

# Web Based Chronic Kidney Disease Surveillance System

# A dissertation submitted for the Degree of Master of Information Technology

# A.M.S.M. Atapattu

# University of ColomboSchool of Computing

2017



# Declaration

The thesis is my original work and has not been submitted previously for a degree at this or any other university/institute.

To the best of my knowledge it does not contain any material published or written by another person, except as acknowledged in the text.

Student Name: A.M.S.M.Atapattu

Registration Number: 2014/MIT/005

Index Number: 14550052

Signature:

Date:

This is to certify that this thesis is based on the work of Mr. A.M.S.M.Atapattuunder my supervision. The thesis has been prepared according to the format stipulated and is of acceptable standard.

Certified by:

Supervisor Name: Mr. G.K.A. Dias

Signature:

Date:

# Abstract

This Web base Application, developed based on comprehensive evidences and the expertise of the specialist doctors in the country, is intended to be used by the primary care doctors. The intention of these Web base Application is to help doctors in decision making in low resource settings ensuring the best plan of management for every patent.

The shared care by the primary care doctors in the referral health care facilities and the specialist doctors based in tertiary care facilities will maximize the benefits to both patients and the Health Service.

Here, we describe the process and methods used to establish this national Chronic Kidney Disease Surveillance System. The major Chronic Kidney Disease components covered include burden (incidence and prevalence), risk factors, awareness, health consequences, processes and quality of care, and health system capacity issues. Goals include regular reporting of the data collected, plus development of a dynamic project web site and periodic issuance of a Chronic Kidney Disease fact sheet.

This system will provide an important foundation for widespread efforts toward primary prevention, earlier detection, and implementation of optimal disease management strategies, with resultant increased awareness of Chronic Kidney Disease, decreased rates of Chronic Kidney Disease progression, lowered mortality, and reduced resource utilization.

A Web-based consultation system enables family physicians to consult a nephrologist about a patient with chronic kidney disease. Relevant data are exported from the patient's electronic file to a protected digital environment from which advice can be formulated by the nephrologist. The primary purpose of this study was to assess the potential of telenephrology to reduce in-person referrals.

This System used in technologies are PHP, CSS, Bootstrap and Java scripts languages. Data based Designed in MYSQL.

# **TABLE OF CONTENTS**

ABSTRACT	II
TABLE OF CONTENTS	
TABLE OF FIGURES	V
LIST OF TABLE	VI
LIST OF ABBREVIATIONS	VIII
CHAPTER 1: INTRODUCTION	1
1.1 Problem Introduction	1
1.2 OBJECTIVE	2
CHAPTER 2: BACKGROUND	4
2.1 Proposed System	4
2.2 Functional Requirements	6
2.3Non- Functional Requirements	11
2.4GOALS OF PROPOSED SYSTEM	12
2.5 Software Requirement Specification	13
2.6 Feasibility Study	14
2.7 ARCHITECTURE OF THE PROPOSED SYSTEM	17
2.8 WORK BREAKDOWN STRUCTURE OF THE PROPOSED SYSTEM	19
2.9 Use Case of proposed system	20
2.10 Activity diagram of the proposed system	21
CHAPTER 3: METHODOLOGY /ANALYSIS AND DESIGN	
24.04	24
3.1 METHODOLOGY FOLLOWED	
3.2 ANALYSIS AND DESIGN	
OVERALL SYSTEM DATAFLOW DIAGRAM	
3.3 SKETCHING	
3.4 DESIGNING IN PHOTOSHOP	
3.5 IMPLEMENTATION	
3.6. PREPARATION OF DEVELOPMENT ENVIRONMENT	
3.7. DATABASE DESIGN	
3.8. STRUCTURE OF FILES	
3.9ER DIAGRAM OF PROPOSED SYSTEM	
3.10 DATA BASE TABLE STRUCTURES OF PROPOSED SYSTEM	
CHAPTER 4: EVOLUTION	62
4.1. TESTING	62
4.2. The Testing Spectrum	62
4.3. Test Plan	62
4.4. Test Cases	64
4.4 Concluding Remarks	70
4.5. Evaluation of the Achievement	70
4.6. Lesson Learned During the Project	71
References	72

MOH Area Registration 79
PHI Area Registration82
LOGIN FUNCTION
MOH User Login85
RDHS User Login
EPID User Login90
Patient Registration Use Case Diagram92
Appendix B- User Manual
Appendix C

# **TABLE OF FIGURES**

FIGURE 1: PROPOSED SYSTEM INTERFACE	
FIGURE 2: ARCHITECTURE OF PROPOSED SYSTEM	17
FIGURE 3 : PROPOSE SYSTEM PHASE	
FIGURE 4: WORK BRAKE DOWN DIAGRAM	19
FIGURE 5: SYSTEM USE CASE DIAGRAM	20
FIGURE 6: SYSTEM ACTIVITY DIAGRAM	21
FIGURE 7: WATERFALL MODEL	23
FIGURE 8: WATERFALL METHODOLOGY OF SYSTEM DEVELOPMENT LIFE CYCLE	24
Figure 9: Main Interface	
FIGURE 10: CSS RULE STRUCTURE	32
FIGURE 11: DATA BASE CONNECTION FILE	36
FIGURE 12: STRUCTURE FILE	
Figure 13: Login Page	
Figure 14 : Home Page	
FIGURE 15 : PATIENT REGISTRATION – PART1	40
FIGURE 16 : PATIENT REGISTRATION -PART2	40
FIGURE 17 : PATIENT REGISTRATION -PART3	41
FIGURE 18: ER DIAGRAM	47

# LIST OF TABLE

TABLE 1 : FUNCTIONS	2
Table 2 : Proposed System	6
Table 3 : Register Patient	7
Table 4 : Abdomen Table	48
Table 5 : Admission Table	48
Table 6 : Biochemistry Table	49
TABLE 7 : CLINICAL EXAMINATION	50
TABLE 8 : CLINIC VISIT	50
Table 9 : Comobidities Table	50
Table 10 : Comobidities Subsection Table	51
TABLE 11 : DATES TABLE	51
TABLE 12 : DEATH NOTIFICATION TABLE	51
Table 13 : Diagnosis Table	51
TABLE 14 : DIALYSIS TABLE	51
TABLE 15 : DISTRICT TABLE	52
TABLE 16 : DPDHS TABLE	52
TABLE 17 : DS DIVISION TABLE	52
TABLE 18 : GENITARIA TABLE	52
TABLE 19 : GN DIVISION TABLE	
Table 20 : Histological Table	
Table 20 · Hormone Assay Table	53
Tari e 22 : Hospitai ization Tari e	54
TABLE 22 · HOSHIALIZATION TABLE	54
TABLE 23 · MOLI TABLE	54
TADLE 24 . MONTHADLE	54
TADLE 25 - MIONTHS TADLE	54
TABLE 20 . INERVE STSTEIN TABLE	54
TABLE 27 . OTHER COMOBIDITIES TABLE	
TABLE 20 : PATIENT TABLE	50
TABLE 29 : PATIENT ADDRESS TABLE	50
TABLE 30 : PATIENT ALLERGY TABLE	50
TABLE 31 : PATIENT BLOOD GROUP TABLE	56
TABLE 32 : PATIENT BP TABLE	5/
TABLE 33 : PATIENT COMOBIDITIES TABLE	57
TABLE 34 : PATIENT CONTACT TABLE	57
TABLE 35 : PATIENT DIAGNOSIS TABLE	57
TABLE 36 : PATIENT DIALYSIS TABLE	57
TABLE 37 : PATIENT MEDICINE TABLE	57
TABLE 38 : PATIENT OTHER COMOBIDITIES TABLE	58
Table 39 : Patient Stage Table	58
TABLE 40 : PHARMACEUTICAL TABLE	58
Table 41 : Plan of Management Table	58
TABLE 42 : PROVINCE TABLE	59
Table 43 : Radiological Studies Table	59
Table 44 : Respiratory System Table	59
Table 45 : Screening for Infection Table	60
TABLE 46 : URINE ANALYSIS TABLE	60
Table 47 : User Group Table	61
TABLE 48 : USERS TABLE	61

