=0; $i--){
   if($forum[$i]->is_approved == 1){
   if($searchTitleArray->title == ""){
  //foreach($forum as $forum[$i]){
    if($cookie->forumCategory == 0){
    foreach($user_list as $user){
     if($user->id == $forum[$i]->author_id){
      $author_username = $user->username;
     }
    }
   }
   ?>
    <div class="panel panel-default">
     <div class="panel-heading">
      <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id
          ?>">
       <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
      </a>
      submitted on <p style="display:inline;" class="text-success"><?php echo date('
          F d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p>
      by <p style="display:inline;" class="text-danger"><?=$author_username?></p>
      <span class="pull-right">
      <?php foreach($category_list as $category){
        if($category->id == $forum[$i]->category_id){ ?>
         <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
       <?php }
      }?>
      <?php if(($is_mod == 1 && $forum[$i]->category_id == $currCategory) || $cookie
          ->id == 53){ ?>
       <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class="
          text-danger"><span class="glyphicon glyphicon-trash"></span></a>
      </span>
      <?php } ?>
     </div>
     <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
      <div class="panel-body no-corner">
       <?=$forum[$i]->content?>
       <hr>
       <h4>Type a reply</h4>
       <form method="POST"
        action="<?=base_url('submit_reply')?>"
        autocomplete="false"
       >
        <div class="form-group col-xs-11">
         <textarea
         rows=4;
         class="form-control"
         name="new_post_content"></textarea>
        </div>
        <input type='hidden' name='new_post_id' value='<?=$forum[$i]->id?>' />
        <input type='hidden' name='new_post_user_id' value='<?=$cookie->id?>' />
        <div class="form-group col-xs-1">
         <button type="submit" class="btn btn-success" style="margin-top:30px;">
             Reply</button>
        </div>
       </form>
       <br><br><br><br><br>
       <h4><span class="glyphicon glyphicon-comment"></span> Replies</h4>
       <?php
       $username = "deactivated";
       foreach($replies as $reply){
        if($reply->post_id == $forum[$i]->id){
         foreach($user_list as $user){
          if($user->id == $reply->user_id){
           $username = $user->username;
          }
         } ?>
         <p style="display:inline;" class="text-success"><?=$username?></p> says:
         <?php if(($is_mod == 1 && $forum[$i]->category_id == $currCategory) ||
             $cookie->id == 53){ ?>
          <a href="<?=base_url("mod/process_delete_reply/ {$reply->id}")?>" class="
```

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```
                text-danger"><span class="glyphicon glyphicon-trash pull-right"></span
                    ></a>
             </span>
             <?php } ?>
             <blockquote>
              <?=$reply->content?>
             </blockquote>
           <?php }} ?>
          </div>
         </div>
        </div>
    <?php }
     else if($forum[$i]->category_id == $cookie->forumCategory){
        foreach($user_list as $user){
         if($user->id == $forum[$i]->author_id){
          $author_username = $user->username;
         }
        }
      ?>
       <div class="panel panel-default">
        <div class="panel-heading">
         <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id
             ?>">
          <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
         </a>
         submitted on <p style="display:inline;" class="text-success"><?php echo date('
             F d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p>
         by <p style="display:inline;" class="text-danger"><?=$author_username?></p>
         <span class="pull-right">
         <?php foreach($category_list as $category){
           if($category->id == $forum[$i]->category_id){ ?>
            <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
          <?php }
         }?>
         <?php if(($is_mod == 1 && $forum[$i]->category_id == $currCategory) || $cookie
             ->id == 53){ ?>
          <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class="
              text-danger"><span class="glyphicon glyphicon-trash"></span></a>
         </span>
         <?php } ?>
        </div>
        <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
         <div class="panel-body no-corner">
          <?=$forum[$i]->content?>
          <hr>
          <h4>Type a reply</h4>
          <form method="POST"
           action="<?=base_url('submit_reply')?>"
           autocomplete="false"
          >
           <div class="form-group col-xs-11">
            <textarea
            rows=4;
            class="form-control"
            name="new_post_content"></textarea>
           </div>
           <input type='hidden' name='new_post_id' value='<?=$forum[$i]->id?>' />
           <input type='hidden' name='new_post_user_id' value='<?=$cookie->id?>' />
           <div class="form-group col-xs-1">
            <button type="submit" class="btn btn-success" style="margin-top:30px;">
                Reply</button>
           </div>
          </form>
          <br><br><br><br><br>
          <h4><span class="glyphicon glyphicon-comment"></span> Replies</h4>
          <?php foreach($replies as $reply){
           if($reply->post_id == $forum[$i]->id){
            foreach($user_list as $user){
             if($user->id == $reply->user_id){
              $username = $user->username;
             }
            } ?>
            <p style="display:inline;" class="text-success"><?=$username?></p> says:
            <?php if($is_mod == 1 && $forum[$i]->category_id == $currCategory){ ?>
             <a href="<?=base_url("mod/process_delete_reply/ {$reply->id}")?>" class="
```

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```php
            text-danger"><span class="glyphicon glyphicon-trash pull-right"></span
                ></a>
          </span>
          <?php } ?>
          <blockquote>
           <?=$reply->content?>
          </blockquote>
        <?php }} ?>
       </div>
      </div>
     </div>
<?php }
   }
   else{
   if((strpos(strtolower($forum[$i]->title), strtolower($searchTitleArray->title)))
       !== false){
    foreach($user_list as $user){
     if($user->id == $forum[$i]->author_id){
      $author_username = $user->username;
     }
    }
   ?>
    <div class="panel panel-default">
     <div class="panel-heading">
      <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id
          ?>">
       <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
      </a>
      submitted on <p style="display:inline;" class="text-success"><?php echo date
          ('F d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p>
      by <p style="display:inline;" class="text-danger"><?=$author_username?></p>
      <span class="pull-right">
      <?php foreach($category_list as $category){
        if($category->id == $forum[$i]->category_id){ ?>
         <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
        <?php }
      }?>
      <?php if(($is_mod == 1 && $forum[$i]->category_id == $currCategory) ||
          $cookie->id == 53){ ?>
       <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class="
           text-danger"><span class="glyphicon glyphicon-trash"></span></a>
      </span>
      <?php } ?>
     </div>
     <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
      <div class="panel-body no-corner">
       <?=$forum[$i]->content?>
       <hr>
       <h4>Type a reply</h4>
       <form method="POST"
        action="<?=base_url('submit_reply')?>"
        autocomplete="false"
       >
        <div class="form-group col-xs-11">
         <textarea
         rows=4;
         class="form-control"
         name="new_post_content"></textarea>
        </div>
        <input type='hidden' name='new_post_id' value='<?=$forum[$i]->id?>' />
        <input type='hidden' name='new_post_user_id' value='<?=$cookie->id?>' />
        <div class="form-group col-xs-1">
         <button type="submit" class="btn btn-success" style="margin-top:30px;">
             Reply</button>
        </div>
       </form>
       <br><br><br><br><br>
       <h4><span class="glyphicon glyphicon-comment"></span> Replies</h4>
       <?php foreach($replies as $reply){
       if($reply->post_id == $forum[$i]->id){
         foreach($user_list as $user){
          if($user->id == $reply->user_id){
           $username = $user->username;
          }
         } ?>
```

```
                <p style="display:inline;" class="text-success"><?=$username?></p> says:
                <?php if($is_mod == 1 && $forum[$i]->category_id == $currCategory){ ?>
                 <a href="<?=base_url("mod/process_delete_reply/ {$reply->id}")?>" class="
                    text-danger"><span class="glyphicon glyphicon-trash pull-right"></span
                    ></a>
                </span>
                <?php } ?>
                <blockquote>
                 <?=$reply->content?>
                </blockquote>
              <?php }} ?>
             </div>
            </div>
           </div>
         <?php }}}
      } ?>
     </div>
     <div class="col-xs-3">
     <br>
     <div class="panel panel-success">
      <div class="panel-heading text-center"><span class="glyphicon glyphicon-list-alt
          "></span> Categories</div>
      <div class="panel-body">
      <a href="<?=base_url("set_category/0")?>" class="text-danger">All</a><br>
      <?php foreach($category_list as $category){
       if($category->is_approved == 1){ ?>
       <a href="<?=base_url("set_category/{$category->id}")?>" class="text-danger"><?=
           $category->name?></a><br>
      <?php }} ?>
      </div>
     </div>
    </div>
   </div>
</div>
```

view_appointments.php

```
<html>
<body>
<?php if($cookie->userType == 2){?>
<strong>Approved<strong>
<table class="table table-bordered table-striped no-margin-bottom">
 <thead>
  <tr>
   <th width="15%">Date</th>
   <th width="10%">Time</th>
   <th width="25%">Patient Name</th>
   <th width="30%">Purpose</th>
  </tr>
 </thead>
 <tbody>
 <?php
  for($i = count($appointments)-1; $i>=0; $i--){
  //foreach( $appointments[$i]s as $appointments[$i] ){
   if($appointments[$i]->health_pro_id == $cookie->id){
    foreach( $patient_list as $patient ){
    if($appointments[$i]->is_approved == 1 && $patient->id == $appointments[$i]->
        patient_id){?>
     <tr>
      <td>
       <?php echo date('F d, Y', strtotime($appointments[$i]->date)); ?>
      </td>
      <td>
       <?php echo date('g:i:s A', strtotime($appointments[$i]->time)); ?>
      </td>
      <td>
       <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name?>
      </td>
      <td>
       <?=$appointments[$i]->purpose?>
      </td>
     </tr>
    <?php }}}}?>
 </tbody>
</table>
<strong>Requests<strong>
```

```php
<table class="table table-bordered table-striped no-margin-bottom">
 <thead>
  <tr>
   <th width="20%" class="text-center" colspan="2">Options</th>
   <th width="10%">Date</th>
   <th width="10%">Time</th>
   <th width="25%">Patient Name</th>
   <th width="30%">Purpose</th>
  </tr>
 </thead>
 <tbody>
 <?php
 for($i = count($appointments)-1; $i>=0; $i--){
 //foreach( $appointments[$i]s as $appointments[$i] ){
  if($appointments[$i]->health_pro_id == $cookie->id){
   foreach( $patient_list as $patient ){
   if($appointments[$i]->is_approved == 0 && $patient->id == $appointments[$i]->
       patient_id){?>
    <tr>
     <td class="text-center">
      <a href="<?=base_url("health_pro/approve_appointment/{$appointments[$i]->id}")
         ?>" class="text-success">
      <span class="glyphicon glyphicon-ok"></span> Approve
      </a>
     </td>
     <td class="text-center">
      <a href="<?=base_url("health_pro/disapprove_appointment/{$appointments[$i]->id
         }")?>" class="text-danger">
      <span class="glyphicon glyphicon-remove"></span> Disapprove
      </a>
     </td>
     <td>
      <?php echo date('F d, Y', strtotime($appointments[$i]->date)); ?>
     </td>
     <td>
      <?php echo date('g:i:s A', strtotime($appointments[$i]->time)); ?>
     </td>
     <td>
      <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name?>
     </td>
     <td>
      <?=$appointments[$i]->purpose?>
     </td>
    </tr>
   <?php }}}}?>
 </tbody>
</table>
<?php }
 else if($cookie->userType == 3){ ?>
 <div class="container">
  <button type="button" class="btn btn-success btn-sm pull-right" style="margin-right
     : 60px;" data-toggle="modal" data-target="#myModal">Schedule an Appointment</
     button>
  <!-- Modal -->
  <div class="modal fade" id="myModal" 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">New Appointment</h4>
     </div>
     <div class="modal-body">
      <!-- FORM!!! -->
      <?php
      if(get_cookie("newAppointmentCookie")) {
       $newAppointmentArray = json_decode(base64_decode(get_cookie("
          newAppointmentCookie")));
       foreach($patient_ids as $patient){
        if($patient->id == $cookie->id){
         $hp_id = $patient->health_pro_id;
        }
       }
      }
      ?>
      <form method="POST"
```

```php
      action="<?=base_url('add_appointment ')?>"
      class="manage-user-form row"
      autocomplete="false"
      >
    <div class="form-group col-xs-6">
     <label for="a_date">Date</label>
     <input name="a_date"
        type="date"
        id="a_date"
        class="form-control"
        value="<?=$newAppointmentArray ->a_date?>"
        >
    </div>
    <div class="form-group col-xs-6">
     <label for="a_time">Time</label>
     <input name="a_time"
        type="time"
        id="a_time"
        class="form-control"
        value="<?=$newAppointmentArray ->a_time?>"
        >
    </div>
    <div class="form-group col-xs-12">
     <label for="a_purpose">Purpose</label>
     <textarea name="a_purpose"
        rows="5"
        id="a_purpose"
        class="form-control"
        value="<?=$newAppointmentArray ->a_purpose?>"
        ></textarea>
    </div>
    <input type='hidden' name='patient_id' value="<?=$cookie->id?>" />
    <input type='hidden' name='health_pro_id' value="<?=$hp_id?>" />
    <div class="col-xs-12">
     <button type="submit" class="btn btn-success">Submit</button>
    </div>
   </form>
  </div>
 </div>
 </div>
 </div>
</div> <br>
<table class="table table-bordered table-striped no-margin-bottom">
 <thead>
  <tr>
   <th width="15%">Date</th>
   <th width="10%">Time</th>
   <th width="25%">Health Professional Name</th>
   <th width="30%">Purpose</th>
   <th width="15%" class="text-center">Status</th>
  </tr>
 </thead>
 <tbody>
 <?php
 for($i = count($appointments)-1; $i>=0; $i--){
 //foreach( $appointments[$i]s as $appointments[$i] ){
  if($appointments[$i]->patient_id == $cookie->id){
   foreach( $health_pro_list as $health_pro ){
   if($health_pro ->id == $appointments[$i]->health_pro_id){?>
    <tr>
    <td>
     <?php echo date('F d, Y', strtotime($appointments[$i]->date)); ?>
    </td>
    <td>
     <?php echo date('g:i:s A', strtotime($appointments[$i]->time)); ?>
    </td>
     <td>
      <?=$health_pro ->first_name?> <?=$health_pro ->middle_name?> <?=$health_pro ->
        last_name?>
     </td>
     <td>
      <?=$appointments[$i]->purpose?>
     </td>
     <td>
      <?php if($appointments[$i]->is_approved == 1){ ?>
       <p class="text-success text-center">Approved</p>
      <?php }
```

```php
            else if($appointments[$i]->is_approved == 2) { ?>
              <p class="text-danger text-center">Disapproved</p>
          <?php } else { ?>
              <p class="text-info text-center">Pending</p>
          <?php }?>
          </td>
        </tr>
    <?php }}}}?>
  </tbody>
 </table>
 <?php } ?>
</body>
</html>
```

messages.php