TABLE 49 : USER CONTACTS TABLE	61
TABLE 50 : WEBTESTING CHECKLIST	63
TABLE 51:TEST PLAN FOR LOGIN MODULE	64
TABLE 52:TEST PLAN FOR PATIENT REGISTRATION	64
TABLE 53:TEST PLAN FOR VIEW PATIENT REGISTRATION	64
TABLE 54:TEST PLAN FOR CLINIC VISIT REGISTRATION	64
TABLE 55:TEST PLAN FOR HOSPITAL ADMISSION REGISTRATION	65
TABLE 56:TEST PLAN FOR ADD DIALYSIS	65
TABLE 57:TEST PLAN FOR ADD DONOR RECIPIENT EVALUATION	65
TABLE 58:TEST PLAN FOR FIELD UPDATE	65
TABLE 59:TEST PLAN FOR DEATH NOTIFICATION	66
TABLE 60:TEST PLAN FOR REPORT GENERATION PROVINCE WISE	66
TABLE 61:TEST PLAN FOR REPORT GENERATION DISTRICT WISE	67
TABLE 62:Test plan for report generation Institution wise	69
TABLE 63:TEST PLAN FOR REPORT GENERATION MOH WISE	69

# LIST OF ABBREVIATIONS

- CKD Chronic Kidney Disease
- GUI Graphical user Interface
- OS Operation System
- RAM Random Access Memory
- CPU Central Processing Unit
- HD Hard Disk
- RDHS Regional Director of Health Service
- MOH Medical Officer of Health
- PHN Personal health Number
- RDE Recipient Donor Evaluations

# **Chapter 1: Introduction**

Surveillance of Chronic Kidney Disease Management System is powerful, flexible, and easy to use and is designed and developed to deliver real conceivable benefits to hospitals.

Surveillance of Chronic Kidney Disease Management System is designed for multispecialty hospitals, to cover a wide range of kidney patient's administration and management processes. It is an integrated end-to-end Surveillance of Chronic Kidney Disease Management System that provides relevant information across the hospital to support effective decision making for kidney patient's administration.

This web based application is designed to accommodate electronic kidney disease clinical patient management. It is a dedicated clinical and patient management system designed specifically to satisfy the exacting demands of different members of the renal multidisciplinary team.

## **1.1 Problem Introduction**

#### Lack of immediate retrievals: -

The information is very difficult to retrieve and to find particular information like- E.g. - To find out about the patient's medical history, the user has to go through various registers. This results in inconveniences and wastage of time.

#### Lack of immediate information storage: -

The information generated byvarious transactions takes time and efforts to be stored at right place.

#### Lack of prompt updating: -

Various changes to information like patientdetails or immunization details of child are difficult to make as paper work isinvolved.

#### Preparation of accurate and prompt reports: -

This becomes a difficulttask as information is difficult to collect from various registers.

# **1.2 Objective**

Overview of the available functions

Component Component Name		Sub Components			
Patient Management		Register new patient			
		Update patient information			
		Search patient information			
	Patient follow up	Clinic visit			
		Add clinic visit			
		Hospital Admission			
		Add hospital admission			
		Dialysis			
		Add Dialysis event			
		<b>Recipient Donor Evaluation</b>			
		Add RDE event			
		Add Death Notification			
	Report Generation	Institutional Reports			
		Patient Count Report			
		Gender Distribution of count			
		District Reports			
		Patient Count Report			
		Gender Distribution of count			
		Province Reports			
		Patient Count Report			
		Gender Distribution of count			
		DS Division/MOH Report			
		Patient Count Report			
		Gender Distribution of count			
		Individual Patient Reports			

Table 1 : Functions of proposed system

Project is related to Surveillance of Chronic Kidney Disease Management System.

The project maintains two levels of users:-

- Administrator Level
- User Level
  - I. Hospital Level
  - II. RDHS Level
- III. Provincial Level
- IV. MOH Level

Main facilities available in this project are:-

- Maintaining records of hospitalization /clinic visits patients.
- Maintaining patients diagnosis details, advised tests to be done.
- Providing different test facilities to a doctor for diagnosis of patients.
  - i. X-Ray Report
  - ii. Urine Test Report
  - iii. Stool Test Report
  - iv. Sonography Test Report
  - v. Gastroscopy Test Report
  - vi. Colonoscopy Test Report
  - vii. Blood Test Report
  - viii. Biochemistry Test Report
    - ix. Death Notification Reports
- Maintaining patient's injection entry records.
- Maintaining patient's prescription, medicine and diet advice details.
- Maintaining backup of data as per user requirements (between mentioned dates).
- If user forgets his/her password then it can be retrieved by hint question.
- In this project collection of data is from different pathology labs.
- Results of tests, prescription, precautions and diet advice will be automatically updated in the database.
- Related test reports, patient details report, prescription and billing reports can be generated as per user requirements.
- User or Administrator can search a patient's record by his/her name or their registration date.

# **Chapter 2: Background**

# 2.1 Proposed System

This software application is designed to electronically manage kidney disease patient information. It is a dedicated clinical and patient management system designed specifically to satisfy the exacting demands of different members of the real multidisciplinary team. The proposed system consists of four major components. The following table gives an overview of components and subcomponents of the intended system.

Component	Component Name	Sub Components	
1.	Patient Management	Register new patient	
		Update patient information	
		Search patient information	
	User Management	Manage Users	
		Create new user (Including adding user level and basic information)	
		View all users	
		Manage user Groups	
		Create new user group	
		View all user groups	
		View all users according to groups	
	Patient follow up	Clinic visit	
		Add clinic visit	
		Update clinic visit	
		Delete clinic visit	
		View clinic visit	
		Hospital Admission	
		Add hospital admission	
		Edit hospital admission	
		Delete hospital admission	

	View hospital admission
	Dialysis
	Add Dialysis
	Edit Dialysis event
	Delete Dialysis event
	View Dialysis event
	Recipient Donor Evaluation
	Add RDE event
	Edit RDE event
	Delete Dialysis event
	View Dialysis event
	Post KT clinic
	Add Post KT clinic visit
	Edit Post KT clinic visit
	Delete Post KT clinic visit
	View Dialysis event
	Death Notification
	Add Death Notification event
	Edit Death Notification event
	Delete Death Notification event
	View Death Notification event
Report Generation	Institutional Reports
	Patient Count Report
	Age Distribution(Median, Mode)
	Gender Distribution
	Clinic visits report
	District Reports
	Patient Count Report



Table 2 : Proposed System Requirements

# **2.2 Functional Requirements**

#### 2.2.1 Register patients

Available functionality in the current system along with;

The system produced a unique number for each patient (Number configuration) which will be available just after registering a new patient in printable format with bar code compatibility.

The unique number shall comply with the PHN (Personal health Number) specified by the national e-health guidelines and standards- NeGS 1.0[8]

Point of Issue number	Serial Number	Check
		Digit
XXXX	XXX XXX	С
(4 digit alpha numeric number)	(6 digit numeric )	

#### Table 3 : Register Patient

#### 2.2.2 User Management

The system created new users with the following basic information

- 1. Name
- 2. Age
- 3. Gender
- 4. Position
- 5. Institution
- 6. Password
- 7. User level
- The system has a user to create a new password and edit/ update the user profile.
- The system has a list all the users who are registered.
- The system has a list all user groups.
- The system has a create new user group levels and reallocate users to new user groups.
- The system has a list all the registered users according to the user levels.
- The system has the administrator level users to edit/delete user profiles/ user levels and user level profiles.
- The system allocated specific functionalities (In above all four components) to different user levels.