```php
<html>
<body>
<?php if(get_cookie("newMessageCookie")) {
    $newMessageArray = json_decode(base64_decode(get_cookie("newMessageCookie")));
  $newMessageArray->from_id = $cookie->id;
 }
  if(get_cookie("searchUserCookie")) {
 $searchUserArray = json_decode(base64_decode(get_cookie("searchUserCookie")));
}
  //var_dump($user_list);
    $sortArray = array();
    foreach($user_list as $user){
     foreach($user as $key=>$value){
      if(!isset($sortArray[$key])){
       $sortArray[$key] = array();
      }
      $sortArray[$key][] = $value;
     }
    }
    $orderby = "username"; //change this to whatever key you want from the array
    array_multisort($sortArray[$orderby],SORT_ASC,$user_list);
    //echo "<br><br><br>";
    //var_dump($user_list);
 ?>
<div class="container">
<div class="col-xs-3" style="margin-top:30px;">
 <div class="panel panel-info">
 <div class="panel-heading">Contacts
 <?php if($cookie->userType == 2){ ?><br>
  <span class="pull-right glyphicon glyphicon-search" style="display:inline; margin-
    top:-20px;" data-toggle="collapse" data-target="#contacts"></span>
  <div id="contacts" class="collapse">
  <form method="POST"
  action="<?=base_url('admin/search_user')?>"
  class="row"
  autocomplete="false"
  >
  <div class="col-xs-10">
  <input name="search_name"
    type="text"
    id="search_name"
    class="form-control"
    value="<?=$searchUserArray->user?>"
    >
  </div>
  <div class="col-xs-2">
   <button type="submit" class="btn" style=" height: 35px; margin-left:-30px;"><span
     class="glyphicon glyphicon-search"></span></button>
  </div>
 </form>
 </div> <?php } ?>
 </div>
 <div class="list-group" style="overflow-y:scroll; overflow-x:hidden; height:300px;">
  <?php if($cookie->userType == 2){
   if($searchUserArray->user == ""){
    foreach($user_list as $user){
     if(($user->type == 2 || $user->type == 3) && ($user->is_approved == 1) && (
       $user->id != $cookie->id) && ($user->hospital_id == $cookie->hospitalID)){
       $message_count = 0;
```

```php
      foreach($messages as $message){
       if($message->from_id == $user->id && $message->to_id == $cookie->id &&
          $message->is_read == 0){
        $message_count++;
       }
      }
      ?>
      <a href="<?=base_url("set_recepient/{$user->id}")?>" class="list-group-item
         "><?=$user->username?> (<?=$user->first_name?> <?=$user->last_name?>)
       <?php if($message_count != 0){ ?>
       <p class="text-info pull-right" style="display:inline; margin-top:5px; font-
          size:13px;"><?=$message_count?></p>
       <?php } ?>
      </a>
  <?php }
   }
  }
  else{
   foreach($user_list as $user){
     $user_name = $user->first_name . ' ' . $user->last_name . ' ' . $user->
        middle_name;
     if(($user->type == 2 || $user->type == 3) && ($user->is_approved == 1) && (
        $user->id != $cookie->id) && ($user->hospital_id == $cookie->hospitalID) && (
        strpos(strtolower($user_name), strtolower($searchUserArray->user)) !== false)
        ){
     $message_count = 0;
     foreach($messages as $message){
      if($message->from_id == $user->id && $message->to_id == $cookie->id &&
         $message->is_read == 0){
       $message_count++;
      }
     }
     ?>
     <a href="<?=base_url("set_recepient/{$user->id}")?>" class="list-group-item
        "><?=$user->username?> (<?=$user->first_name?> <?=$user->last_name?>)
      <?php if($message_count != 0){ ?>
      <p class="text-info pull-right" style="display:inline; margin-top:5px; font-
         size:13px;"><?=$message_count?></p>
      <?php } ?>
     </a>
  <?php }
   }
  }
 } ?>
 <?php if($cookie->userType == 3){
  foreach($patient_ids as $patient){
   if($patient->id == $cookie->id){
    $doctor_id = $patient->health_pro_id;
   }
  }
  foreach($user_list as $user){
    //if(($user->type == 2) && ($user->is_approved == 1) && ($user->id != $cookie->
       id)){
    if($user->id == $doctor_id){
    $message_count = 0;
     foreach($messages as $message){
      if($message->from_id == $user->id && $message->to_id == $cookie->id &&
         $message->is_read == 0){
       $message_count++;
      }
     }
     ?>
     <a href="<?=base_url("set_recepient/{$user->id}")?>" class="list-group-item
        "><?=$user->first_name?> <?=$user->last_name?>>
      <?php if($message_count != 0){ ?>
      <p class="text-info pull-right" style="display:inline; margin-top:5px; font-
         size:13px;"><?=$message_count?></p>
      <?php } ?>
     </a>
 <?php } } }?>
</div>
 </div>
</div>
<div class="col-xs-8" style="margin-top:10px;">
```

```
<div class="panel panel-default">
 <?php foreach($user_list as $user){
    if(($user->id == $newMessageArray->to_id)){ ?>
    <div class="panel-heading">
    <?=$user->first_name?> <?=$user->last_name?>
    </div>
 <?php }
 }
    if($newMessageArray->to_id == ""){ ?>
    <div class="panel-heading">
    To:
    </div>
    <?php } ?>
 <div class="panel-body message-panel">
 <?php foreach($messages as $message){
  if($message->from_id == $newMessageArray->from_id && $message->to_id ==
      $newMessageArray->to_id){ ?>
    <div class="row">
    <div class="col-md-6"></div>
    <div class="col-md-6 message">
    <div class="panel panel-default" style="background: #337AB7; border-color: #337
        AB7; color:#FFFFFF;">
     <div class="panel-body"><?=$message->content?>
     <p style="position:absolute; margin-left:210px; font-size:10px; color:#FFFFFF
        ;"><?php echo date("F d, Y h:i:s A", strtotime($message->time))?></p>
     </div>
    </div>
    </div>
    </div>
 <?php }
  if($message->from_id == $newMessageArray->to_id && $message->to_id ==
      $newMessageArray->from_id){ ?>
    <div class="row">
    <div class="col-md-6 message">
    <div class="panel panel-default">
     <div class="panel-body"><?=$message->content?>
     <p style="position:absolute; margin-left:210px; font-size:10px;"><?php echo
        date("F d, Y h:i:s A", strtotime($message->time))?></p>
     </div>
    </div>
    </div>
    <div class="col-md-6"></div>
    </div>
 <?php }
 } ?>
 </div>
</div>
<form method="POST"
 action="<?=base_url('send_message')?>"
 autocomplete="false"
>
 <div class="form-group col-xs-11" style="margin-left:-12px;">
  <textarea
  rows=4;
  class="form-control"
  id="new_message_content"
  name="new_message_content"
  value=""></textarea>
 </div>
 <input type='hidden' name='new_message_to' value='<?=$newMessageArray->to_id?>' />
 <input type='hidden' name='new_message_from' value='<?=$newMessageArray->from_id
     ?>' />
 <div class="form-group col-xs-1">
  <button type="submit" class="btn btn-success" style="margin-top:30px;">Send</
      button>
 </div>
</form>
</div>
</div>
</body>
</html>
```

open_file.php

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

```
<div class="container" style="padding-top: 0px;
      padding-bottom: 0px;
      padding-right: 0px;
      padding-left: 0px;">
<?php $uploader_username = "deactivated";
foreach($files as $file){
 if($file->id == $file_id){
  foreach($user_list as $user){
   if($user->id == $file->uploader_id){
    $uploader_username = $user->username;
   }
  }
 }?>
  <div class="panel panel-default">
    <div class="panel-heading">
    <h1 class="panel-title"><?=$file->title?></h1>
    posted on <p style="display:inline;" class="text-success"><?php echo date('F d, Y
        | g:i:s A', strtotime($file->date_created)); ?></p> by <p style="display:
        inline;" class="text-danger"><?=$uploader_username?></p>
    </div>
   <div class="panel-body"><h4>Brief Description:</h4><?=$file->description?> <br><hr
       >
    <?php if($file->type == 'jpg'){
      $filename = 'assets/uploads/jpg/' . $file->name . ".jpg";
      ?>
      <div class="image"><img src="<?=base_url($filename)?>" width="400" height
          ="375"></div>
    <?php }
     if($file->type == 'pdf'){
      $filename = 'assets/uploads/pdf/' . $file->name . ".pdf";
      ?>
      <div><embed src="<?=base_url($filename)?>" width="100%" height="100%" type='
          application/pdf'></div>
    <?php }
     if($file->type == 'mp4'){
      $filename = 'assets/uploads/mp4/' . $file->name . ".mp4";
      ?>
      <video controls>
       <source src="<?=base_url($filename)?>" type="video/mp4">
      </video>
    <?php } ?>
    <a href="<?=base_url("download_file/{$file_id}")?>" class="pull-right"><span
        class="glyphicon glyphicon-download"></span> Download</a>
   </div>
  </div>
<?php }
} ?>
</div>
</body>
</html>
```

upload.php

```php
<?php
$target_dir = getcwd() . "/assets/uploads/";
$target_file = $target_dir . basename($_FILES["fileToUpload"]["name"]);
$uploadOk = 1;
$imageFileType = pathinfo($target_file,PATHINFO_EXTENSION);
// Check if image file is a actual image or fake image
if(isset($_POST["submit"])) {
  $check = getimagesize($_FILES["fileToUpload"]["tmp_name"]);
  if($check !== false) {
    echo "File is an image - " . $check["mime"] . ".";
    $uploadOk = 1;
  } else {
    echo "File is not an image.";
    $uploadOk = 0;
  }
}
// Check if file already exists
if (file_exists($target_file)) {
  echo "Sorry, file already exists.";
  $uploadOk = 0;
}
// Check file size
```

```php
if ($_FILES["fileToUpload"]["size"] > 500000) {
  echo "Sorry, your file is too large.";
  $uploadOk = 0;
}
// Allow certain file formats
if($imageFileType != "jpg" && $imageFileType != "png" && $imageFileType != "jpeg"
&& $imageFileType != "gif" ) {
  echo "Sorry, only JPG, JPEG, PNG & GIF files are allowed.";
  $uploadOk = 0;
}
// Check if $uploadOk is set to 0 by an error
if ($uploadOk == 0) {
  echo "Sorry, your file was not uploaded.";
// if everything is ok, try to upload file
} else {
  if (move_uploaded_file($_FILES["fileToUpload"]["tmp_name"], $target_file)) {
    echo "The file ". basename( $_FILES["fileToUpload"]["name"]). " has been uploaded
    .";
  } else {
    echo "Sorry, there was an error uploading your file.";
  }
}
?>
```

view_med_con.php

```php
<button type="button" class="btn btn-success btn-sm pull-right" data-toggle="modal"
    data-target="#conditionModal">Add Condition</button>
<div class="container">
<div class="align-center">
 <?php
 if(get_cookie("newIntervalCookie")) {
  $newIntervalArray = json_decode(base64_decode(get_cookie("newIntervalCookie")));
 }
 ?>
 <form method="POST"
    action="<?=base_url('medcon_set_interval')?>"
    class="manage-user-form row"
    autocomplete="false"
    >
  <div class="form-group col-xs-5">
   <label for="medcon_start_date">Start Date</label>
   <input name="medcon_start_date"
      type="date"
      id="medcon_start_date"
      class="form-control"
      value="<?=$newIntervalArray->start_date?>"
      >
  </div>
  <div class="form-group col-xs-5">
   <label for="medcon_end_date">End Date</label>
   <input name="medcon_end_date"
      type="date"
      id="medcon_end_date"
      class="form-control"
      value="<?=$newIntervalArray->end_date?>"
      >
  </div>
  <input type="hidden" name="medcon_patient_id" id="chart_patient_id" value="<?=
      $cookie->id?>">
  <div class="col-xs-2">
   <button type="submit" class="btn btn-success" style="margin-top:27px;">Go</button>
  </div>
 </form>
</div>
</div>
<table class="table table-bordered table-striped no-margin-bottom">
    <thead>
     <tr>
    <th width="10%">Date Diagnosed</th>
        <th width="20%">Condition</th>
        <th width="30%">Notes</th>
        <th width="40%">Health Professional Recommendation</th>
     </tr>
    </thead>
    <tbody>
    <?php
```

```php
  for($i = count($condition_list)-1; $i>=0; $i--){
  //foreach( $condition_list[$i]_list as $condition_list[$i] ){
   if(($condition_list[$i]->patient_id == $cookie->id)){
    if($newIntervalArray->start_date == "" && $newIntervalArray->end_date == ""){?>
    <tr>
    <td class="text-center">
        <?php echo date('F d, Y', strtotime($condition_list[$i]->date_diagnosed));
   ?>
      </td>
      <td>
        <?=$condition_list[$i]->name?>
      </td>
   <td>
        <?=$condition_list[$i]->notes?>
      </td>
   <td>
        <?=$condition_list[$i]->recommendation?>
      </td>
     </tr>
  <?php }
   else if((date('Y-m-d', strtotime($newIntervalArray->start_date)) <= date('Y-m-d',
       strtotime($condition_list[$i]->date_diagnosed))) && (date('Y-m-d', strtotime
       ($newIntervalArray->end_date)) >= date('Y-m-d', strtotime($condition_list[$i
       ]->date_diagnosed)))){ ?>
   <tr>
   <td class="text-center">
        <?php echo date('F d, Y', strtotime($condition_list[$i]->date_diagnosed));
   ?>
      </td>
      <td>
        <?=$condition_list[$i]->name?>
      </td>
   <td>
        <?=$condition_list[$i]->notes?>
      </td>
   <td>
        <?=$condition_list[$i]->recommendation?>
      </td>
     </tr>
  <?php }}
   } ?>
    </tbody>
</table>
 <!-- Modal -->
 <div class="modal fade" id="conditionModal" 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">New Medical Condition</h4>
    </div>
    <div class="modal-body">
     <?php
    if(get_cookie("newConditionCookie")) {
     $newConditionArray = json_decode(base64_decode(get_cookie("newConditionCookie"))
        );
    }
    ?>
     <form method="POST"
       action="<?=base_url('patient/new_condition')?>"
       class="manage-user-form row"
       autocomplete="false"
       >
     <div class="form-group col-xs-12">
      <label for="new_condition_name">Condition</label>
      <input name="new_condition_name"
        type="text"
        id="new_condition_name"
        class="form-control"
        value="<?=$newConditionArray->name?>"
        >
     </div>
     <div class="form-group col-xs-12">
      <label for="new_condition_date">Date Diagnosed</label>
      <input name="new_condition_date"
        type="date"
        id="new_condition_date"
```

```
                      class="form-control"
                      value="<?=$newConditionArray->date_diagnosed?>"
                      >
            </div>
            <div class="form-group col-xs-12">
             <label for="new_condition_notes">Notes</label>
             <textarea name="new_condition_notes"
                 rows="5"
                 id="new_condition_notes"
                 class="form-control"
                 value="<?=$newConditionArray->notes?>"
                 ></textarea>
            </div>
            <input type='hidden' name='new_condition_patient_id' value="<?=$cookie->id?>"
                 />
            <div class="col-xs-12">
             <button type="submit" class="btn btn-success pull-right">Submit</button>
            </div>
          </form>
        </div>
       </div>
     </div>
   </div>
```

view_charts.php