#### 2.2.3 Patient follow-up

#### Search patient

- The system searched registered patient profiles by using the unique number the system is generating/ NIC number/ a part or the full surname, by institution.
- The searched patient profile should list all the clinic visits/ hospital admission events/ Dialysis events/ RDE events/ Post KT clinic visits/ Death Notifications which are relevant to that particular patient.

#### **Clinic Visits**

- The system add the clinic visit to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a clinic visit.
- The system delete the relevant information of a clinic visit after confirmation.

#### **Hospital Admission**

- The system add the hospital admission event to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a hospital admission event.
- The system delete the relevant information of a hospital admission event after confirmation.

#### **Dialysis event**

- The system add the Dialysis event to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a Dialysis event.
- The system delete the relevant information of a Dialysis event after confirmation.

#### **Recipient Donor Evaluation**

- The system add the Recipient Donor Evaluation event to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a Recipient Donor Evaluation event.

• The system delete the relevant information of a Recipient Donor Evaluation event after confirmation.

#### Post Kidney Transplant clinic

- The system add the Post Kidney Transplant clinic visit to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a Post Kidney Transplant clinic visit.
- The system delete the relevant information of a Post Kidney Transplant clinic visit after confirmation.

#### **Death Notification**

- The system add the Death Notification to a registered patient depending on searching for the relevant patient by the unique ID, NIC number or the surname or institution.
- The system update/edit the relevant information of a Death Notification.
- The system delete the relevant information of a Death Notification after confirmation.
- The Immediate Cause of Death, Underlying Cause of Death and Contributory Causes of death has entered in ICD-10.

#### 2.2.3 Reports

- Reports generated for individual patients and aggregate reports as described below.
- Report generation has a selected/different user levels.
- All reports downloaded in excel/ pdf format.

#### **Aggregate Reports:**

- Patient counts depicted as count, percentage and density in pivot tables, trend lines and in maps according to the institution/ MOH/ RDHS/District/ Provincial and Island wide values depending on the time period.
- Patient lists generated according to the institution/ MOH/ RDHS/ Provincial and Island wide values depending on the time period.

• The selection of the time distribution, location, information type and data view type shall be according to the below mock-up.

National Renal Registry Epidemiology Unit   Ministry of Health and Indigenous Medicine Sri Lanka						
Home	Patient Managemen	t~ User Management~	Patient Follow-up~	Reports~	Contact Us	
Last Login	í.					• 🔔 My Account
Prov	Province : Year :	9 OSIS Repo - Select Province - Select Year	ort  ~  ~			
	Time Distribution :	Select Time Distribution	1- 💙			
	Diagnosis :	Select Diagnosis	~			
	Diagnosis Stage :	Stage0	~			
		Reset 🕜	, , , , , , , , , , , , , , , , , , ,		Search	hQ

#### Figure 1:proposed system interface

Patient lists and counts (as count, percentage and density in pivot tables, trend lines and in maps according to the institution/ MOH/ RDHS/District/ Provincial and Island wide values depending on the time periodfigure 2

#### **Individual Reports:**

The system generated individual reports inclusive of registration details, a summary of Clinic Visits, Hospital Admissions, Dialysis events, Recipient Donor Evaluations, Post Kidney Transplant clinic visits and Death Notification. (This summary has a tabulated format where each event is summarized into date, event and the location  $\rightarrow$  e.g. 2016/07/10 ------Clinic Visit 01 ------TH Anuradhapura)

The summary events has a linked with the original entry.

The individual report has an inclusive of all the history, examination, investigation and intervention details regarding the patient.

Individual reports/ parts of the individual reports/ entries of the reports shall be editable and delectable by permitted user levels.

#### 2.2.5 Home

The home page contains Main article and news tag lines leading to articles and those should be deleted/ updated or changed by administrative level users.

The home page also contains important links to relevant sites and download links to necessary documents/ literature.

The home page contain view/edit profile, change password and log out links to the logged in user.

#### 2.2.6 About

The 'about' page contain the links to contact details of necessary units and personnel along with a map and other preferred details by the Epidemiology unit.

#### 2.3Non-Functional Requirements

These are the non-functional requirements of this project:-

- The system scalable depending on the future requirements.
- The software interface follow reputed international design conventions which allow for familiar location of drop down menus, help buttons (radio buttons and other user friendly interface options etc.)
- Usability standards maintained (i.e. proper and accepted screen element density, layout and flow, colours, UI metaphors, keyboard shortcuts)
- More than five attempts at login and failure has a produce a red flag to system administrator.
- The system log off of the current profile if there's no detectable user activity within five minutes.
- The system comply with the latest security guidelines in coding [9] to protect from any possible threat to the nationally important data.

- The software technically safeguarded according to HIPAA [30] rules as this contains individual and sensitive clinical data.
- The system fine-tuned to minimize the resource utilization while functioning.
- The system reliable and not lose any data in any transaction while functioning.
- All the functions of the system has a accurate and robust.
- Inputs validated according to the preference of the relevant authorities of the Epidemiology Unit and the input errors has a returned in red with appropriate message box and alert sound.
- The system maintain an audit trail to visualize the timestamps and user details per specific transaction.
- The system scalable to accommodate Sinhala and Tamil languages
- The system independent of the operating system and the browser platforms of individual users.
- The system adopt the Lanka Interoperability Framework where necessary[31]
- The system used the HL7 (Health Level 7) standard for the purpose of Data Exchange [32]
- The system a comply with the national e-health standards and guidelines [33] where necessary.
- The system send automatic back-ups of the system and the database to a referenced location on weekly basis
- Response times, Processing times and Query and Reporting times has a not lag more than 5 seconds.

# 2.4Goals of proposed system

1. **Planned approach towards working:** - The working in the organization will be well planned and organized. The data will be stored properly in data stores, which will help in retrieval of information as well as its storage.

2. Accuracy: - The level of accuracy in the proposed system will be higher. All operation would be done correctly and it ensures that whatever information is coming from the center is accurate.

3. **Reliability:** - The reliability of the proposed system will be high due to the above stated reasons. The reason for the increased reliability of the system is that now there would be proper storage of information.

4. **No Redundancy:** - In the proposed system utmost care would be that no information is repeated anywhere, in storage or otherwise. This would assure economic use of storage space and consistency in the data stored.

5. **Immediate retrieval of information:** - The main objective of proposed system is to provide for a quick and efficient retrieval of information. Any type of information would be available whenever the user requires.

6. **Immediate storage of information: -** In manual system there are manyproblems to store the largest amount of information.

7. **Easy to Operate:** - The system should be easy to operate and should be such that it can be developed within a short period of time and fit in the limited budget of the user.

# 2.5 Software Requirement Specification

Client-Server environment is used to deploy the Surveillance of Chronic Kidney Disease Management System.

#### Server environment:-

Toshiba notebook is used as "Development server" on Windows 7 system environment. The Following software versions are used to setup the "Development Server".

- Apache version: 2.2.21
- PHP version: 5.3.8
- MySQL version: 5.5.16

After doing the extensive research on a cost basis, Linux platform is chosen for "Live Server" OfSurveillance of Chronic Kidney Disease Management System. A Linux Shared Hosting account is purchased to deploy the live site. The following software versions are used in the Shared Hosting Live Server.

- Apache version: 2.2.15
- PHP version: 5.2.13
- MySQL version: 5.0.92

#### Client environment:-

Any modern web browsers could be used as client tool from any modern Operating systems Such as Windows, Linux & Mac.

# 2.6 Feasibility Study

Depending on the results of the initial investigation the survey is now expanded to a more detailed feasibility study. "FEASIBILITY STUDY" is a test of system proposal according to its workability, impact of the organization, ability to meet needs and effective use of the resources. It focuses on these major questions:

- What are the user's demonstrable needs and how does a candidate system meet them?
- What resources are available for given candidate system?
- What are the likely impacts of the candidate system on the organization?
- Whether it is worth to solve the problem?
- During feasibility analysis for this project, following primary areas of interest are to be considered.
- Investigation and generating ideas about a new system does this.