```
<script type="text/javascript" src="https://www.gstatic.com/charts/loader.js"></
    script>
<script type="text/javascript" src="https://www.google.com/jsapi"></script>
<script type="text/javascript">
 function change(){
  switch(document.getElementById("chart_type").value){
   case "bp":
    document.getElementById("bp").style.display="inline";
    break;
   case "bg":
    document.getElementById("bg").style.display="inline";
    break;
   case "pulse":
    document.getElementById("pulse").style.display="inline";
    break;
   case "weight":
    document.getElementById("weight").style.display="inline";
    break;
   case "egfr":
    document.getElementById("egfr").style.display="inline";
    break;
   case "uacr":
    document.getElementById("uacr").style.display="inline";
    break;
   case "hemoglobin":
    document.getElementById("hemoglobin").style.display="inline";
    break;
   case "cholesterol":
    document.getElementById("cholesterol").style.display="inline";
    break;
   case "calcium":
    document.getElementById("calcium").style.display="inline";
    break;
   case "phosphorus":
    document.getElementById("phosphorus").style.display="inline";
    break;
   case "ipth":
    document.getElementById("ipth").style.display="inline";
    break;
   case "vit_d":
    document.getElementById("vit_d").style.display="inline";
    break;
  }
 }
</script>
<div class="container">
 <div class="row">
  <div class="col-md-2"><button type="button" class="btn btn-success btn-lg pull-left
      " data-toggle="modal" data-target="#chartModal">Update Chart</button></div>
    <div class="modal fade" id="chartModal" 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">Update Chart (Fill-out applicable)</h4>
</div>
<div class="modal-body">
 <?php
  if(get_cookie("newEntryCookie")) {
   $newEntryArray = json_decode(base64_decode(get_cookie("newEntryCookie")));
  }
  $no_of_entries = 0;
  foreach($monitor_list as $monitor){
   if($monitor->patient_id == $cookie->id){
    $date_monitored[$no_of_entries] = $monitor->date_created;
    $no_of_entries++;
   }
  }
  //echo $date_monitored;
  //echo date("Y-m-d H:i:s");
  if($no_of_entries!=0){
   $no_of_days = date_diff(date_create(date("Y-m-d H:i:s", strtotime(
       $date_monitored[0]))), date_create(date("Y-m-d H:i:s")));
  }
  else{
   $no_of_days = 0;
  }
  ?>
   <form method="POST"
     action="<?=base_url('patient/new_chart_entry')?>"
     class="manage-user-form row"
     autocomplete="false"
     >
     <div class="form-group col-xs-12">
     <label for="new_entry_date">Date</label>
     <input name="new_entry_date"
        type="date"
        id="new_entry_date"
        class="form-control"
        value="<?=$newEntryArray->entry_date?>"
        >
     </div>
     <div class="form-group col-xs-12">
     <label for="chart_type">Select</label>
     <select name="chart_type"
       id="chart_type"
       class="form-control"
       onchange="change();">
       <option value="" selected></option>
       <option value="bp">Blood Pressure</option>
       <option value="bg">Blood Glucose</option>
       <option value="pulse">Pulse</option>
       <option value="weight">Weight</option>
       <option value="egfr">Estimated Glomerular Filtration Rate (eGFR)</option>
       <option value="uacr">Urine Albumin-to-Creatinine Ratio (UACR)</option>
       <option value="hemoglobin">Hemoglobin</option>
       <option value="cholesterol">Cholesterol</option>
       <option value="calcium">Calcium</option>
       <option value="phosphorus">Phosphorus</option>
       <option value="ipth">Intact Parathyroid Hormone (iPTH)</option>
       <option value="vitd">Vitamin D</option>
     </select>
    </div>
    <div id="bp" class="row" style="display:none;">
     <div class="form-group col-xs-6">
      <label for="new_entry_blood_pressure">Blood Pressure [Systolic]</label>
      <input name="new_entry_bp_systolic"
        type="text"
        id="new_entry_bp_systolic"
        class="form-control"
        placeholder="mm Hg"
        value="<?=$newEntryArray->bp_systolic?>"
        >
     </div>
     <div class="form-group col-xs-6">
      <label for="new_entry_blood_pressure">Blood Pressure [Diastolic]</label>
      <input name="new_entry_bp_diastolic"
```

```
          type="text"
          id="new_entry_bp_diastolic"
          class="form-control"
          placeholder="mm Hg"
          value="<?=$newEntryArray->bp_diastolic?>"
          >
  </div>
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="bg">
  <label for="new_entry_blood_glucose">Blood Glucose</label>
  <input name="new_entry_blood_glucose"
          type="text"
          id="new_entry_blood_glucose"
          class="form-control"
          placeholder="mg/dL"
          value="<?=$newEntryArray->blood_glucose?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="pulse">
  <label for="new_entry_pulse">Pulse</label>
  <input name="new_entry_pulse"
          type="text"
          id="new_entry_pulse"
          class="form-control"
          placeholder="BPM"
          value="<?=$newEntryArray->pulse?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="weight">
  <label for="new_entry_weight">Weight</label>
  <input name="new_entry_weight"
          type="text"
          id="new_entry_weight"
          class="form-control"
          placeholder="kg"
          value="<?=$newEntryArray->weight?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="egfr">
  <label for="new_entry_egfr">Estimated Glomerular Filtration Rate (eGFR)</
          label>
  <input name="new_entry_egfr"
          type="text"
          id="new_entry_egfr"
          class="form-control"
          placeholder="mL/min/1.73m^2"
          value="<?=$newEntryArray->egfr?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="uacr">
  <label for="new_entry_uacr">Urine Albumin-to-Creatinine Ratio (UACR)</label>
  <input name="new_entry_uacr"
          type="text"
          id="new_entry_uacr"
          class="form-control"
          placeholder="mg albumin/g creatinine"
          value="<?=$newEntryArray->uacr?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="hemoglobin">
  <label for="new_entry_hemoglobin">Hemoglobin</label>
  <input name="new_entry_hemoglobin"
          type="text"
          id="new_entry_hemoglobin"
          class="form-control"
          placeholder="g/dL"
          value="<?=$newEntryArray->hemoglobin?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="cholesterol">
  <label for="new_entry_cholesterol">Cholesterol</label>
  <input name="new_entry_cholesterol"
          type="text"
          id="new_entry_cholesterol"
          class="form-control"
          placeholder="mg/dL"
          value="<?=$newEntryArray->cholesterol?>"
          >
 </div>
 <div class="form-group col-xs-12" style="display:none;" id="calcium">
```

```
        <label for="new_entry_calcium">Calcium</label>
        <input name="new_entry_calcium"
            type="text"
            id="new_entry_calcium"
            class="form-control"
            placeholder="mg/dL"
            value="<?=$newEntryArray->calcium?>"
            >
      </div>
      <div class="form-group col-xs-12" style="display:none;" id="phosphorus">
       <label for="new_entry_phosphorus">Phosphorus</label>
       <input name="new_entry_phosphorus"
            type="text"
            id="new_entry_phosphorus"
            class="form-control"
            placeholder="mg/dL"
            value="<?=$newEntryArray->phosphorus?>"
            >
      </div>
      <div class="form-group col-xs-12" style="display:none;" id="ipth">
       <label for="new_entry_ipth">Intact Parathyroid Hormone (iPTH)</label>
       <input name="new_entry_ipth"
            type="text"
            id="new_entry_ipth"
            class="form-control"
            placeholder="pg/mL"
            value="<?=$newEntryArray->ipth?>"
            >
      </div>
      <div class="form-group col-xs-12" style="display:none;" id="vit_d">
        <label for="new_entry_vitamin_d">Vitamin D</label>
        <input name="new_entry_vitamin_d"
            type="text"
            id="new_entry_vitamin_d"
            class="form-control"
            placeholder="ng/mL"
            value="<?=$newEntryArray->vitamin_d?>"
            >
      </div>
      <input type='hidden' name='new_entry_patient_id' value="<?=$cookie->id?>" />
      <div class="col-xs-12">
       <button type="submit" class="btn btn-success pull-right">Submit</button>
      </div>
     </form>
   </div>
  </div>
 </div>
 </div>
<div class="col-md-6">
 <?php
 if(get_cookie("newIntervalCookie")) {
  $newIntervalArray = json_decode(base64_decode(get_cookie("newIntervalCookie")));
 }
 ?>
 <form method="POST"
   action="<?=base_url('generate_chart')?>"
   class="manage-user-form row"
   autocomplete="false"
   >
  <div class="form-group col-xs-6">
   <label for="chart_start_date">Start Date</label>
   <input name="chart_start_date"
       type="date"
       id="chart_start_date"
       class="form-control"
       value="<?=$newIntervalArray->start_date?>"
       >
  </div>
  <div class="form-group col-xs-6">
   <label for="chart_end_date">End Date</label>
   <input name="chart_end_date"
       type="date"
       id="chart_end_date"
       class="form-control"
       value="<?=$newIntervalArray->end_date?>"
       >
  </div>
  <div class="form-group col-xs-10">
   <label for="chart_type">Select</label>
```

```html
        <select name="chart_type"
          id="chart_type"
          class="form-control">
           <option value="bp" selected>Blood Pressure</option>
           <option value="bg">Blood Glucose</option>
           <option value="pulse">Pulse</option>
           <option value="weight">Weight</option>
           <option value="egfr">Estimated Glomerular Filtration Rate (eGFR)</option>
           <option value="uacr">Urine Albumin-to-Creatinine Ratio (UACR)</option>
           <option value="hemoglobin">Hemoglobin</option>
           <option value="cholesterol">Cholesterol</option>
           <option value="calcium">Calcium</option>
           <option value="phosphorus">Phosphorus</option>
           <option value="ipth">Intact Parathyroid Hormone (iPTH)</option>
           <option value="vitd">Vitamin D</option>
         </select>
       </div>
       <input type="hidden" name="chart_patient_id" id="chart_patient_id" value="<?=
          $cookie->id?>">
       <div class="col-xs-2">
        <button type="submit" class="btn btn-success" style="margin-top:27px;">Go</
           button>
       </div>
     </form>
   </div>
 </div>
<div class="col-md-3">
 <div class="panel panel-success">
  <div class="panel-heading text-center">Last Entry</div>
  <?php if($no_of_entries == 0){ ?>
  <div class="panel-body text-center">No entry yet.</div>
  </div>
  <div class="panel panel-success">
   <div class="panel-heading text-center">Reporting Frequency</div>
   <div class="panel-body">
   <div class="row">
    <div class="col-xs-3" style="border-right-style: solid;"><h3>0%</h3></div>
    <div class="col-xs-9">You've made 0 entries over 0 days</div>
   </div>
  <?php }
  else{ ?>
  <div class="panel-body text-center"><?php echo date("F d, Y", strtotime(
     $date_monitored[$no_of_entries-1])) . " <strong>|</strong> ". date("h:i A",
     strtotime($date_monitored[$no_of_entries-1])); ?></div>
  </div>
  <div class="panel panel-success">
   <div class="panel-heading text-center">Reporting Frequency</div>
   <div class="panel-body">
   <div class="row">
    <div class="col-xs-3" style="border-right-style: solid;"><h3>%</h3></div>
    <div class="col-xs-9">You've made <?php echo $no_of_entries; ?> entries over <?
       php echo $no_of_days->format("%a days."); ?></div>
   </div>
  <?php } ?>
   </div>
  </div>
 </div>
</div>
<?php
 $array = array();
 $array['cols'][] = array('label'=>'Date','type' => 'string');
 switch($newIntervalArray->type)
 {
  case 'bp':
   $array['cols'][] = array('label'=>'Blood Pressure [Systolic]','type' => 'number')
      ;
   $array['cols'][] = array('label'=>'Blood Pressure [Diastolic]','type' => 'number
      ');
   break;
  case 'bg':
   $array['cols'][] = array('label'=>'Blood Glucose','type' => 'number');
   break;
  case 'pulse':
   $array['cols'][] = array('label'=>'Pulse','type' => 'number');
   break;
  case 'weight':
   $array['cols'][] = array('label'=>'Weight','type' => 'number');
```

```php
  break;
 case 'egfr':
  $array['cols'][] = array('label'=>'Estimated Glomerular Filtration Rate (eGFR)','
      type' => 'number');
  break;
 case 'uacr':
  $array['cols'][] = array('label'=>'Urine Albumin-to-Creatinine Ratio (UACR)','
      type' => 'number');
  break;
 case 'hemoglobin':
  $array['cols'][] = array('label'=>'Hemoglobin','type' => 'number');
  break;
 case 'cholesterol':
  $array['cols'][] = array('label'=>'Cholesterol','type' => 'number');
  break;
 case 'calcium':
  $array['cols'][] = array('label'=>'Calcium','type' => 'number');
  break;
 case 'phosphorus':
  $array['cols'][] = array('label'=>'Phosphorus','type' => 'number');
  break;
 case 'ipth':
  $array['cols'][] = array('label'=>'Intact Parathyroid Hormone (iPTH)','type' => '
      number');
  break;
 case 'vitd':
  $array['cols'][] = array('label'=>'Vitamin D','type' => 'number');
  break;
}
foreach($monitor_list as $monitor){
 if($monitor->patient_id == $cookie->id){
  if($newIntervalArray->start_date == "" && $newIntervalArray->end_date == ""){
   if($newIntervalArray->type == "bp"){
    if($monitor->bp_systolic !=0 && $monitor->bp_diastolic != 0){
     $array['rows'][][' c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_entered))),
     array('v' => $monitor->bp_systolic),
     array('v' => $monitor->bp_diastolic)
     );
    }
   }
   else if($newIntervalArray->type == "bg"){
    if($monitor->blood_glucose !=0){
     $array['rows'][][' c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_entered))),
     array('v' => $monitor->blood_glucose)
     );
    }
   }
   else if($newIntervalArray->type == "pulse"){
    if($monitor->pulse !=0){
     $array['rows'][][' c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_entered))),
     array('v' => $monitor->pulse)
     );
    }
   }
   else if($newIntervalArray->type == "weight"){
    if($monitor->weight !=0){
     $array['rows'][][' c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_entered))),
     array('v' => $monitor->weight)
     );
    }
   }
   else if($newIntervalArray->type == "egfr"){
    if($monitor->egfr != 0){
     $array['rows'][][' c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_entered))),
     array('v' => $monitor->egfr),
     );
    }
   }
   else if($newIntervalArray->type == "uacr"){
    if($monitor->uacr !=0){
```

```php
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->uacr)
  );
 }
}
else if($newIntervalArray->type == "hemoglobin"){
 if($monitor->hemoglobin !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->hemoglobin)
  );
 }
}
else if($newIntervalArray->type == "cholesterol"){
 if($monitor->cholesterol !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->cholesterol)
  );
 }
}
else if($newIntervalArray->type == "calcium"){
 if($monitor->calcium !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->calcium)
  );
 }
}
else if($newIntervalArray->type == "phosphorus"){
 if($monitor->phosphorus !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->phosphorus)
  );
 }
}
else if($newIntervalArray->type == "ipth"){
 if($monitor->ipth !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->ipth)
  );
 }
}
else if($newIntervalArray->type == "vitd"){
 if($monitor->vitamin_d != 0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->vitamin_d)
  );
 }
}
}
else if((date('Y-m-d', strtotime($newIntervalArray->start_date)) <= date('Y-m-d',
     strtotime($monitor->date_entered))) && (date('Y-m-d', strtotime(
    $newIntervalArray->end_date)) >= date('Y-m-d', strtotime($monitor->
    date_entered)))){
 if($newIntervalArray->type == "bp"){
  if($monitor->bp_systolic !=0 && $monitor->bp_diastolic != 0){
   $array['rows'][][' c'] = array(
   array('v' => date('F d, Y', strtotime($monitor->date_entered))),
   array('v' => $monitor->bp_systolic),
   array('v' => $monitor->bp_diastolic)
   );
  }
 }
 else if($newIntervalArray->type == "bg"){
  if($monitor->blood_glucose !=0){
   $array['rows'][][' c'] = array(
   array('v' => date('F d, Y', strtotime($monitor->date_entered))),
   array('v' => $monitor->blood_glucose)
```