Steps in feasibility analysis: Eight steps involved in the feasibility analysis are:

- 1) Form a project team and appoint a project leader.
- 2) Prepare system flowcharts.
- 3) Enumerate potential proposed system.
- 4) Define and identify characteristics of proposed system.
- 5) Determine and evaluate performance and cost effective of each proposed system.
- 6) Weight system performance and cost data.
- 7) Select the best-proposed system.
- 8) Prepare and report final project directive to management.

#### **Technical feasibility**

A study of resource availability that may affect the ability to achieve an acceptable system. This evaluation determines whether the technology needed for the proposed system is available or not.

- 1) Can the work for the project be done with current equipment existing software technology & available personal?
- 2) Can the system be upgraded if developed?
- 3) If new technology is needed then what can be developed?
- 4) This is concerned with specifying equipment and software that will successfully satisfy the user requirement.

#### The technical needs of the system may include:Front-end and back-end selection

An important issue for the development of a project is the selection of suitable front-end and back-end. When we decided to develop the project we went through an extensive study to determine the most suitable platform that suits the needs of the organization as well as helps in development of the project. The aspects of our study included the following factors.

#### Front-end selection:

- It must have a graphical user interface that assists employees that are not from IT background.
- 2) Scalability and extensibility.
- 3) Flexibility.
- 4) Robustness.
- 5) According to the organization requirement and the culture.
- 6) Must provide excellent reporting features with good printing support.
- 7) Platform independent.
- 8) Easy to debug and maintain.
- 9) Event driven programming facility.
- 10) Front end must support some popular back end like MY SQL. According to the above stated features we selected Bootstrap as the front-end for developing our project. Surveillance of Chronic Kidney Disease Management System.

#### **Back-end Selection:**

- 1) Multiple user support.
- 2) Efficient data handling.
- 3) Provide inherent features for security.
- 4) Efficient data retrieval and maintenance.
- 5) Stored procedures.

- 6) Popularity.
- 7) Operating System compatible.
- 8) Easy to install.
- 9) Various drivers must be available.
- 10) Easy to implant with the Front-end.

According to above stated features we selected MY SQL as the backend. The technical feasibility is frequently the most difficult area encountered at this stage. It is essential that the process of analysis and definition be conducted in parallel with an assessment to technical feasibility. It centers on the existing computer system (hardware, software etc.) and to what extent it can support the proposed system.

#### **Economic feasibility**

Economic justification is generally the "Bottom Line" consideration for most systems. Economic justification includes a broad range of concerns that includes cost benefit analysis. In this we weight the cost and the benefits associated with the candidate system and if it suits the basic purpose of the organization i.e. profit making, the project is making to the analysis and design phase. The financial and the economic questions during the preliminary investigation are verified to estimate the following:

- 1) The cost to conduct a full system investigation.
- 2) The cost of hardware and software for the class of application being considered.
- 3) The benefits in the form of reduced cost.
- 4) The proposed system will give the minute information, as a result the performance is improved which in turn may be expected to provide increased profits.
- 5) This feasibility checks whether the system can be developed with the available funds. The Surveillance of Chronic Kidney Disease Management System does not require enormous amount of money to be developed. This can be done economically if planned judicially, so it is economically feasible. The cost of project depends upon the number of manhours required.

#### **Operational Feasibility**

It is mainly related to human organizations and political aspects. The points to be considered are:

- 1) What changes will be brought with the system?
- 2) What organization structures are disturbed?
- 3) What new skills will be required? Do the existing staff members have these skills? If not, can they be trained in due course of time?
- 4) The system is operationally feasible as it very easy for the End users to operate it. It only needs basic information about Windows platform.

#### Schedule feasibility

Time evaluation is the most important consideration in the development of project. The time schedule required for the developed of this project is very important since more development time effect machine time, cost and cause delay in the development of other systems.

A reliable Surveillance of Chronic Kidney Disease Management System can be developed in the considerable amount of time.

#### 2.7 Architecture of the proposed system

Mainly, the system is divided into three components: user interfaces, programs (modules) and database. Surveillance of Chronic Kidney Disease Management System have been used for all the components, as Surveillance of Chronic Kidney Disease Forms for user interfaces, Surveillance of Chronic Kidney Disease for source codes (modules), and Surveillance of Chronic Kidney Disease database for database. Therefore, the *front end* and *back end*, of the system are independently behaved. The interaction of three components are shown in the Figure 2



#### Figure 2:Architecture of Proposed System

The system runs on Windows environment. MY SQL commands have also been used in the 4gl modules.

# 2.7.1 Proposed System Phase



Figure 3 :propose system phase

# 2.8 work breakdown structure of the proposed system



Figure 4:Work brake down diagram

#### 2.9 Use Case of proposed system Verify Login <<extend Add patient View Patient PDH <<extend Add Clinic Visit View Clinic Add Hospital <<extend View Hospital Institution Add Dialysis <<extend View Dialysis Add Donor <<extend View Donor Evaluation <<extend Add Death RDH View Death Notification Add Post KT Clinic <<extend View Post Kt Add Filed <<extend МОН ViewFiled

Figure 5:System Use case Diagram

# 2.10 Activity diagram of the proposed system



Figure 6:System Activity Diagram

### Chapter 3: Methodology /Analysis and Design

#### What is a Methodology?

Software engineering is carry out of using preferred procedure techniques to progress the quality of a software development effort. A methodology is defined as a collection of procedures, techniques, tools, and documentation aids which will help developers in their efforts (both product and process related activities) to implement a new system. For successful implementation, a well-organized and systematic approach is crucial. Therefore, several methodologies were developed to encourage the systematic approach to planning, analysis, design, testing and implementation. Methodologies offer various tools and techniques to assist in analysis, design and testing in terms of detailed design of software, data flowcharts and database design.

#### Why Methodology?

- 1. To complete a project within time and budget with the expected scope and quality we need methodologies which provide for a framework.
- 2. Most methodologies have a general planning, developing and managing stages in common. They suggest the development team the ways of thinking, learning and arriving at a regular feasible solution.

To select an ideal methodology was based on project requirements and goals.

- Functional Decomposition: The methodology should have stages according to the interrelated activities which can be grouped into different functional areas.
- Requirement Changes: If required, methodology provides scope to change the requirement.
- ✤ Manage Risks: Determined the risk is an important activity to develop a project.
- ♦ Iterative approach: Iteration allows refinement of requirement as well as design.
- Documentation: Methodology provides support for large documentation.
- Analysis and Design Support: A well-defined structure of the methodology helps for analysis and designing to development process.
- ✤ Implementation: The system should be implemented as per plan.
- ◆ Testing Support: More testing, more reliable the product is.
- Object Oriented Approach: Object oriented concepts will be used in developing the project as it supports component reusability.

#### **Suitable Methodologies:**

**Waterfall Methodology**: All projects can be managed better when segmented into a hierarchy of chunks such as phases, stages, activities, tasks and steps. It follows a linear structure starting from requirement analysis, through design, implementation and maintenance. Most widely accepted methodology for student projects, this model has been well tried and tested. Each phase of it has sub phases which produce deliverables. Requirements are fixed at initial stages before proceeding with development plans in system development projects; the simplest rendition of this is called the "waterfall" methodology, as shown in the following Figure 7:



Figure 7:Waterfall model

The graphic illustrates a few critical principles of a good methodology:

- Work is done in stages,
- Content reviews are conducted between stages, and
- Reviews represent quality gates and decision points for continuing.

The waterfall provides an orderly sequence of development steps and helps ensure the adequacy of documentation and design reviews to ensure the quality, reliability, and maintainability of the developed software. While almost everyone these days disparages the "waterfall methodology" as being needlessly slow and cumbersome, it does illustrate.

#### 3.1 Methodology Followed

Waterfall Methodology of Systems Developments Life Cycle Method (SDLC) was followed by me for developing the new system. It is a world recognized very popular methodology. Waterfall Methodology of Systems Developments Life Cycle Method is more suitable for this project because this system is a widely using Transaction Processing System.

"The Systems Development Life Cycle (SDLC) is a conceptual model used in project management that describes the stages involved in an information system development project from an initial feasibility study through maintenance of the completed application. Various SDLC methodologies have been developed to guide the processes involved including the waterfall model (the original SDLC method), rapid application development (RAD), joint application development (JAD), the fountain model and the spiral model. Mostly, several models are combined into some sort of hybrid methodology.

The image below is the classic Waterfall model methodology, which is the first SDLC method and it describes the various phases involved in development, as shown in the following

Figure 8:



Figure 8:Waterfall Methodology of System Development Life Cycle

# 3.2 Analysis and Design

In this section, detailed description is given for the process of creating the layout of the Surveillance of Chronic Kidney Disease Management System.

**User Levels** 



Figure 9: System User level



# **Institution Level Activity Diagram**



Figure 11: Institutional level Activity diagram
# Moh Level Activity diagram



Figure 12: Moh level activity diagram

## 3.3 Sketching

Sketching of Surveillance of Chronic Kidney Disease Management System is designed in such way where all the search boxes, menus, header and footer should be placed on. Sketching of the main webpage to the Surveillance of Chronic Kidney Disease Management SystemFigure13.



Figure 13:Sketches showing different pages for the application

## 3.4 Designing in Photoshop

After the sketching of layout which would be the first step to make this Surveillance of Chronic Kidney Disease Management System as working model, the main page graphic interference is created using Photoshop. First mock-ups are created in Photoshop. The main page is designed such one could easily identify the functionality and purpose of this site by just looking at it. In order to show the similarity between the website and the application, Cascading Style Sheet (CSS) was created for the prototype in this thesis. The main page was shown with home page which would easily give the user the main idea of this site. The background color is selected in such way; the site would look more attractive. The mock-ups have been created with the 960 pixels.

The below screen shot shows how the main graphic user interface looksFigure 14:



#### Figure 9:Main Interface

### 3.5 Implementation

This study was conducted to implement a Surveillance of Chronic Kidney Disease Management System. It was coded in mainly HTML/XHTML, CSS, PHP 5 and using MySQL as the database. JavaScript was also used for front-end works.

### 3.5.1. HTML/XHTML

HTML is by far the most popular language on the Web today. Without it, the Internet would not be anything like it is now. HTML can be thought of as the building blocks of the Internet like the bricks and mortar of a house.

Producing hypertext for the Web is accomplished by creating documents with a language CalledHyperText Markup Language, or HTML. With HTML, tags are placed within the text to accomplish document formatting, visual features such as font size, italics and bold, and the creation of hypertext links. Graphics and multimedia may also be incorporated into an HTML document. HTML is an evolving language, with new tags being added as each upgrade of the language is developed and released. The World Wide Web Consortium (W3C), led by Web founder Tim Berners-Lee, coordinates the efforts of standardizing HTML. The W3C now calls the language XHTML (eXtensible Hypertext Markup Language) and considers it to be an application of the XML (eXtensible Markup Language) language standard.

## 3.5.1.1 HTML Tags

Tags make up the 'words' of the html language. Attributes define the properties of the tags used. HTML tags are typically used in pairs and each is surrounded by < and > characters. Grammatically, they belong to any of the patterns described below[11]:

- Basic tag
- Single tag/ empty tag
- Attribute tag

### 3.5.1.1.1 Basic Tag:

For this type of tag an opening tag is used before a character string and a closing tag is used after it.

<TAG> ...... </TAG>

(Opening tag / Start tag) (String/ Text/ Character String) (Closing tag/ End tag)

### 3.5.1.1.2 Single Tag:

For this type of tag an opening tag is used either before or after a character string.

For example:

<BR> Line Break Tag

### 3.5.1.1.3 Attribute Tag:

### <TAG attribute1 attribute2....>......</TAG>

This type of tag is used to specify attributes within a tag for detailed specification. Depending on the type of tag, the attributes that could be used are different. Multiple attributes could be specified in random order. Attributes are separated by a single-byte space.

For example:

<BODY bgcolor="#FFFFF"> ...... </BODY>

### 3.5.1.2 Basic structure of a HTML page

The following sample html code sets the title for the document and adds some text as content for the page. This is the basic structure of a HTML page.

```
<html>
<head>
<title>My First Web page</title>
</head>
<body>
Hello World
</body>
</html>
```

### 3.5.2. CSS

At the same time W3C was standardizing HTML, some help in keeping content separate frompresentation was offered in the form of another W3C complementary presentation language called Cascading Style Sheets (CSS). This language, introduced in 1996, was specifically designed to help "style" or present HTML pages. The general result is that the presentation details (kept in the CSS document) are separate from the content (kept in the HTML document)[12].

### 3.5.2.1 Rule

A rule or "rule set" is a statement that tells browsers how to render particular elements on an HTML page. A CSS rule consists of two main parts: selector ('h1') and declaration ('color: red'). The declaration has two parts: property ('color') and value ('red')[13].



Figure 10:CSS Rule Structure

### 3.5.2.2 Selector and Declaration block

The selector "selects" the elements on an HTML page that are affected by the rule set. The selector consists of everything up to (but not including) the first left curly bracket. The declaration block is a container that consists of anything between (and including) the curly brackets.

### For Example:

```
h1 { color: blue; margin-top: lem; }
p { padding: 5px; }
td { background-color: #ddd; }
```

Styles can be specified in details using the following methods [\*,\*]:

- **Type Selector/ Element Selector** This selects elements in the document according to type.
- Class Selector The class selector is used to assign properties to a named class.
- **ID Selector** This type of selector is used to assign properties to an element with a specific and unique identifier.
- **Group Selector** This selects a group of elements and applies the same declarations to all of them.
- **Context Selector/ Descendant Selector** This selects elements that are descendents of another element within the document tree.
- Universal Selector This will select any element.
- Child Selector This will select any element with a specific parent.
- Combining class and type selectors This allow to use class and Type selectors together.
- **Pseudo-classes** The :link, :visited, and :active are called pseudo classes and are used to assign properties to link states such as unvisited, visited, active and hover. These are all associated with the 'a' anchor element[14].

### **3.5.2.3 CSS Implementation**

Following are the 4 methods of implementing the CSS.

Inline Style Sheet - Specifying style directly by using the style attributes.

Embedded Style Sheet - Defining style in advance to STYLE element, then applyingit.

Linking Style Sheet - By using LINK elements link the external file where style has been defined.

**Import Style Sheet** - By using STYLE element, specify the external file (define style) to be imported.

### 3.5.2.4 How to put CSS into web pages

CSS can use three special attributes in a webpage. The attribute style (style="...") is for direct style definitions. Attributes class (class="...") and id (id="...") are for external (linked), import and embedded style sheets.

For example:

### 3.5.3. PHP

PHP (recursive acronym for "PHP: Hypertext pre-processor") is a widely-used Open Source general purpose scripting language that is especially suited for Web development and could be embedded into HTML. It also has evolved to include a command-line interface capability and can be used in standalone graphical applications. PHP can be deployed on most web servers and as a standalone interpreter, on almost every operating system and platform free of charge. A competitor to Microsoft's Active Server Pages (ASP) server-side script engine and similar languages, PHP is installed on more than 20 million websites and 1 million web servers[15].

### 3.5.4. MySQL

MySQL is the world's most popular open source database. Whether you are a fast growing web property, technology ISV or large enterprise, MySQL can cost-effectively help you deliver high performance, scalable database applications[16].