```php
  );
 }
}
else if($newIntervalArray->type == "pulse"){
 if($monitor->pulse !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->pulse)
 );
 }
}
else if($newIntervalArray->type == "weight"){
 if($monitor->weight !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->weight)
 );
 }
}
else if($newIntervalArray->type == "egfr"){
 if($monitor->egfr != 0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->egfr),
 );
 }
}
else if($newIntervalArray->type == "uacr"){
 if($monitor->uacr !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->uacr)
 );
 }
}
else if($newIntervalArray->type == "hemoglobin"){
 if($monitor->hemoglobin !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->hemoglobin)
 );
 }
}
else if($newIntervalArray->type == "cholesterol"){
 if($monitor->cholesterol !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->cholesterol)
 );
 }
}
else if($newIntervalArray->type == "calcium"){
 if($monitor->calcium !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->calcium)
 );
 }
}
else if($newIntervalArray->type == "phosphorus"){
 if($monitor->phosphorus !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->phosphorus)
 );
 }
}
else if($newIntervalArray->type == "ipth"){
 if($monitor->ipth !=0){
  $array['rows'][][ 'c'] = array(
  array('v' => date('F d, Y', strtotime($monitor->date_entered))),
  array('v' => $monitor->ipth)
 );
```

```php
      }
     }
     else if($newIntervalArray ->type == "vitd"){
      if($monitor ->vitamin_d != 0){
       $array['rows'][][ 'c'] = array(
       array('v' => date('F d, Y', strtotime($monitor ->date_entered))),
       array('v' => $monitor ->vitamin_d)
       );
      }
     }
    }
   }
  }
  $encoded_data = json_encode($array);
 ?>
 <script type="text/javascript">
   google.charts.load('current', {'packages':['line']});
   google.charts.setOnLoadCallback(drawChart);
  function drawChart() {
   var data = new google.visualization.DataTable(<?php echo $encoded_data ?>);
   var options = {
   chart: {
    title: '',
    subtitle: ''
   },
   colors: ['green', 'red'],
   width: 900,
   height: 500,
   axes: {
    x: {
    0: {side: 'bottom'}
    }
   }
   };
   var chart = new google.charts.Line(document.getElementById('line_chart'));
   chart.draw(data, options);
  }
 </script>
 <?php if($no_of_entries != 0){ ?>
   <center><div id="line_chart"></div>
   <!--<a class="pull-right" style="margin-right:90px;" href="<?=base_url("
     download_chart/{$cookie ->id}")?>"><span class="glyphicon glyphicon-download"></
     span> Download Chart</a>-->
   </center>
 <?php } ?>
</div>
```

view_patients.php

```php
<?php
if(get_cookie("searchUserCookie")) {
 $searchUserArray = json_decode(base64_decode(get_cookie("searchUserCookie")));
}
 //var_dump($user_list);
 $sortArray = array();
 foreach($patient_list as $patient){
  foreach($patient as $key=>$value){
   if(!isset($sortArray[$key])){
    $sortArray[$key] = array();
   }
   $sortArray[$key][] = $value;
  }
 }
 $orderby = "first_name"; //change this to whatever key you want from the array
 array_multisort($sortArray[$orderby],SORT_ASC,$patient_list);
 //echo "<br><br><br>";
 //var_dump($user_list);
?>
<div class="container">
<div class="col-xs-12 pull-right">
<form method="POST"
  action="<?=base_url('admin/search_user')?>"
  class="manage-user-form row"
  autocomplete="false"
```

```
        >
     <div class="form-group col-xs-10">
     <label for="search_name">Search Patient</label>
     <input name="search_name"
         type="text"
         id="search_name"
         class="form-control"
         value="<?=$searchUserArray->user?>"
         >
     </div>
     <div class="col-xs-2">
      <button type="submit" class="btn" style="margin-top:26px; height: 40px;"><span
         class="glyphicon glyphicon-search text-success"></span></button>
     </div>
</form>
</div>
 &nbsp
<?php
 foreach( $patient_ids as $patientID ){
 if($patientID->health_pro_id == $cookie->id){
  foreach( $patient_list as $patient ){
  if($patient->is_approved == 1 && $patient->id == $patientID->id){
   if($searchUserArray->user == ""){?>
    <div class="panel panel-default" style="margin-right:80px;">
    <div class="panel-body">
        <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
            /users/' . $patient->image_path . ".jpg"; ?>
        <img src="<?=base_url($filename)?>" width="200" height="200">
        </div>
        <br><br>
        <div class="col-xs-10">
          <div class="col-xs-2" style="margin-left:10px">
          <strong>Name<br>
            Sex<br>
            Email<br>
            Mobile Number
          </strong>
          </div>
          <div class="col-xs-9">
           <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name
               ?><br>
           <?=$patient->sex?><br>
           <?=$patient->email?><br>
           <?=$patient->mobile_no?><br><br><br>
           <span class="pull-right">
           <a target="_blank" href="<?=base_url("health_pro/view_patient_medcon/{
               $patient->id}")?>"><span class="glyphicon glyphicon-align-justify"></
               span> View Medical Condition</a> |
           <a target="_blank" href="<?=base_url("health_pro/view_patient_charts/{
               $patient->id}")?>"><span class="glyphicon glyphicon-stats"></span> View
               Charts</a>
           </span>
           <div class="modal fade" id="transferModal" 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">Transfer</h4>
             </div>
             <div class="modal-body">
             <!-- FORM!!! -->
             <form method="POST"
              action="<?=base_url('health_pro/transfer_patient')?>"
              class="manage-user-form row"
              autocomplete="false"
              >
             <div class="form-group col-xs-12">
              <label for="new_hp_id">Transfer patient to:</label>
              <select name="new_hp_id"
                id="new_hp_id"
                class="form-control">
                 <option value=null selected disabled></option>
                <?php foreach( $health_pro_list as $hp ){
                 if($hp->hospital_id == $cookie->hospitalID && $hp->id != $cookie->id){
                    ?>
                  <option value="<?=$hp->id?>"><?=$hp->first_name?> <?=$hp->middle_name
                      ?> <?=$hp->last_name?></option>
```

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```
                          <?php }} ?>
                         </select>
                        </div>
                        <div class="form-group col-xs-12">
                         <label for="new_post_content">Why</label>
                         <textarea name="new_post_content"
                             rows="5"
                             id="new_post_content"
                             class="form-control"
                             value=""
                             ></textarea>
                        </div>
                        <input type='hidden' name='patient_id' value="<?=$patient->id?>" />
                        <div class="col-xs-12">
                         <button type="submit" class="btn btn-success pull-right">Submit</button>
                        </div>
                        </form>
                        </div>
                       </div>
                     </div>
                    </div>
                   </div>
             <?php }
              else{
              $patient_name = $patient->first_name . ' ' . $patient->last_name . ' ' . $patient->
                  middle_name;
              if($patient->is_approved == 1 && (strpos(strtolower($patient_name), strtolower(
                  $searchUserArray->user)) !== false)){?>
               <div class="panel panel-default" style="margin-right:80px;">
               <div class="panel-body">
                 <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images/
                     users/' . $patient->image_path . ".jpg"; ?>
                 <img src="<?=base_url($filename)?>" width="200" height="200">
                 </div>
                 <br><br>
                 <div class="col-xs-10">
                   <div class="col-xs-2" style="margin-left:10px">
                   <strong>Name<br>
                     Sex<br>
                     Email<br>
                     Mobile Number
                   </strong>
                   </div>
                   <div class="col-xs-9">
                    <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name
                        ?><br>
                    <?=$patient->sex?><br>
                    <?=$patient->email?><br>
                    <?=$patient->mobile_no?><br><br><br>
                    <span class="pull-right">
                    <a target="_blank" href="<?=base_url("health_pro/view_patient_medcon/{
                        $patient->id}")?>"><span class="glyphicon glyphicon-align-justify"></span
                        > View Medical Condition</a> |
                    <a target="_blank" href="<?=base_url("health_pro/view_patient_charts/{
                        $patient->id}")?>"><span class="glyphicon glyphicon-stats"></span> View
                        Charts</a>
                    </span>
                    <div class="modal fade" id="transferModal" 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">Transfer</h4>
                      </div>
                      <div class="modal-body">
                       <!-- FORM!!! -->
                       <form method="POST"
                        action="<?=base_url('health_pro/transfer_patient')?>"
                        class="manage-user-form row"
                        autocomplete="false"
                        >
                       <div class="form-group col-xs-12">
                        <label for="new_hp_id">Transfer patient to:</label>
```

```
                <select name="new_hp_id"
                  id="new_hp_id"
                  class="form-control">
                   <option value=null selected disabled></option>
                  <?php foreach( $health_pro_list as $hp ){
                   if($hp->hospital_id == $cookie->hospitalID && $hp->id != $cookie->id){
                       ?>
                   <option value="<?=$hp->id?>"><?=$hp->first_name?> <?=$hp->middle_name?>
                       <?=$hp->last_name?></option>
                  <?php }} ?>
                </select>
              </div>
              <div class="form-group col-xs-12">
               <label for="new_post_content">Why</label>
               <textarea name="new_post_content"
                   rows="5"
                   id="new_post_content"
                   class="form-control"
                   value=""
                   ></textarea>
              </div>
              <input type='hidden' name='patient_id' value="<?=$patient->id?>" />
              <div class="col-xs-12">
               <button type="submit" class="btn btn-success pull-right">Submit</button>
              </div>
              </form>
              </div>
             </div>
           </div>
          </div>
        </div>
      </div>
     </div>
   <?php }
   }
}}}} ?>
</div>


        add_patient.php
<html>
<body>
<?php
  if(get_cookie("addUserCookie")) {
     $addUserArray = json_decode(base64_decode(get_cookie("addUserCookie")));
  $addUserArray->type = 3;
  }
?>
<?php if( $addUserArray->addUserAlert == 1 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Passwords should be the same. </
     div>
<?php } else if( $addUserArray->addUserAlert == 2 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> Username is already taken. Try a
     different one. </div>
<?php } else if( $addUserArray->addUserAlert == 3 ) { ?>
  <div class="alert alert-danger no-margin-bottom"> First name and/or last name
     should be at least 6 characters. </div>
<?php } else if( $addUserArray->addUserAlert == 4 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Username should be at least 6
     characters. </div>
<?php } else if( $addUserArray->addUserAlert == 5 ) {?>
  <div class="alert alert-danger no-margin-bottom"> Password/s should be at least 6
     characters. </div>
<?php } ?>
<form method="POST"
    action="<?=base_url('user/add')?>"
    class="manage-user-form row"
    autocomplete="false"
    >
 <input type='hidden' name='new_user_hospital_id' value="<?=$cookie->hospitalID?>"/>
   <div class="form-group col-xs-4">
     <label for="new_user_first_name">First Name</label>
     <input name="new_user_first_name"
         type="text"
```

```
                         id="new_user_first_name"
                         class="form-control"
                         value="<?=$addUserArray->first_name?>"
                         >
         </div>
         <div class="form-group col-xs-4">
            <label for="new_user_last_name">Last Name</label>
            <input name="new_user_last_name"
                         type="text"
                         id="new_user_last_name"
                         class="form-control"
                         value="<?=$addUserArray->last_name?>"
                         >
         </div>
    <div class="form-group col-xs-4">
            <label for="new_user_middle_name">Middle Name</label>
            <input name="new_user_middle_name"
                         type="text"
                         id="new_user_middle_name"
                         class="form-control"
                         value="<?=$addUserArray->middle_name?>"
                         >
         </div>
    <div class="form-group col-xs-12">
     <label for="new_user_sex">Sex</label>
     <select name="new_user_sex"
            id="new_user_sex"
            class="form-control">
              <option value=null selected disabled></option>
              <option value="Male">Male</option>
              <option value="Female">Female</option>
     </select>
    </div>
    <div class="form-group col-xs-12">
            <label for="new_user_email">Email Address</label>
            <input name="new_user_email"
                         type="text"
                         id="new_user_email"
                         class="form-control"
                         value="<?=$addUserArray->email?>"
                         >
         </div>
    <div class="form-group col-xs-12">
            <label for="new_user_mobile_no">Mobile Number</label>
            <input name="new_user_mobile_no"
                         type="text"
                         id="new_user_mobile_no"
                         class="form-control"
                         value="<?=$addUserArray->mobile_no?>"
                         >
         </div>
     <div class="form-group col-xs-12">
            <label for="new_user_username">Username</label>
            <input name="new_user_username"
                         type="text"
                         id="new_user_username"
                         class="form-control"
                         value="<?=$addUserArray->username?>"
                         >
         </div>
     <div class="form-group col-xs-12">
            <label for="new_user_password">Password</label>
            <input name="new_user_password"
                         type="password"
                         id="new_user_password"
                         class="form-control"
                         value="<?=$addUserArray->password?>"
                         >
         </div>
     <div class="form-group col-xs-12">
            <label for="new_user_checker_password">Retype Password</label>
            <input name="new_user_checker_password"
                         type="password"
                         id="new_user_checker_password"
                         class="form-control"
                         value="<?=$addUserArray->password_verify?>"
                         >
         </div>
    <input type='hidden' name='new_user_HP_id' value="<?=$cookie->id?>" />
```

```
    <input type='hidden' name='new_user_type' value='3' />
     <div class="col-xs-12">
       <button type="submit" class="btn btn-success">Submit</button>
     </div>
 </form>
  </body>
  </html>
```