### 3.5.5. Javascript

JavaScript is an object-oriented scripting language used to enable programmatic access to objects within both the client application and other applications[17].

### 3.5.6. AJAX

AJAX = Asynchronous JavaScript and XML.

AJAX is not a new programming language, but a new way to use existing standards. It is the art of exchanging data with a server, and update parts of a web page - without reloading the whole page[18].

#### 3.5.7. jQuery

jQuery is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development. jQuery is designed to change the way that you write JavaScript[19].

#### 3.6. Preparation of Development Environment

#### 3.6.1. Apache Server 2.2.21

The Apache HTTP server project is a robust server which provides free availability of source code. Apache server is one of the popular web servers which support scripting languages like PHP to create dynamic pages. The initial release of Apache was made in the year 1995. PhpMyAdmin is a free software tool written in PHP intended to handle the administration of MySQL over the World Wide Web. It supports a wide range of operations with MySQL[20]. Steps for installing Apache Server 2.2.21 (WampServer 2.2a)[20]:

i. Download WampServer 2.2a. The WampServer package has eight components which includes

- Apache 2.2.21
- Php 5.3.8
- Mysql 5.5.16
- XDebug 2.1.2
- XDC 1.5
- PhpMyadmin 3.4.5
- SQLBuddy 1.3.3
- webGrind 1.0
- ii. Run the WampServer 2.2a setup wizard.
- iii. Click "Next" on the first screen.
- iv. Select "I Accept the Agreement". For legal reasons, and my own education, advise reading the agreement first. Click "Next".
- v. Select where want WAMP to be installed on the computer. The default, c:\wamp is a good, easy place. Click "Next".
- vi. Select any shortcuts may want. Click "Next".
- vii. Review my selections, then click "Install". Installation may take a few minutes.
- viii. After a little while, will be prompted to choose a default web browser for WAMP. I

recommend Firefox, both because it's good and WAMP auto-detects it, saving my time.

If you want to choose something else then i am going to have to browse for the .exe.

- ix. Another prompt will come up asking if you want to overwrite index.php with a new WAMP homepage. Select "No".
- x. The next information will be prompted for is SMTP data. Leave the defaults then click "Next".
- xi. Leave the box for "Launch WampServer 2.2a now" checked, then click "Finish".

### 3.6.2. MySQL Server and connectivity

MySQL can be characterized as a reliable open source which is robust by nature. MySQL is also known as RDBMS (Relational Database Management System)[16]. MySQL is the most preferred database for web applications. Many third party applications (front ends) integrate with MySQL for developing database structure. One among the popular front end is PhpMyAdmin which is used in my application. It is a web based front end developed in PHP. MySQL function is used to connect to the MySQL database[21].

ckdepid\_db\_new MySQL database is connected using the following code:

```
<?php

[ function dbConnect() {
    $con = mysqli_connect('localhost', 'root', '', 'ckdepid_db_new');

    if(!$con) {
        die("Failed to connect to MySQL.");
        die("Failed to connect to MySQL.");
        }
        return $con;

        function dbConnectionClose($dbServer) {
            mysqli_close($dbServer);
        }
    }
}</pre>
```



The username and password (username is root and password is none) are given during the installation of MySQL server.

## 3.7. Database Design

Databases are now an integral part of the internet and many web sites use databases in the background to control their contents. MySQL is one of the most commonly used open source database management systems[16].

#### 3.7.1. Database Architecture

The database architecture is the set of specifications, rules, and processes that dictate how data is stored in a database and how data is accessed by components of a system.

### 3.7.2. Data Definition Language

A data definition language or data description language (DDL) is a syntax similar to a computer programming language for defining data structures, especially database schemas[24].

### 3.7.3 Database schema

A database schema of a database system is its structure described in a formal language supported by the database management system (DBMS) and refers to the organization of data to create a blueprint of how a database will be constructed (divided into database tables)[25].

### 3.8. Structure of files

After running JetBrainsPhpStrome 6.o, the window is opened with the welcome screen as the start page.The user is prompted to select a workspace. The webpage is carefully designed to provide the users with clearly named links, labels and informative navigation tools. The Surveillance of Chronic Kidney Disease Management System web site architecture structures are structured in way which would be easier for the users to understand where they are, how to go back to previous page or how to move forward to new pages. Surveillance of Chronic Kidney Disease Management Systemweb site contents are grouped in a very organizational method to provide the user with clear and efficient use of the applications. Even, the behind the scenes folders are structured in very organized manner with full clarity of the groups which would make life of the administrator much easy when they are up-dating sites. Structure file isShown in Figure 13:

```
www - [C:\wamp\www] - JetBrains PhpStorm 6.0
                                                                                                                                                                   <u>File Edit View Navigate Code Refactor Run Tools VCS Window Help</u>
🛅 🖶 💋 🛷 🍌 👸 🞁 🔍 🔍 💠 🌵 🎬 district_report.php 💌 🕨 🍀 🏀 😭 🐓 💡
mww
Project
                             ⊕ ≑ ★ I<sup>+</sup>
         v
   - 🗖 CKD FINAL check
    t- Card
      - 🗖 ckd
       - D assets
       🕂 🗖 🗖 🖬
       🗄 – 🛅 DL
       🗄 🗖 img
         - 🗖 includes
         - D PL
       index.php
```

#### Figure 12:StructureFile

#### 3.8.1. Login page

This file is responsible for the welcome page of the website.

This system deals with the various login options available. The login option is common for the users and the administrators. When user logs in, user is redirected to the Home page with The project maintains two levels of users:-

• Administrator Level -As an administrator, has full control over registered users.

They could view user information, upgrade/demote user levels, delete users, delete

inactive users, and ban users.

• User Level - Now users can be differentiated by what level they are (user, administrator, etc.)

- i. Hospital Level
- ii. RDHS Level
- iii. Provincial Level
- iv. MOH Level

The script determines whether username or email is entered and it checks for existing account. When the user enters his password, the script converts the password to md5 string and thencompares this to the md5 of the password stored in the database. Surveillance of Chronic Kidney Disease Management System never want to know or store the real password of users. That is why it isimplemented in such way to use md5.

Login Page is shown in Figure 17.

🙆 CKD 🛛 🗙 📃		🕹 - 8 💌
← → C 🔘 localhost/ckd%20sameera%20fir	al/ckd/PL/Login.php	Q 🕁 🗖 🗄
ė	National Renal Registry Epidemilogy Unit	
	Ministry of Health and Indigenous Medicine	
	Sign in to your account Please entry your name and paramed to log in.	
	≜ Usemame	
	Password	
	Lopis O	
	22.35 @ Taylormonity j lint	

Figure 13:Login Page

#### 3.8.1.1 Home Page

This file is responsible for the welcome page of the website. The links of Home, Patient Management, User Management, Patient Follow up, Reports and Contact us displayed on top side of the main header section. The links screening guidelines Pdf document and clinical management guidelines Pdf document. Main content has the short description about the web site. Home Page is shown in Figure 18.

	📥 – 🗇 💌
0sameera%20final/ckd/PL/home.php	Q 🕈 🛧 🖬 :
National Renal Registry       Epidemiology Unit       Ministry of Health and Indigenous Medicine       Sri Lanka	
Home Patient Management <sup>v</sup> User Management <sup>v</sup> Patient Follow-up <sup>v</sup> Reports <sup>v</sup> Contact Us	
User: test • 1 My Account ***	
Home	
Surveillance on Chronic Kidney Disease in Sri Lanka	
The Epidemiology Uhit of the Ministry of Health, Sri Lanka has established surveillance on chronic kidney disease since October 2013. Thrip hospitals were declared as sentinel sites was the available statistics on the disease burden and the media reports and public concerns of the presence of the disease in geographic locations.	
	Parameters%20fmat/ckd/PU/home.php         Prove National Registry of Health and Indigenous Medicina Sri Lanks         More       Net Management       Ver Management       Reports       Contact Us         More       Ver Management       Ver Management       Reports       Contact Us         More       Ver Management       Reports       Contact Us         More       Ver Management       Reports       Contact Us         More       Imagement       Note on Contact Kdney Disease in Sri Lanks       Imagement       Imagement         Vertellance on Chronic Kdney Disease in Sri Lank       The Epidemiology Unit of theath, Sinah and sets Stabibles surveillance on chronic Kdney Disease in Sri Lanks       Imagement       Ima

Figure 14 : Home Page

#### **3.8.1.2 Patient Registration**

Patient registers with their personal details (Registered date, Institutional Name, First name ,Middle Name Last Name, Age, Date of Birth , Gender, Address, Province, District, Ds Division , Gn Division, Occupation ,Contact number, Civil statues and Renal Diagnosis ) . After System is Generate Automatically Patient Id number.