view_patient_medcon.php

```php
<?php
if(get_cookie("searchTitleCookie")) {
 $searchTitleArray = json_decode(base64_decode(get_cookie("searchTitleCookie")));
}?>
<div class="container" style="padding-top: 10px; padding-bottom: 10px">
 <?php foreach($user_list as $user){
  if($user->id == $patient_id){ ?>
   <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images/
       users/' . $user->image_path . ".jpg"; ?>
   <img src="<?=base_url($filename)?>" width="200" height="200">
   </div>
   <br><br>
   <div class="col-xs-10">
     <div class="col-xs-2">
     <strong>Name<br>
       Sex<br>
       Email<br>
       Mobile Number
     </strong>
     </div>
     <div class="col-xs-10">
      <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
      <?=$user->sex?><br>
      <?=$user->email?><br>
      <?=$user->mobile_no?><br><br>
      <a class="text-danger" data-toggle="modal" data-target="#archiveModal"><span
          class="glyphicon glyphicon-tasks"></span> Archive</a><br><br><br>
     </div>
   </div>
  <?php }
 } ?>
<form method="POST"
 action="<?=base_url('search_title')?>"
 class="manage-user-form"
 style="margin-right:-48px; margin-top:0px;"
 autocomplete="false"
 >
 <div class="form-group col-xs-10">
 <label for="search_title">Search</label>
 <input name="search_title"
     type="text"
     id="search_title"
     class="form-control"
     value="<?=$searchTitleArray->title?>"
     >
 </div>
 <input type='hidden' name='patient_id' value='<?=$patient_id?>' />
 <div class="col-xs-2">
  <button type="submit" class="btn" style="margin-top:26px; margin-left:-20px;height:
      40px;"><span class="glyphicon glyphicon-search text-success"></span></button>
 </div>
</form>
 <table class="table table-bordered table-striped no-margin-bottom">
   <thead>
    <tr>
     <th width="10%">Date Diagnosed</th>
     <th width="20%">Condition</th>
     <th width="30%">Notes</th>
     <th width="40%">Health Professional Recommendation</th>
    </tr>
   </thead>
   <tbody>
   <?php
   for($i = count($condition_list)-1; $i>=0; $i--){
   //foreach( $condition_list[$i]_list as $condition_list[$i] ){
    if($condition_list[$i]->patient_id == $patient_id && $condition_list[$i]->
```

```
      is_archived == 0){
   if($searchTitleArray->title == ""){?>
   <tr>
    <td class="text-center">
      <?php echo date('F d, Y', strtotime($condition_list[$i]->date_diagnosed)); ?>
    </td>
    <td>
     <?=$condition_list[$i]->name?>
    </td>
    <td>
     <?=$condition_list[$i]->notes?>
    </td>
    <?php if($condition_list[$i]->recommendation == NULL){?>
    <td contenteditable='true'>
    <form action="<?=base_url("health_pro/add_recommendation/{$condition_list[$i]->
        id}")?>"
     method="POST"
     id="recommendation_form"
     >
     <textarea type="text"
       name="new_recommendation"
       id="new_recommendation"
       rows=2
       style="width:90%; border:none; display:inline;"
       ></textarea>
     <input type="hidden" name="rec_patient_id" value="<?=$patient_id?>">
      <button type="submit" class="btn btn-sm btn-default" style="display:inline;">
          Add</button>
    </form> <?php }
    else { ?>
    <td>
     <?=$condition_list[$i]->recommendation?>
    <?php } ?>
     <a href="<?=base_url("health_pro/archive_record/{$condition_list[$i]->id}/{
        $patient_id}")?>" class="text-danger pull-right"><span class="glyphicon
        glyphicon-tasks"></span></a>
    </td>
   </tr>
<?php }
 else{
  if((strpos(strtolower($condition_list[$i]->name), strtolower($searchTitleArray->
      title))) !== false){?>
   <tr>
    <td class="text-center">
      <?php echo date('F d, Y', strtotime($condition_list[$i]->date_diagnosed)); ?>
    </td>
    <td>
     <?=$condition_list[$i]->name?>
    </td>
    <td>
     <?=$condition_list[$i]->notes?>
    </td>
    <?php if($condition_list[$i]->recommendation == NULL){?>
    <td contenteditable='true'>
    <form action="<?=base_url("health_pro/add_recommendation/{$condition_list[$i]->
        id}")?>"
     method="POST"
     id="recommendation_form"
     >
     <textarea type="text"
       name="new_recommendation"
       id="new_recommendation"
       rows=2
       style="width:90%; border:none; display:inline;"
       ></textarea>
     <input type="hidden" name="rec_patient_id" value="<?=$patient_id?>">
      <button type="submit" class="btn btn-sm btn-default" style="display:inline;">
          Add</button>
    </form> <?php }
    else { ?>
    <td>
     <?=$condition_list[$i]->recommendation?>
    <?php } ?>
     <a href="<?=base_url("health_pro/archive_record/{$condition_list[$i]->id}/{
        $patient_id}")?>" class="text-danger pull-right"><span class="glyphicon
        glyphicon-tasks"></span></a>
    </td>
```

```
      </tr>
  <?php } }
    }} ?>
    </tbody>
  </table>
</div>
<div class="modal fade lg" id="archiveModal" role="dialog">
 <div class="modal-dialog modal-lg">
  <!-- Modal content-->
  <div class="modal-content">
    <div class="modal-header">
     <button type="button" class="close" data-dismiss="modal">&times;</button>
     <h4 class="modal-title"><span class="glyphicon glyphicon-tasks"></span> Archive</
        h4>
    </div>
    <div class="modal-body">
     <table class="table table-bordered table-striped no-margin-bottom">
      <thead>
       <tr>
        <th width="10%">Date Diagnosed</th>
        <th width="20%">Condition</th>
        <th width="30%">Notes</th>
        <th width="40%">Health Professional Recommendation</th>
       </tr>
      </thead>
      <tbody>
      <?php
      for($i = count($condition_list)-1; $i>=0; $i--){
      //foreach( $condition_list[$i]_list as $condition_list[$i] ){
       if($condition_list[$i]->patient_id == $patient_id && $condition_list[$i]->
          is_archived == 1){?>
       <tr>
        <td class="text-center">
         <?=$condition_list[$i]->date_diagnosed?>
        </td>
        <td>
         <?=$condition_list[$i]->name?>
        </td>
        <td>
         <?=$condition_list[$i]->notes?>
        </td>
        <td>
         <?=$condition_list[$i]->recommendation?>
        </td>
       </tr>
       <?php }} ?>
      </tbody>
     </table>
    </div>
   </div>
  </div>
</div>
```

view_patient_charts.php

```
<script type="text/javascript" src="https://www.gstatic.com/charts/loader.js"></
    script>
<div class="container" style="padding-top: 10px; padding-bottom: 10px">
 <?php foreach($user_list as $user){
  if($user->id == $patient_id){ ?>
   <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images/
      users/' . $user->image_path . ".jpg"; ?>
   <img src="<?=base_url($filename)?>" width="200" height="200">
   </div>
   <br><br>
   <div class="col-xs-10">
     <div class="col-xs-2">
     <strong>Name<br>
       Sex<br>
       Email<br>
       Mobile Number
     </strong>
     </div>
     <div class="col-xs-10">
      <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
      <?=$user->sex?><br>
```

```php
    <?=$user->email?><br>
    <?=$user->mobile_no?><br><br><br><br><br>
  </div>
 </div>
<?php }
} ?>
  <div class="row">
 <div class="col-md-2" style="margin-left:40px"><br><br><br><br><button type="button
    " class="btn btn-success btn-lg pull-left" data-toggle="modal" data-target="#
    chartModal">Update Chart</button></div>
  <div class="modal fade" id="chartModal" 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">New Medical Condition</h4>
  </div>
  <div class="modal-body">
   <?php
   if(get_cookie("newEntryCookie")) {
    $newEntryArray = json_decode(base64_decode(get_cookie("newEntryCookie")));
   }
   $no_of_entries = 0;
   foreach($monitor_list as $monitor){
    if($monitor->patient_id == $patient_id){
     $date_monitored[$no_of_entries] = $monitor->date_created;
     $no_of_entries++;
    }
   }
   //echo $date_monitored;
   //echo date("Y-m-d H:i:s");
   if($no_of_entries!=0){
    $no_of_days = date_diff(date_create(date("Y-m-d H:i:s", strtotime(
        $date_monitored[0]))), date_create(date("Y-m-d H:i:s")));
   }
   else{
    $no_of_days = 0;
   }
   ?>
   <form method="POST"
     action="<?=base_url('patient/new_chart_entry')?>"
     class="manage-user-form row"
     autocomplete="false"
     >
    <div class="form-group col-xs-12">
     <label for="chart_type">Select</label>
     <select name="chart_type"
       id="chart_type"
       class="form-control">
      <option value="bp" selected>Blood Pressure</option>
      <option value="bg">Blood Glucose</option>
      <option value="pulse">Pulse</option>
      <option value="weight">Weight</option>
      <option value="egfr">Estimated Glomerular Filtration Rate (eGFR)</option>
      <option value="uacr">Urine Albumin-to-Creatinine Ratio (UACR)</option>
      <option value="hemoglobin">Hemoglobin</option>
      <option value="cholesterol">Cholesterol</option>
      <option value="calcium">Calcium</option>
      <option value="phosphorus">Phosphorus</option>
      <option value="ipth">Intact Parathyroid Hormone (iPTH)</option>
      <option value="vitd">Vitamin D</option>
     </select>
    </div>
    <div class="form-group col-xs-6">
     <label for="new_entry_blood_pressure">Blood Pressure [Systolic]</label>
     <input name="new_entry_bp_systolic"
        type="text"
        id="new_entry_bp_systolic"
        class="form-control"
        placeholder="mm Hg"
        value="<?=$newEntryArray->bp_systolic?>"
        >
    </div>
    <div class="form-group col-xs-6">
     <label for="new_entry_blood_pressure">Blood Pressure [Diastolic]</label>
     <input name="new_entry_bp_diastolic"
```

```
        type="text"
        id="new_entry_bp_diastolic"
        class="form-control"
        placeholder="mm Hg"
        value="<?=$newEntryArray->bp_diastolic?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_blood_glucose">Blood Glucose</label>
 <input name="new_entry_blood_glucose"
        type="text"
        id="new_entry_blood_glucose"
        class="form-control"
        placeholder="mg/dL"
        value="<?=$newEntryArray->blood_glucose?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_pulse">Pulse</label>
 <input name="new_entry_pulse"
        type="text"
        id="new_entry_pulse"
        class="form-control"
        placeholder="BPM"
        value="<?=$newEntryArray->pulse?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_weight">Weight</label>
 <input name="new_entry_weight"
        type="text"
        id="new_entry_weight"
        class="form-control"
        placeholder="kg"
        value="<?=$newEntryArray->weight?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_egfr">Estimated Glomerular Filtration Rate (eGFR)</
        label>
 <input name="new_entry_egfr"
        type="text"
        id="new_entry_egfr"
        class="form-control"
        placeholder="mL/min/1.73m^2"
        value="<?=$newEntryArray->egfr?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_uacr">Urine Albumin-to-Creatinine Ratio (UACR)</label>
 <input name="new_entry_uacr"
        type="text"
        id="new_entry_uacr"
        class="form-control"
        placeholder="mg albumin/g creatinine"
        value="<?=$newEntryArray->uacr?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_hemoglobin">Hemoglobin</label>
 <input name="new_entry_hemoglobin"
        type="text"
        id="new_entry_hemoglobin"
        class="form-control"
        placeholder="g/dL"
        value="<?=$newEntryArray->hemoglobin?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_cholesterol">Cholesterol</label>
 <input name="new_entry_cholesterol"
        type="text"
        id="new_entry_cholesterol"
        class="form-control"
        placeholder="mg/dL"
        value="<?=$newEntryArray->cholesterol?>"
        >
</div>
<div class="form-group col-xs-12">
 <label for="new_entry_calcium">Calcium</label>
```

```
        <input name="new_entry_calcium"
            type="text"
            id="new_entry_calcium"
            class="form-control"
            placeholder="mg/dL"
            value="<?=$newEntryArray->calcium?>"
            >
    </div>
    <div class="form-group col-xs-12">
     <label for="new_entry_phosphorus">Phosphorus</label>
     <input name="new_entry_phosphorus"
            type="text"
            id="new_entry_phosphorus"
            class="form-control"
            placeholder="mg/dL"
            value="<?=$newEntryArray->phosphorus?>"
            >
    </div>
    <div class="form-group col-xs-12">
     <label for="new_entry_ipth">Intact Parathyroid Hormone (iPTH)</label>
     <input name="new_entry_ipth"
            type="text"
            id="new_entry_ipth"
            class="form-control"
            placeholder="pg/mL"
            value="<?=$newEntryArray->ipth?>"
            >
    </div>
    <div class="form-group col-xs-12">
     <label for="new_entry_vitamin_d">Vitamin D</label>
     <input name="new_entry_vitamin_d"
            type="text"
            id="new_entry_vitamin_d"
            class="form-control"
            placeholder="ng/mL"
            value="<?=$newEntryArray->vitamin_d?>"
            >
    </div>
    <input type='hidden' name='new_entry_patient_id' value="<?=$patient_id?>" />
    <div class="col-xs-12">
     <button type="submit" class="btn btn-success pull-right">Submit</button>
    </div>
   </form>
  </div>
 </div>
</div>
</div>
<div class="col-md-6">
<?php
if(get_cookie("newIntervalCookie")) {
 $newIntervalArray = json_decode(base64_decode(get_cookie("newIntervalCookie")));
}
?>
<form method="POST"
  action="<?=base_url('generate_chart')?>"
  class="manage-user-form row"
  autocomplete="false"
  >
 <div class="form-group col-xs-6">
  <label for="chart_start_date">Start Date</label>
  <input name="chart_start_date"
        type="date"
        id="chart_start_date"
        class="form-control"
        value="<?=$newIntervalArray->start_date?>"
        >
 </div>
 <div class="form-group col-xs-6">
  <label for="chart_end_date">End Date</label>
  <input name="chart_end_date"
        type="date"
        id="chart_end_date"
        class="form-control"
        value="<?=$newIntervalArray->end_date?>"
        >
 </div>
 <div class="form-group col-xs-10">
  <label for="chart_type">Select</label>
  <select name="chart_type"
```

```
          id="chart_type"
          class="form-control">
           <option value="bp">Blood Pressure</option>
           <option value="bg">Blood Glucose</option>
           <option value="pulse">Pulse</option>
           <option value="weight">Weight</option>
           <option value="egfr">Estimated Glomerular Filtration Rate (eGFR)</option>
           <option value="uacr">Urine Albumin-to-Creatinine Ratio (UACR)</option>
           <option value="hemoglobin">Hemoglobin</option>
           <option value="cholesterol">Cholesterol</option>
           <option value="calcium">Calcium</option>
           <option value="phosphorus">Phosphorus</option>
           <option value="ipth">Intact Parathyroid Hormone (iPTH)</option>
           <option value="vitd">Vitamin D</option>
        </select>
      </div>
      <input type="hidden" name="chart_patient_id" id="chart_patient_id" value="<?=
          $patient_id?>">
      <div class="col-xs-2">
       <button type="submit" class="btn btn-success" style="margin-top:27px;">Go</
           button>
      </div>
     </form>
    </div>
 <div class="col-md-3">
  <div class="panel panel-success">
   <div class="panel-heading text-center">Last Entry</div>
   <?php if($no_of_entries == 0){ ?>
   <div class="panel-body text-center">No entry yet.</div>
   </div>
   <div class="panel panel-success">
    <div class="panel-heading text-center">Reporting Accuracy</div>
    <div class="panel-body">
    <div class="row">
     <div class="col-xs-3" style="border-right-style: solid;"><h3>0%</h3></div>
     <div class="col-xs-9">Patient has made 0 entries over 0 days</div>
    </div>
   <?php }
   else{ ?>
   <div class="panel-body text-center"><?php echo date("F d, Y", strtotime(
       $date_monitored[$no_of_entries-1])) . " <strong>|</strong> ". date("h:i A",
       strtotime($date_monitored[$no_of_entries-1])); ?></div>
   </div>
   <div class="panel panel-success">
    <div class="panel-heading text-center">Reporting Accuracy</div>
    <div class="panel-body">
    <div class="row">
     <div class="col-xs-3" style="border-right-style: solid;"><h3>%</h3></div>
     <div class="col-xs-9">Patient has made <?php echo $no_of_entries; ?> entries
         over <?php echo $no_of_days->format("%a days."); ?></div>
    </div>
   <?php } ?>
    </div>
   </div>
  </div>
 </div>
 <?php
  $array = array();
  $array['cols'][] = array('label'=>'Date','type' => 'string');
  switch($newIntervalArray->type)
  {
   case 'bp':
    $array['cols'][] = array('label'=>'Blood Pressure [Systolic]','type' => 'number')
        ;
    $array['cols'][] = array('label'=>'Blood Pressure [Diastolic]','type' => 'number
        ');
    break;
   case 'bg':
    $array['cols'][] = array('label'=>'Blood Glucose','type' => 'number');
    break;
   case 'pulse':
    $array['cols'][] = array('label'=>'Pulse','type' => 'number');
    break;
   case 'weight':
    $array['cols'][] = array('label'=>'Weight','type' => 'number');
    break;
```

```
      case 'egfr':
       $array['cols'][] = array('label'=>'Estimated Glomerular Filtration Rate (eGFR)','
           type' => 'number');
       break;
      case 'uacr':
       $array['cols'][] = array('label'=>'Urine Albumin-to-Creatinine Ratio (UACR)','
           type' => 'number');
       break;
      case 'hemoglobin':
       $array['cols'][] = array('label'=>'Hemoglobin','type' => 'number');
       break;
      case 'cholesterol':
       $array['cols'][] = array('label'=>'Cholesterol','type' => 'number');
       break;
      case 'calcium':
       $array['cols'][] = array('label'=>'Calcium','type' => 'number');
       break;
      case 'phosphorus':
       $array['cols'][] = array('label'=>'Phosphorus','type' => 'number');
       break;
      case 'ipth':
       $array['cols'][] = array('label'=>'Intact Parathyroid Hormone (iPTH)','type' => '
           number');
       break;
      case 'vitd':
       $array['cols'][] = array('label'=>'Vitamin D','type' => 'number');
       break;
}
foreach($monitor_list as $monitor){
 if($monitor->patient_id == $patient_id){
  if($newIntervalArray->start_date == "" && $newIntervalArray->end_date == ""){
   if($newIntervalArray->type == "bp"){
    if($monitor->bp_systolic !=0 && $monitor->bp_diastolic != 0){
     $array['rows'][][ 'c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_created))),
     array('v' => $monitor->bp_systolic),
     array('v' => $monitor->bp_diastolic)
     );
    }
   }
   else if($newIntervalArray->type == "bg"){
    if($monitor->blood_glucose !=0){
     $array['rows'][][ 'c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_created))),
     array('v' => $monitor->blood_glucose)
     );
    }
   }
   else if($newIntervalArray->type == "pulse"){
    if($monitor->pulse !=0){
     $array['rows'][][ 'c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_created))),
     array('v' => $monitor->pulse)
     );
    }
   }
   else if($newIntervalArray->type == "weight"){
    if($monitor->weight !=0){
     $array['rows'][][ 'c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_created))),
     array('v' => $monitor->weight)
     );
    }
   }
   else if($newIntervalArray->type == "egfr"){
    if($monitor->egfr != 0){
     $array['rows'][][ 'c'] = array(
     array('v' => date('F d, Y', strtotime($monitor->date_created))),
     array('v' => $monitor->egfr),
     );
    }
   }
   else if($newIntervalArray->type == "uacr"){
    if($monitor->uacr !=0){
     $array['rows'][][ 'c'] = array(
```

```php
      array('v' => date('F d, Y', strtotime($monitor->date_created))),
      array('v' => $monitor->uacr)
      );
   }
  }
  else if($newIntervalArray->type == "hemoglobin"){
   if($monitor->hemoglobin !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->hemoglobin)
    );
   }
  }
  else if($newIntervalArray->type == "cholesterol"){
   if($monitor->cholesterol !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->cholesterol)
    );
   }
  }
  else if($newIntervalArray->type == "calcium"){
   if($monitor->calcium !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->calcium)
    );
   }
  }
  else if($newIntervalArray->type == "phosphorus"){
   if($monitor->phosphorus !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->phosphorus)
    );
   }
  }
  else if($newIntervalArray->type == "ipth"){
   if($monitor->ipth !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->ipth)
    );
   }
  }
  else if($newIntervalArray->type == "vitd"){
   if($monitor->vitamin_d != 0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->vitamin_d)
    );
   }
  }
 }
 else if((date('Y-m-d', strtotime($newIntervalArray->start_date)) <= date('Y-m-d',
     strtotime($monitor->date_created))) && (date('Y-m-d', strtotime(
      $newIntervalArray->end_date)) >= date('Y-m-d', strtotime($monitor->
      date_created)))){
  if($newIntervalArray->type == "bp"){
   if($monitor->bp_systolic !=0 && $monitor->bp_diastolic != 0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->bp_systolic),
    array('v' => $monitor->bp_diastolic)
    );
   }
  }
  else if($newIntervalArray->type == "bg"){
   if($monitor->blood_glucose !=0){
    $array['rows'][][  'c'] = array(
    array('v' => date('F d, Y', strtotime($monitor->date_created))),
    array('v' => $monitor->blood_glucose)
    );
```

```php
 }
}
else if($newIntervalArray ->type == "pulse"){
 if($monitor ->pulse !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->pulse)
 );
 }
}
else if($newIntervalArray ->type == "weight"){
 if($monitor ->weight !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->weight)
 );
 }
}
else if($newIntervalArray ->type == "egfr"){
 if($monitor ->egfr != 0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->egfr),
  );
 }
}
else if($newIntervalArray ->type == "uacr"){
 if($monitor ->uacr !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->uacr)
  );
 }
}
else if($newIntervalArray ->type == "hemoglobin"){
 if($monitor ->hemoglobin !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->hemoglobin)
  );
 }
}
else if($newIntervalArray ->type == "cholesterol"){
 if($monitor ->cholesterol !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->cholesterol)
  );
 }
}
else if($newIntervalArray ->type == "calcium"){
 if($monitor ->calcium !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->calcium)
  );
 }
}
else if($newIntervalArray ->type == "phosphorus"){
 if($monitor ->phosphorus !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->phosphorus)
  );
 }
}
else if($newIntervalArray ->type == "ipth"){
 if($monitor ->ipth !=0){
  $array['rows'][][' c'] = array(
  array('v' => date('F d, Y', strtotime($monitor ->date_created))),
  array('v' => $monitor ->ipth)
  );
 }
```

```php
        }
       else if($newIntervalArray->type == "vitd"){
        if($monitor->vitamin_d != 0){
         $array['rows'][][ 'c'] = array(
         array('v' => date('F d, Y', strtotime($monitor->date_created))),
         array('v' => $monitor->vitamin_d)
         );
        }
       }
      }
     }
    }
   $encoded_data = json_encode($array);
  ?>
  <script type="text/javascript">
    google.charts.load('current', {'packages':['line']});
    google.charts.setOnLoadCallback(drawChart);
   function drawChart() {
    var data = new google.visualization.DataTable(<?php echo $encoded_data ?>);
    var options = {
    chart: {
     title: '',
     subtitle: ''
    },
    colors: ['green', 'red'],
    width: 900,
    height: 500,
    axes: {
     x: {
     0: {side: 'bottom'}
     }
    }
    };
    var chart = new google.charts.Line(document.getElementById('line_chart'));
    chart.draw(data, options);
   }
  </script>
  <center><div id="line_chart" class="col-xs-12"></div></center>
</div>
```