In the first part, it would cover creation of the registration form and storing the data in a MySQL database. Patient Registration pages are shown in Figure 18, Figure 19 and Figure 20.

National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine Sri Lanka			
Home Patient Manageme	nent~ User Management~ Patient Follow-up~ Reports~ Contact Us		
Last Login : test		• 🚺 My Account 🗠	
Patient Regis	stration		
Registered year and month * :	Year V Mont V Da V Patient's Image		
Institution * :	Select Institution 🗸		
First Name * :	First Name		
Middle Name :	Middle Name		
Last Name * :	Last Name	🗑 Remove Image	
Gender *:	◯ Female ◯ Male		
NIC :	NIC		
Date of Birth :	曲		
Permanent Ado	ddress :		

Figure 15 : Patient Registration – part1

Gender *	: O Female O Male
NIC	: NIC
Date of Birth	: 🖴
Permanent	Address :
	No.
	Street Name
	Town
IF	there are other/previous address?
🕀 Set Co	ordinates
Contact No(mobile) :	
Contact No(home) :	
Occupation :	Occupation
Civil Status :	Single Married Divorced Widowed
Ethnicity :	Select Ethnicity *
Province * :	Select Province 🗸
RDHS*:	Select District 🗸



Next of Kin Name :	
Next of Kin Contact :	
Renal Diagnosis :	Under Investigation
Referred By :	
	Reset 🖉 Register 🕥

Figure 17 : Patient Registration -part3

### **3.8.1.3 Patient Follow up**

Patient follow up with their patient clinic visits, patient hospital admission, dialysis, recipient and donor evolution, post kt clinic, field update and death notification.

- In the first part, it would cover creation of the patient clinic visits form and storing the data in a MySQL database. Patient clinic visits pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the patient hospital admission form and storing the data in a MySQL database. Patient hospital admission pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the patient hospital admission form and storing the data in a MySQL database. Patient hospital admission pages are shown in annexed in Appendix B.
- In the Third part, it would cover creation of the patient dialysis form and storing the data in a MySQL database. Patient dialysis pages are shown in annexed in Appendix B.
- In the Fourth part, it would cover creation of the recipient and donor evaluation form and storing the data in a MySQL database. Recipient and donor evaluation pages are shown in annexed in Appendix B.
- In the Fifth part, it would cover creation of the post kt clinic form and storing the data in a MySQL database. Post kt clinic pages are shown in annexed in Appendix B.
- In the Sixth part, it would cover creation of the field update form and storing the data in a MySQL database. Field update pages are shown in annexed in Appendix B.

• In the Seventh part, it would cover creation of the death notification form and storing the data in a MySQL database. Death notification pages are shown in annexed in Appendix B.

### 3.8.1.4 User Management

User registers with their chosen username, email and password. The script checks for existing username, if exists, it denies them registering an account. The username is restricted to only alphabets, numbers and underscore. No special characters allowed.

The password is stored in md5 format during registration and sends a 4 digit random activation code to their email address.

Creating a membership based site seems like a daunting task at first. The whole process consists of two big parts:

- user registration
- user authentication

In the first part, it would cover creation of the registration form and storing the data in a MySQL database. In the second part, it would create the login form and use it to allow users access in the secure area.

User Management pages are shown in annexed in Appendix B.

### 3.8.1.5 Report Generation

### **3.8.1.5.1 Distribution Reports**

Reports with their Provincial distribution reports, District distribution reports, Institutional distribution reports and MOH distribution reports.

- In the first part, it would cover creation of the provincial patient count form, provincial patient list form, provincial death count form ,provincial death list ,provincial audit count form and provincial audit list form andsearching the data in a MySQL database. Provincial distribution reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the district patient count form, district patient list form, district death count form, district death list, district audit count form and district audit list form andsearchingthe data in a MySQL database. District distribution reports pages are shown in annexed in Appendix B.

- In the Third part, it would cover creation of the institutional patient count form, institutional patient list form, institutional death count form, institutional death list, institutional audit count form and institutional audit list form andsearching the data in a MySQL database. Institutional distribution reports pages are shown in annexed in Appendix B.
- In the Fourth part, it would cover creation of the Moh/ Ds-division patient count form, Moh/ Ds-division patient list form, Moh/ ds-division death count form,Moh/ Dsdivision death list, Moh/ Ds-division audit count form and moh/ ds-division audit list form andsearchingthe data in a MySQL database. Moh/ Ds-division distribution reports pages are shown in annexed in Appendix B.

#### **3.8.1.5.2 Individual Patient Reports**

Reports with their Individual clinic report, Individual hospital admission report, Individual recipient and donor evaluation report, Individual Dialysisreport, Individual post kt clinic report and Individual death notification report.

- In the first part, it would cover creation of the Individual clinic report and searching the data in a MySQL database. Individual clinic report pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the Individual hospital admission report form andsearchingthe data in a MySQL databaseIndividual hospital admission report pages are shown in annexed in Appendix B.
- In the Third part, it would cover creation of the Individual recipient and donor evaluation report form and searching the data in a MySQL database. Individual recipient and donor evaluation report pages are shown in annexed in Appendix B.
- In the Fourth part, it would cover creation of the , Individual post kt clinic report form and searching the data in a MySQL database. , Individual post kt clinic report pages are shown in annexed in Appendix B.
- In the Fifth part, it would cover creation of the Individual recipient and donor evaluation report form and searching the data in a MySQL database. Individual recipient and donor evaluation report pages are shown in annexed in Appendix B.

• In the Sixth part, it would cover creation of the Individual death notification form andsearchingthe data in a MySQL database. Individual death notification pages are shown in annexed in Appendix B.

### **3.8.1.5.3 Age Distribution Reports**

Reports with their Provincial Age distribution reports, District Age distribution reports, Institutional Age distribution reports and MOH Age distribution reports.

- In the first part, it would cover creation of the provincial average age form, provincial standard deviation form, provincial age category form and searching the data in a MySQL database. Provincial age distribution reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the district average age form, district standard deviation form, district age category form and searching the data in a MySQL database. District age distribution reports pages are shown in annexed in Appendix B.
- In the Thirdpart, it would cover creation of the institutional average age form, institutional standard deviation form, institutional age category form and searching the data in a MySQL database. Institutional age distribution reports pages are shown in annexed in Appendix B.
- In the Fourth part, it would cover creation of the Moh / Ds-diviation average age form, Moh / Ds-diviation standard deviation form, Moh / Ds-diviation age category form and searching the data in a MySQL database. Moh / Ds-diviation age distribution reports pages are shown in annexed in Appendix B.

#### **3.8.1.5.4 Diagnosis Reports**

Reports with their Diagnosis reports.

- In the first part, it would cover creation of the diagnosis wise age count form and searching the data in a MySQL database. Diagnosis reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the diagnosis wise age category form and searching the data in a MySQL database. Diagnosis reports pages are shown in annexed in Appendix B.

### **3.8.1.5.5 Dialysis Reports**

Reports with their Dialysis reports.