manage_forum.php

```php
<h1 class="text-info"> Manage Forum </h1>
<?php
if($cookie->id == 53){
 foreach($category_list as $category){
   $currCategory = $category->id; ?>
   <h3 class="text-success"><strong><?=$category->name?></strong></h3>
   <div class="panel-group" id="accordion">
    <?php
    for($i = count($forum)-1; $i>=0; $i--){
    //foreach($forum as $post){
    if($forum[$i]->category_id == $currCategory && $forum[$i]->is_approved == 0){
     foreach($user_list as $user){
      if($user->id == $forum[$i]->author_id){
       $author_username = $user->username;
      }
     }
    ?>
     <div class="panel panel-default">
      <div class="panel-heading">
       <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id
          ?>">
        <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
       </a>
       submitted on <p style="display:inline;" class="text-success"><?php echo date
          ('F d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p> by <p
          style="display:inline;" class="text-danger"><?=$author_username?></p>
       <span class="pull-right">
        <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class="
           text-danger"><span class="glyphicon glyphicon-trash"></span> Delete</a>
           |
        <a href="<?=base_url("mod/process_approve_post/{$forum[$i]->id}")?>" class
           ="text-success"><span class="glyphicon glyphicon-ok"></span> Approve </a
```

```php
          >
          </span>
          </div>
          <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
          <div class="panel-body">
           <?=$forum[$i]->content?>
          </div>
          </div>
          </div>
      <?php } } ?>
      </div>
  <?php }
}
else{
foreach($moderator_list as $moderator){
 if($moderator->health_pro_id == $cookie->id && $moderator->is_approved == 1){
  foreach($category_list as $category){
    if($category->id == $moderator->category_id){
     $currCategory = $category->id; ?>
     <h3 class="text-success"><strong><?=$category->name?></strong></h3>
     <div class="panel-group" id="accordion">
      <?php
      for($i = count($forum)-1; $i>=0; $i--){
      //foreach($forum as $post){
       if($forum[$i]->category_id == $currCategory && $forum[$i]->is_approved == 0){
        foreach($user_list as $user){
         if($user->id == $forum[$i]->author_id){
          $author_username = $user->username;
         }
        }
       ?>
        <div class="panel panel-default">
         <div class="panel-heading">
          <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id
              ?>">
           <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
          </a>
          submitted on <p style="display:inline;" class="text-success"><?php echo
              date('F d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p>
              by <p style="display:inline;" class="text-danger"><?=$author_username
              ?></p>
          <span class="pull-right">
           <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class
               ="text-danger"><span class="glyphicon glyphicon-trash"></span> Delete
               </a> |
           <a href="<?=base_url("mod/process_approve_post/{$forum[$i]->id}")?>" class
               ="text-success"><span class="glyphicon glyphicon-ok"></span> Approve</
               a>
          </span>
          </div>
          <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
          <div class="panel-body">
           <?=$forum[$i]->content?>
          </div>
          </div>
          </div>
      <?php } } ?>
      </div>
  <?php }
  }
 }
}}
   ?>
<?php if($cookie->id == 53){ ?>
<div class="panel-group" id="accordion">
<h3 class="text-success"><strong>Other Categories</strong></h3>
<?php foreach($category_list as $category){
 if($category->is_approved == 0){ ?>
  <?php
  for($i = count($forum)-1; $i>=0; $i--){
  //foreach($forum as $post){
   if($forum[$i]->category_id == $category->id){
    foreach($user_list as $user){
     if($user->id == $forum[$i]->author_id){
      $author_username = $user->username;
```

```php
    }
   }
  ?>
   <div class="panel panel-default">
    <div class="panel-heading">
     <a data-toggle="collapse" data-parent="#accordion" href="#<?=$forum[$i]->id?>">
      <h3 class="panel-title" ><?=$forum[$i]->title?> </h3>
     </a>
     submitted on <p style="display:inline;" class="text-success"><?php echo date('F
         d, Y | g:i:s A', strtotime($forum[$i]->date_created)); ?></p> by <p style
         ="display:inline;" class="text-danger"><?=$author_username?></p>
     <span class="pull-right">
      <p style="display:inline;" class="text-primary">[<?=$category->name?>]</p>
      <a href="<?=base_url("mod/process_delete_post/{$forum[$i]->id}")?>" class="
          text-danger"><span class="glyphicon glyphicon-trash"></span> Delete</a> |
       <a href="<?=base_url("mod/process_approve_post/{$forum[$i]->id}")?>" class="
          text-success"><span class="glyphicon glyphicon-ok"></span> Approve</a>
     </span>
    </div>
    <div id="<?=$forum[$i]->id?>" class="panel-collapse collapse">
    <div class="panel-body">
     <?=$forum[$i]->content?>
    </div>
    </div>
   </div>
  <?php } } ?>
  <?php }
}} ?>
</div>
<hr>
<h1 class="text-info"> Manage Research Hub </h1>
<?php
if($cookie->id == 53){
 foreach($category_list as $category){
   $currCategory = $category->id; ?>
   <h3 class="text-success"><strong><?=$category->name?></strong></h3>
    <?php
     for($i = count($files)-1; $i>=0; $i--){
     //foreach($files as $file){
      if($files[$i]->category_id == $currCategory && $files[$i]->is_approved == 0){
       foreach($user_list as $user){
        if($user->id == $files[$i]->uploader_id){
         $uploader_username = $user->username;
        }
       }
      ?>
       <div class="panel panel-default">
        <div class="panel-heading">
        <a target="_blank" href="<?=base_url("open_file/{$files[$i]->id}")?>">
        <h1 class="panel-title" style="display:inline"><?=$files[$i]->title?> </h1> <
            h5 class="inline text-info" style="display:inline">[.<?=$files[$i]->type
            ?>]</h5>
        </a><br>
        posted on <p style="display:inline;" class="text-success"><?php echo date('F
            d, Y | g:i:s A', strtotime($files[$i]->date_created)); ?></p> by <p style
            ="display:inline;" class="text-danger"><?=$uploader_username?></p>
        <span class="pull-right">
         <a href="<?=base_url("mod/process_delete_file/{$files[$i]->id}")?>" class="
             text-danger"><span class="glyphicon glyphicon-trash"></span> Delete</a>
             |
         <a href="<?=base_url("mod/process_approve_file/{$files[$i]->id}")?>" class="
             text-success"><span class="glyphicon glyphicon-ok"></span> Approve</a>
        </span>
       </div>
      </div>
    <?php } } ?>
  <?php }
}
else{
foreach($moderator_list as $moderator){
 if($moderator->health_pro_id == $cookie->id && $moderator->is_approved == 1){
  foreach($category_list as $category){
   if($category->id == $moderator->category_id){
    $currCategory = $category->id; ?>
```

```php
      <h3 class="text-success"><strong><?=$category->name?></strong></h3>
       <?php
        for($i = count($files)-1; $i>=0; $i--){
        //foreach($files as $file){
         if($files[$i]->category_id == $currCategory && $files[$i]->is_approved == 0){
          foreach($user_list as $user){
           if($user->id == $files[$i]->uploader_id){
            $uploader_username = $user->username;
           }
          }
        ?>
           <div class="panel panel-default">
           <div class="panel-heading">
           <a target="_blank" href="<?=base_url("open_file/{$files[$i]->id}")?>">
           <h1 class="panel-title" style="display:inline"><?=$files[$i]->title?> </h1>
               <h5 class="inline text-info pull-right" style="display:inline">[.<?=
               $files[$i]->type?>]</h5>
           </a><br>
           posted on <p style="display:inline;" class="text-success"><?php echo date('
               F d, Y | g:i:s A', strtotime($files[$i]->date_created)); ?></p> by <p
               style="display:inline;" class="text-danger"><?=$uploader_username?></p>
           <span class="pull-right">
            <a href="<?=base_url("mod/process_delete_file/{$files[$i]->id}")?>" class
                ="text-danger"><span class="glyphicon glyphicon-trash"></span> Delete
                </a> |
            <a href="<?=base_url("mod/process_approve_file/{$files[$i]->id}")?>" class
                ="text-success"><span class="glyphicon glyphicon-ok"></span> Approve</
                a>
           </span>
           </div>
           </div>
       <?php } } ?>
   <?php }
   }
 }
}}?>
```

view_users.php

```php
<?php
if(get_cookie("searchUserCookie")) {
 $searchUserArray = json_decode(base64_decode(get_cookie("searchUserCookie")));
}
?>
<div class="row" style="margin-left:40px">
 <form method="POST"
  action="<?=base_url('admin/search_user')?>"
  class="manage-user-form row col-xs-6"
  autocomplete="false"
  >
  <div class="form-group col-xs-10">
  <label for="search_name">Search by Name</label>
  <input name="search_name"
     type="text"
     id="search_name"
     class="form-control"
     value="<?=$searchUserArray->user?>"
     >
  </div>
  <div class="col-xs-2">
   <button type="submit" class="btn" style="margin-top:26px; height: 40px;"><span
       class="glyphicon glyphicon-search text-success"></span></button>
  </div>
 </form>
 <form method="POST"
   action="<?=base_url('admin/search_user')?>"
   class="manage-user-form row col-xs-6"
   autocomplete="false"
   >
  <div class="form-group col-xs-10">
   <label for="search_hospital">Search by Hospital</label>
   <select name="search_hospital"
     id="search_hospital"
     class="form-control">
     <option value="" selected></option>
     <?php foreach($hospital_list as $hospital){ ?>
```

```
        <option value="<?=$hospital->id?>"><?=$hospital->name?></option>
      <?php } ?>
    </select>
   </div>
  <div class="col-xs-2">
   <button type="submit" class="btn" style="margin-top:26px; height: 40px;"><span
        class="glyphicon glyphicon-search text-success"></span></button>
  </div>
 </form>
</div>
<?php foreach($hospital_list as $hospital){
 if($searchUserArray->user == "" && $searchUserArray->hospital == ""){?>
 <div class="container">
  <strong><h3 class="text-success text-center"><?=$hospital->name?></h3></strong>
 </div>
 <?php foreach($user_list as $user ){
   if($user->type !=0 && $user->type !=3 && $user->hospital_id == $hospital->id){?>
    <div class="panel panel-default">
     <div class="panel-body">
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $user->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>User Type<br>
          Username<br>
          Name<br>
          Sex<br>
          Email<br>
          Mobile Number<br>
          Date Created<br>
          Approved
        </strong>
        </div>
        <div class="col-xs-9">
         <?php if($user->type == 1){ ?>
         <p class="text-success" style="display:inline">
          Administrator</p>
         <?php }
         else if($user->type == 2){ ?>
         <p class="text-primary" style="display:inline">
          Health Professional</p>
         <?php }
         else if($user->type == 3){?>
         <p class="text-danger" style="display:inline">
          Patient</p>
         <?php }?><br>
         <?=$user->username?><br>
         <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
         <?=$user->sex?><br>
         <?=$user->email?><br>
         <?=$user->mobile_no?><br>
         <?php echo date('F d, Y | g:i:s A', strtotime($user->date_created)); ?><br>
         <?=$user->is_approved?>
        </div>
      </div>
     </div>
    </div>
<?php }}}
 else if($hospital->id == $searchUserArray->hospital){?>
 <div class="container">
  <strong><h3 class="text-success text-center"><?=$hospital->name?></h3></strong>
 </div>
 <?php foreach($user_list as $user ){
   if($user->type !=0 && $user->type !=3 && $user->hospital_id == $hospital->id){?>
    <div class="panel panel-default">
     <div class="panel-body">
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $user->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>User Type<br>
```

```php
            Username<br>
            Name<br>
            Sex<br>
            Email<br>
            Mobile Number<br>
            Date Created<br>
            Approved
          </strong>
          </div>
          <div class="col-xs-9">
           <?php if($user->type == 1){ ?>
           <p class="text-success" style="display:inline">
            Administrator</p>
           <?php }
           else if($user->type == 2){ ?>
           <p class="text-primary" style="display:inline">
            Health Professional</p>
           <?php }
           else if($user->type == 3){?>
           <p class="text-danger" style="display:inline">
            Patient</p>
           <?php }?><br>
           <?=$user->username?><br>
           <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
           <?=$user->sex?><br>
           <?=$user->email?><br>
           <?=$user->mobile_no?><br>
           <?php echo date('F d, Y | g:i:s A', strtotime($user->date_created)); ?><br>
           <?=$user->is_approved?>
          </div>
         </div>
        </div>
       </div>
<?php }}}}
 if($searchUserArray->user != ""){
    foreach($user_list as $user ){
    $user_name = $user->first_name . ' ' . $user->last_name . ' ' . $user->middle_name
       ;
    if($user->type !=0 && $user->type !=3 && (strpos(strtolower($user_name),
       strtolower($searchUserArray->user)) !== false)){?>
     <div class="panel panel-default">
      <div class="panel-body">
       <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $user->image_path . ".jpg"; ?>
       <img src="<?=base_url($filename)?>" width="200" height="200">
       </div>
       <br>
       <div class="col-xs-10">
         <div class="col-xs-2" style="margin-left:10px">
         <strong>User Type<br>
           Username<br>
           Name<br>
           Sex<br>
           Email<br>
           Mobile Number<br>
           Date Created<br>
           Approved
         </strong>
         </div>
         <div class="col-xs-9">
          <?php if($user->type == 1){ ?>
          <p class="text-success" style="display:inline">
           Administrator</p>
          <?php }
          else if($user->type == 2){ ?>
          <p class="text-primary" style="display:inline">
           Health Professional</p>
          <?php }
          else if($user->type == 3){?>
          <p class="text-danger" style="display:inline">
           Patient</p>
          <?php }?><br>
          <?=$user->username?><br>
          <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
          <?=$user->sex?><br>
          <?=$user->email?><br>
          <?=$user->mobile_no?><br>
```

```php
      <?php echo date('F d, Y | g:i:s A', strtotime($user->date_created)); ?><br>
      <?=$user->is_approved?>
    </div>
   </div>
  </div>
 </div>
<?php }}
} ?>
```

manage_local_admin.php

```php
<center><strong>Approved Users</strong></center>
<br>
 <?php foreach( $local_admin_list as $admin ){
    if($admin->is_approved == 1){?>
     <div class="panel panel-default">
      <div class="panel-body">
       <h3 class="text-success text-center"><?php foreach( $hospital_list as $hospital
           ){
           if($hospital->id == $admin->hospital_id){
            echo $hospital->name;
           }
          }?>
       </h3>
       <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
           /users/' . $admin->image_path . ".jpg"; ?>
       <img src="<?=base_url($filename)?>" width="200" height="200">
       </div>
       <br><br>
       <div class="col-xs-10">
         <div class="col-xs-2" style="margin-left:10px">
         <strong>Name<br>
          Sex<br>
          Email<br>
          Mobile Number
         </strong>
         </div>
         <div class="col-xs-9">
          <?=$admin->first_name?> <?=$admin->middle_name?> <?=$admin->last_name?><br>
          <?=$admin->sex?><br>
          <?=$admin->email?><br>
          <?=$admin->mobile_no?><br><br><br>
          <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
              $admin->id}")?>" class="text-danger">
          <span class="glyphicon glyphicon-trash"></span> Delete
          </a> |
          <a href="<?=base_url("admin/process_disable_admin/{$admin->id}")?>" class="
              text-important">
           <span class="glyphicon glyphicon-ban-circle"></span> Disable
          </a></span>
         </div>
       </div>
      </div>
    </div>
 <?php }} ?>
<br>
<hr>
<br>
<center><strong>Pending Approval</strong></center><br>
 <?php foreach( $local_admin_list as $admin ){
    if($admin->is_approved == 0){?>
     <div class="panel panel-default">
      <div class="panel-body">
       <h3 class="text-success text-center"><?php foreach( $hospital_list as $hospital
           ){
           if($hospital->id == $admin->hospital_id){
            echo $hospital->name;
           }
          }?>
       </h3>
       <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
           /users/' . $admin->image_path . ".jpg"; ?>
       <img src="<?=base_url($filename)?>" width="200" height="200">
       </div>
       <br><br>
```

```
<div class="col-xs-10">
  <div class="col-xs-2" style="margin-left:10px">
  <strong>Name<br>
    Sex<br>
    Email<br>
    Mobile Number
  </strong>
  </div>
  <div class="col-xs-9">
   <?=$admin->first_name?> <?=$admin->middle_name?> <?=$admin->last_name?><br>
   <?=$admin->sex?><br>
   <?=$admin->email?><br>
   <?=$admin->mobile_no?><br><br><br>
   <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
       $admin->id}")?>" class="text-danger">
    <span class="glyphicon glyphicon-trash"></span> Delete
   </a> |
   <a href="<?=base_url("admin/process_approve_admin/{$admin->id}")?>" class="
       text-success">
    <span class="glyphicon glyphicon-ok"></span> Approve
   </a></span>
  </div>
 </div>
 </div>
 </div>
<?php }} ?>
```

manage_health_pro.php

```
<?php
if(get_cookie("searchUserCookie")) {
 $searchUserArray = json_decode(base64_decode(get_cookie("searchUserCookie")));
}
?>
<div class="container">
<div class="col-xs-12 pull-right">
<form method="POST"
  action="<?=base_url('admin/search_user')?>"
  class="manage-user-form row"
  autocomplete="false"
  >
  <div class="form-group col-xs-10">
  <label for="search_name">Search User</label>
  <input name="search_name"
     type="text"
     id="search_name"
     class="form-control"
     value="<?=$searchUserArray->user?>"
     >
  </div>
  <div class="col-xs-2">
   <button type="submit" class="btn" style="margin-top:26px; height: 40px;"><span
       class="glyphicon glyphicon-search text-success"></span></button>
  </div>
</form>
</div>
</div>
<?php if($searchUserArray->user == ""){ ?>
<center><strong>Approved Users</center>
 Health Professionals</strong>
 <?php foreach( $health_pro_list as $health_pro ){
   if($health_pro->is_approved == 1 && $health_pro->hospital_id == $cookie->
       hospitalID){?>
    <div class="panel panel-default">
     <div class="panel-body">
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $health_pro->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br><br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>Name<br>
          Sex<br>
          Email<br>
          Mobile Number
```

```php
      </strong>
      </div>
      <div class="col-xs-9">
       <?=$health_pro->first_name?> <?=$health_pro->middle_name?> <?=$health_pro->
           last_name?><br>
       <?=$health_pro->sex?><br>
       <?=$health_pro->email?><br>
       <?=$health_pro->mobile_no?><br><br><br>
       <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
           $health_pro->id}")?>" class="text-danger">
        <span class="glyphicon glyphicon-trash"></span> Delete
       </a> |
       <a href="<?=base_url("admin/process_disable_admin/{$health_pro->id}")?>"
           class="text-important">
        <span class="glyphicon glyphicon-ban-circle"></span> Disable
       </a></span>
      </div>
     </div>
    </div>
   </div>
<?php }} ?>
<br>
<strong>Patients</strong>
<?php foreach( $patient_list as $patient ){
   if($patient->is_approved == 1 && $patient->hospital_id == $cookie->hospitalID){?>
    <div class="panel panel-default">
    <div class="panel-body">
     <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
         /users/' . $patient->image_path . ".jpg"; ?>
     <img src="<?=base_url($filename)?>" width="200" height="200">
     </div>
     <br><br>
     <div class="col-xs-10">
      <div class="col-xs-2" style="margin-left:10px">
      <strong>Name<br>
        Sex<br>
        Email<br>
        Mobile Number
      </strong>
      </div>
      <div class="col-xs-9">
       <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name
           ?><br>
       <?=$patient->sex?><br>
       <?=$patient->email?><br>
       <?=$patient->mobile_no?><br><br><br>
       <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
           $patient->id}")?>" class="text-danger">
        <span class="glyphicon glyphicon-trash"></span> Delete
       </a> |
       <a href="<?=base_url("admin/process_disable_admin/{$patient->id}")?>" class
           ="text-important">
        <span class="glyphicon glyphicon-ban-circle"></span> Disable
       </a></span>
      </div>
     </div>
    </div>
   </div>
 <?php }} ?>
<br>
<hr>
<br>
<center><strong>Pending Approval</center>
 Health Professionals</strong>
 <?php foreach( $health_pro_list as $health_pro ){
   if($health_pro->is_approved == 0 && $health_pro->hospital_id == $cookie->
       hospitalID){?>
    <div class="panel panel-default">
     <div class="panel-body">
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $health_pro->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br><br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
```

```php
        <strong>Name<br>
          Sex<br>
          Email<br>
          Mobile Number
        </strong>
        </div>
        <div class="col-xs-9">
         <?=$health_pro->first_name?> <?=$health_pro->middle_name?> <?=$health_pro->
            last_name?><br>
         <?=$health_pro->sex?><br>
         <?=$health_pro->email?><br>
         <?=$health_pro->mobile_no?><br><br><br>
         <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
            $health_pro->id}")?>" class="text-danger">
          <span class="glyphicon glyphicon-trash"></span> Delete
         </a> |
         <a href="<?=base_url("admin/process_approve_admin/{$health_pro->id}")?>"
            class="text-success">
          <span class="glyphicon glyphicon-ok"></span> Approve
         </a></span>
        </div>
       </div>
      </div>
     </div>
  <?php }} ?>
  <br>
  <strong>Patients</strong>
  <?php foreach( $patient_list as $patient ){
    if($patient->is_approved == 0 && $patient->hospital_id == $cookie->hospitalID){?>
     <div class="panel panel-default">
      <div class="panel-body">
       <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $patient->image_path . ".jpg"; ?>
       <img src="<?=base_url($filename)?>" width="200" height="200">
       </div>
       <br><br>
       <div class="col-xs-10">
         <div class="col-xs-2" style="margin-left:10px">
         <strong>Name<br>
           Sex<br>
           Email<br>
           Mobile Number
         </strong>
         </div>
         <div class="col-xs-9">
          <?=$patient->first_name?> <?=$patient->middle_name?> <?=$patient->last_name
             ?><br>
          <?=$patient->sex?><br>
          <?=$patient->email?><br>
          <?=$patient->mobile_no?><br><br><br>
          <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
             $patient->id}")?>" class="text-danger">
           <span class="glyphicon glyphicon-trash"></span> Delete
          </a> |
          <a href="<?=base_url("admin/process_approve_admin/{$patient->id}")?>" class
             ="text-success">
           <span class="glyphicon glyphicon-ok"></span> Approve
          </a></span>
         </div>
       </div>
      </div>
     </div>
  <?php }} ?>
 <?php }
   else{
     foreach( $user_list as $user ){
       $user_name = $user->first_name . ' ' . $user->last_name . ' ' . $user->
          middle_name;
      if((strpos(strtolower($user_name), strtolower($searchUserArray->user)) !== false)
          && $user->hospital_id == $cookie->hospitalID){?>
      <div class="panel panel-default">
       <div class="panel-body">
        <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/
           images/users/' . $user->image_path . ".jpg"; ?>
        <img src="<?=base_url($filename)?>" width="200" height="200">
        </div>
```

```
      <br><br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>Name<br>
          Sex<br>
          Email<br>
          Mobile Number
        </strong>
        </div>
        <div class="col-xs-9">
         <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
         <?=$user->sex?><br>
         <?=$user->email?><br>
         <?=$user->mobile_no?><br><br><br>
         <span class="pull-right"><a href="<?=base_url("admin/process_delete_admin/{
             $user->id}")?>" class="text-danger">
         <span class="glyphicon glyphicon-trash"></span> Delete
         </a> |
         <a href="<?=base_url("admin/process_disable_admin/{$user->id}")?>" class="
             text-important">
          <span class="glyphicon glyphicon-ban-circle"></span> Disable
         </a></span>
        </div>
      </div>
     </div>
    </div>
  <?php }} } ?>
```

manage_moderator.php

```
<center><strong>Approved Users</strong></center>
<br>
  <?php foreach( $moderator_list as $moderator ){
   if($moderator->is_approved == 1){
   foreach($user_list as $user){
    if($user->id == $moderator->health_pro_id){ ?>
    <div class="panel panel-default">
     <div class="panel-body">
      <h3 class="text-success text-center"><?php foreach($category_list as $category)
          {
         if($category->id == $moderator->category_id){ ?>
          <?=$category->name?>
        <?php }} ?>
      </h3>
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
          /users/' . $user->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br><br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>Name<br>
          Sex<br>
          Email<br>
          Mobile Number<br>
          Insitution
        </strong>
        </div>
        <div class="col-xs-9">
         <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
         <?=$user->sex?><br>
         <?=$user->email?><br>
         <?=$user->mobile_no?><br>
         <?php foreach( $hospital_list as $hospital){
           if($hospital->id == $user->hospital_id){
            echo $hospital->name;
           }
         }?><br><br><br>
         <span class="pull-right"><a href="<?=base_url("admin/process_delete_mod/{
             $moderator->id}")?>" class="text-danger">
         <span class="glyphicon glyphicon-trash"></span> Delete
         </a> <!--|
         <a href="<?=base_url("admin/process_disable_mod/{$moderator->id}")?>" class
             ="text-important">
          <span class="glyphicon glyphicon-ban-circle"></span> Disable
```

```
        </a></span>-->
      </div>
     </div>
    </div>
   </div>
 <?php }}}} ?>
<br>
<hr>
<br>
<center><strong>Pending Approval</strong></center><br>
  <?php foreach( $moderator_list as $moderator ){
   if($moderator->is_approved == 0){
    foreach($user_list as $user){
     if($user->id == $moderator->health_pro_id){ ?>
    <div class="panel panel-default">
     <div class="panel-body">
      <h3 class="text-success text-center"><?php foreach($category_list as $category)
         {
         if($category->id == $moderator->category_id){ ?>
          <?=$category->name?>
        <?php }} ?>
      </h3>
      <div class="col-xs-2" style="padding-left:0px"><?php $filename = 'assets/images
         /users/' . $user->image_path . ".jpg"; ?>
      <img src="<?=base_url($filename)?>" width="200" height="200">
      </div>
      <br><br>
      <div class="col-xs-10">
        <div class="col-xs-2" style="margin-left:10px">
        <strong>Name<br>
         Sex<br>
         Email<br>
         Mobile Number
         Insitution
        </strong>
        </div>
        <div class="col-xs-9">
         <?=$user->first_name?> <?=$user->middle_name?> <?=$user->last_name?><br>
         <?=$user->sex?><br>
         <?=$user->email?><br>
         <?=$user->mobile_no?><br>
         <?php foreach( $hospital_list as $hospital){
           if($hospital->id == $user->hospital_id){
            echo $hospital->name;
           }
         }?><br><br><br>
         <span class="pull-right"><a href="<?=base_url("admin/process_delete_mod/{
            $moderator->id}")?>" class="text-danger">
         <span class="glyphicon glyphicon-trash"></span> Delete
         </a> |
         <a href="<?=base_url("admin/process_approve_mod/{$moderator->id}")?>" class
            ="text-success">
         <span class="glyphicon glyphicon-ok"></span> Approve
         </a></span>
        </div>
      </div>
     </div>
    </div>
  <?php }}}} ?>
```

routes.php

```
<?php
defined('BASEPATH') OR exit('No direct script access allowed');

/*
| -------------------------------------------------------------------------
| URI ROUTING
| -------------------------------------------------------------------------
| This file lets you re-map URI requests to specific controller functions.
|
| Typically there is a one-to-one relationship between a URL string
| and its corresponding controller class/method. The segments in a
| URL normally follow this pattern:
```

```
|
| example.com/class/method/id/
|
| In some instances , however , you may want to remap this relationship
| so that a different class/function is called than the one
| corresponding to the URL.
|
| Please see the user guide for complete details:
|
| https ://codeigniter.com/user_guide/general/routing.html
|
| -------------------------------------------------------------------------
| RESERVED ROUTES
| -------------------------------------------------------------------------
|
| There are three reserved routes:
|
| $route['default_controller '] = 'welcome ';
|
| This route indicates which controller class should be loaded if the
| URI contains no data. In the above example , the "welcome" class
| would be loaded.
|
| $route['404_override '] = 'errors/page_missing ';
|
| This route will tell the Router which controller/method to use if those
| provided in the URL cannot be matched to a valid route.
|
| $route['translate_uri_dashes '] = FALSE;
|
| This is not exactly a route, but allows you to automatically route
| controller and method names that contain dashes. '-' isn't a valid
| class or method name character , so it requires translation.
| When you set this option to TRUE, it will replace ALL dashes in the
| controller and method URI segments.
|
| Examples: my-controller/index -> my_controller/index
|   my-controller/my-method -> my_controller/my_method
*/
$route['default_controller '] = 'CKDMS_Controller ';
$route['404_override '] = '';
$route['translate_uri_dashes '] = FALSE;


/*
User-defined
*/

$route['login '] = 'CKDMS_Controller/login ';
$route['signup '] = 'CKDMS_Controller/signup ';
$route['logout '] = 'CKDMS_Controller/logout ';
$route['user/add '] = 'CKDMS_Controller/processAddUser ';
$route['user/add_admin '] = 'CKDMS_Controller/processAddAdmin ';
$route['signup/health_pro '] = 'CKDMS_Controller/signup_health_pro ';
$route['signup/local_admin '] = 'CKDMS_Controller/signup_local_admin ';

$route['admin/process_approve_admin/(:any) '] = 'CKDMS_Controller/processApproveAdmin/
    $1 ';
$route['admin/process_disable_admin/(:any) '] = 'CKDMS_Controller/processDisableAdmin/
    $1 ';
$route['admin/process_delete_admin/(:any) '] = 'CKDMS_Controller/processDeleteAdmin/$1
    ';
$route['signup/moderator '] = 'CKDMS_Controller/processSignupMod ';

$route['admin/update_daily_sched '] = 'CKDMS_Controller/processUpdateDailySched ';
$route['admin/add_event '] = 'CKDMS_Controller/processAddEvent ';
$route['admin/search_user '] = 'CKDMS_Controller/processSearchUser ';

$route['search_title '] = 'CKDMS_Controller/processSearchTitle ';

$route['admin/process_approve_mod/(:any) '] = 'CKDMS_Controller/processApproveMod/$1 ';
$route['admin/process_disable_mod/(:any) '] = 'CKDMS_Controller/processDisableMod/$1 ';
$route['admin/process_delete_mod/(:any) '] = 'CKDMS_Controller/processDeleteMod/$1 ';
```

```
$route['forgot_password'] = 'CKDMS_Controller/processForgotPassword';

$route['health_pro/approve_appointment/(:any)'] = 'CKDMS_Controller/
    processApproveAppointment/$1';
$route['health_pro/disapprove_appointment/(:any)'] = 'CKDMS_Controller/
    processDisapproveAppointment/$1';

$route['mod/process_approve_post/(:any)'] = 'CKDMS_Controller/processApprovePost/$1';
$route['mod/process_delete_post/(:any)'] = 'CKDMS_Controller/processDeletePost/$1';
$route['mod/process_delete_reply/(:any)'] = 'CKDMS_Controller/processDeleteReply/$1';

$route['mod/process_approve_file/(:any)'] = 'CKDMS_Controller/processApproveFile/$1';
$route['mod/process_delete_file/(:any)'] = 'CKDMS_Controller/processDeleteFile/$1';

$route['set_recepient/(:any)'] = 'CKDMS_Controller/setRecepient/$1';

$route['send_message'] = 'CKDMS_Controller/processSendMessage';
$route['add_appointment'] = 'CKDMS_Controller/processAddAppointment';
$route['new_forum_post'] = 'CKDMS_Controller/processNewForumPost';
$route['submit_reply'] = 'CKDMS_Controller/processNewReply';
$route['upload_article'] = 'CKDMS_Controller/processUploadArticle';
$route['open_file/(:any)'] = 'CKDMS_Controller/processOpenFile/$1';
$route['download_file/(:any)'] = 'CKDMS_Controller/processDownloadFile/$1';
$route['upload_dp'] = 'CKDMS_Controller/processUploadDP';
$route['change_password'] = 'CKDMS_Controller/processChangePass';
$route['change_pass_nvm'] = 'CKDMS_Controller/changePassNVM';
$route['patient/new_condition'] = 'CKDMS_Controller/processNewCondition';
$route['patient/new_chart_entry'] = 'CKDMS_Controller/processNewEntry';
$route['generate_chart'] = 'CKDMS_Controller/processGenerateChart';
$route['download_chart/(:any)'] = 'CKDMS_Controller/processDownloadChart/$1';

$route['medcon_set_interval'] = 'CKDMS_Controller/setIntervalMedCon';

$route['health_pro/view_patient_medcon/(:any)'] = 'CKDMS_Controller/viewPatientMedCon
    /$1';
$route['health_pro/view_patient_charts/(:any)'] = 'CKDMS_Controller/viewPatientCharts
    /$1';
$route['health_pro/add_recommendation/(:any)'] = 'CKDMS_Controller/
    processAddRecommendation/$1';
$route['health_pro/transfer_patient'] = 'CKDMS_Controller/processTransferPatient';

$route['health_pro/archive_record/(:any)/(:any)'] = 'CKDMS_Controller/
    processArchiveRecord/$1/$2';
$route['set_category/(:any)'] = 'CKDMS_Controller/setForumCategory/$1';

$route['clear_notifications'] = 'CKDMS_Controller/processClearNotification';


//PAGE ROUTERS

$route['pending_account'] = 'CKDMS_Controller/pendingAccount';
$route['pending_account_nvm'] = 'CKDMS_Controller/pendingAccount2';
$route['invalid_email_nvm'] = 'CKDMS_Controller/invalidEmail2';

$route['post_file_notified'] = 'CKDMS_Controller/processPostFileNotified';

$route['back'] = 'CKDMS_Controller/back';
$route['add'] = 'CKDMS_Controller/addUser';
$route['addLA'] = 'CKDMS_Controller/addUser_LA';
$route['addHP'] = 'CKDMS_Controller/addUser_HP';

$route['home'] = 'CKDMS_Controller/home';
$route['profile'] = 'CKDMS_Controller/userProfile';
$route['admin/manage_health_pro'] = 'CKDMS_Controller/manageHealthPro';
$route['admin/manage_local_admin'] = 'CKDMS_Controller/manageLocalAdmin';
$route['admin/manage_moderator'] = 'CKDMS_Controller/manageMods';
$route['admin/manage_schedule'] = 'CKDMS_Controller/manageSchedule';
$route['admin/view_users'] = 'CKDMS_Controller/viewUsers';
$route['messages'] = 'CKDMS_Controller/messages';
$route['health_pro/view_patients'] = 'CKDMS_Controller/viewPatients';
$route['health_pro/add_patient'] = 'CKDMS_Controller/addPatient';
$route['forum'] = 'CKDMS_Controller/forum';
$route['manage_forum'] = 'CKDMS_Controller/manageForum';
$route['research_hub'] = 'CKDMS_Controller/researchHub';
$route['appointments'] = 'CKDMS_Controller/viewAppointments';
```

```
$route['view_med_con'] = 'CKDMS_Controller/viewMedCon';
$route['charts'] = 'CKDMS_Controller/viewCharts';
```

XI.   Acknowledgement

Hi.

First and foremost, this SP would not be possible without the help of the Lord Almighty for without Him and His guidance, I'd be nowhere as near to my future as I am now.

I would like to thank my wonderful parents for their unyielding love and support: financially, emotionally, and in all other aspects as well. Thank you for being patient and not giving up on me all throughout these years. Para sa inyo po lahat ng paghi-hirap at pagpupunyagi ko sa pag-aaral. I hope that this is the start of me giving back to all the sacrifices you've made for me and Maan. Mahal na mahal na mahal ko po kayo. (Hello Maan! Mahal din kitaaaaa. ;))

A big thanks to Dr. Vincent Peter Magboo for guiding me as well throughout my SP adventure. Salamat po sa lahat ng tulong at pasensya kapag maliit 'yung size ng screenshot. Good luck sir to your future endeavors! God bless! Hihi. :)

Special mention kay Rosselle Taruc sa lahat ng tulong, encouragements, and cheer-leading sa paggawa ko ng SP! Salamat sa suporta. He he. :)))))

Hello kay Sir Chua! na nakaclose din namin during 4th year. Thanks po sa lahat ng pangbubully hahaha jk, and support din po(!!) and concern para sa'min. :)))

BIG THANK YOU KAY ATE EDEN!!!!!!!! PUPULUTIN PO KAMI SA KANGKUN-GAN KUNG WALA KAYO. WE LOVE YOU PO!!! *heart*

Mwa mwa to Hotties, sasablay tayo!!!! Yay, salamat sa lahat ng memories and friendship and marami pa na hindi magkakasya dito. Huhuhu. (ayoko na baka maiyak me) :')

Sa buong Block 12 din! Salamat sa lahat lahat ng pinagsamahan natin! Yolo sa outing!!! Hihihi. :)

Shoutout to the following:

1. Lara (ilibre mo na kami! salamat sa support beh!)

2. Dignidad (helloooooooo! mahal ko kayo hihi)

3. MOrg (salamat sa tugtugan, detox ko kayo sa toxic na acads lyf ko *heart*)

4. Sa mga pinsan kong nanlilibre ng pagkain!!

5. Kopiko 78 and Barista's Best ;)

6. Mga itlog sa tindahan ni Ate Abek

7. Skittles

8. Bakery na gumagawa ng mojacko

Salamat UP.

Marami pa kong mga dapat pasalamatan pero di ko pa maisip sa ngayon, pero salamat pa rin!

To God be the glory!