- In the first part, it would cover creation of the dialysis patient count form and searching the data in a MySQL database. Dialysis reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the dialysis patient list form and searching the data in a MySQL database. Dialysis reports pages are shown in annexed in Appendix B.

### **3.8.1.5.6** Clinic visit Reports

Reports with their Clinic visit reports.

- In the first part, it would cover creation of the clinic visit patient count form and searching the data in a MySQL database. Clinic visit reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the clinic visit patient list form and searching the data in a MySQL database. Clinic visit reports pages are shown in annexed in Appendix B.

### **3.8.1.5.7** Hospital Admission Reports

Reports with their Hospital Admission reports.

- In the first part, it would cover creation of the hospital admission patient count form and searching the data in a MySQL database. Hospital admission reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the hospital admission patient list form and searching the data in a MySQL database. Hospital admission reports pages are shown in annexed in Appendix B.

### **3.8.1.5.8 Recipient Donor Evolution Reports**

Reports with their Recipient donor evolution reports.

• In the first part, it would cover creation of the recipient donor evolution patient count form and searching the data in a MySQL database. Recipient donor evolution reports pages are shown in annexed in Appendix B.

• In the Second part, it would cover creation of the recipient donor evolution patient list form and searching the data in a MySQL database. Recipient donor evolution reports pages are shown in annexed in Appendix B.

#### 3.8.1.5.9 Post KT Clinic Reports

Reports with their Post KT Clinic reports.

- In the first part, it would cover creation of the post kt clinic patient count form and searching the data in a MySQL database. Recipient donor evolution reports pages are shown in annexed in Appendix B.
- In the Second part, it would cover creation of the recipient donor evolution patient list form and searching the data in a MySQL database. Post KT Clinic reports pages are shown in annexed in Appendix B.

### 3.8.1.6 Contact us

The 'contact us' tab of the main site is to provide all the contact details of the site administrators of the website. In case, if the user has questions regarding the content of the web site or how to use the applications, they could always contact the site administrators via email. Contact us page is shown in annexed in Appendix B.

#### 3.8.1.7 Logout

A logout option is placed in all the pages and this file contains the code for logout function. If the user wishes to logout, it would clear the session and redirect to the page login.php.

## 3.9ER Diagram of proposed system



## 3.10 Data base table structures of proposed system

## 1. Abdomen Table

Field Name	Data Type	Description
p_id	int(6)	Patient ID
clinic_id	int(6)	Clinic ID
clinic_type	Enum	Clinic Type
abdominal_distension	int(6)	Abdominal distension
flank_horseshoe	int(6)	Flank horseshoe
liver	int(6)	Liver
spleen	int(6)	Spleen
Kidney	int(6)	Kidney
bowel_bound	int(6)	Bowel bound
bladder	int(6)	Bladder

Table 4 : Abdomen Table

## 2. Admission Table

Field Name	Data Type	Description
admission_id	int(6)	Admission id
institute_id	int(6)	Institute id
p_id	int(6)	Patient id
admission_no	int(6)	Admission no
admission_date	Date	Admission date
discharge_date	Date	Discharge date
added_by	int(6)	Added by

Table 5 : Admission Table

## 3. Biochemistry Table

Field Name	Data Type	Description
p_id	int(11)	Patient ID
clinic_id	int(11)	Clinic ID
clinic_type	int(1)	Clinic Type
date_time	Datetime	Clinic Date
Tc	decimal(10,4)	Tc value
Hdl	decimal(10,4)	Hdl value
Idl	decimal(10,4)	Idl value
Tag	decimal(10,4)	Tag value
Vidl	decimal(10,4)	Vidl value
ch_ratio	decimal(10,4)	Ch ratio value
sodium	decimal(10,4)	Sodium value
calcium	decimal(10,4)	Calcium value
potassium	decimal(10,4)	Potassium value

phosphate	decimal(10,4)	Phosphate value
chlorine	decimal(10,4)	Chlorine value
Mg	decimal(10,4)	Mg value
Fbs	decimal(10,4)	Fbs value
ppbs	decimal(10,4)	Ppbs value
hbaic	decimal(10,4)	Hbaic value
Sp	decimal(10,4)	Sp value
Alb	decimal(10,4)	Alb value
Glb	decimal(10,4)	Glb value
Сгр	decimal(10,4)	Crp value
Esr	decimal(10,4)	Esr value
s_cr	decimal(10,4)	S_cr value
egfr	decimal(10,4)	Egfr value
Ua	decimal(10,4)	Ua value
Bu	decimal(10,4)	Bu value

Table 6 : Biochemistry Table

## 4. Clinical examination

Field Name	Data Type	Description
p_id	int(11)	Patient id
clinic_id	enum('1', '2', '3')	Clinic ID
clinic_type	int(11)	Clinic Type
dyspneic	int(1)	Dyspneic Value
febrile	int(1)	Febrile Value
pale	int(1)	Pale Value
ankleoedema	int(1)	Ankleoedema Value
pulse_rate	int(3)	Pulse_rate Value
rhythm	int(1)	Rhythm Value
Systolic	int(3)	Systolic Value
Diastolic	int(3)	Diastolic Value
s1	int(1)	S1 value
s2	int(1)	S2 value
additional_sound	int(1)	Additional_sound value
additional_sound_text	varchar(100)	Additional_sound_text
respiratory_rate	int(3)	Respiratory_rate value
left_air_entry	int(1)	Left_air_entry value
left_vesicular_breathing	int(1)	Left_vesicular_breathing
left_bronchial_breathing	int(1)	Left_bronchial_breathing
left_crackles	int(1)	Left_crackles value
left_ronchi	int(1)	Left_ronchi value
right_air_entry	int(1)	Right_air_entry value

right_bronchial_breathing	int(1)	Right_bronchial_breathing
		value
right_crackles	int(1)	Right_crackles value
right_ronchi	int(1)	Right_ronchi value
abdominal_distension	int(1)	Abdominal_distension value
flank_horseshoe	int(1)	Flank_horseshoevalue
Liver	int(1)	Livervalue
Spleen	int(1)	Spleenvalue
Kidney	int(1)	Kidneyvalue
bowel_bound	int(1)	Bowel_boundvalue
Bladder	int(1)	Bladdervalue
Conscious	int(1)	Consciousvalue
Rational	int(1)	Rationalvalue
Orientation	int(1)	Orientationvalue
focal_neurological_signs	int(1)	Focal_neurological_signs
focal_neurological_signs_value	varchar(100)	Focal_neurological_signs_value
gcs_value	int(3)	Gcs_value
genital_abnormality	int(1)	Genital_abnormalityvalue
Prostate	int(1)	Prostatevalue
genital_abnormality_value	varchar(100)	Genital_abnormality_value
prostate_value	varchar(100)	Prostate_value
Ecg	varchar(255)	Ecgvalue
stressEcg	varchar(255)	Stressecgvalue
Echocardiogram	varchar(255)	Echocardiogramvalue

Table 7 : Clinical Examination

## 5. Clinic visit Table

Field Name	Data Type	Description
clinic_id	int(11)	Clinic Id
p_id	int(11)	Patient Id
institute_id	int(11)	Institution Id
clinic_no	int(5)	Clinic No
next_clinic_date	Datetime	Next clinic Date
clinic_date	Datetime	Clinic date
Attendance	int(1)	Attendance(Persent or
		Absent)
added_by	int(11)	Add user

Table 8 : Clinic Visit

## 6. Comobidities Table

Field Name	Data Type	Description
c_id	int(3)	Comobidities ID
c_name	varchar(60)	Comobidities Name

Table 9 : Comobidities Table

## 7. Comobidities subsections Table

Field Name	Data Type	Description
Id	int(11)	Comobidities subsections ID
Subsection	varchar(40)	<b>Comobidities subsections</b>

Table 10 : Comobidities Subsection Table

## 8. Dates Table

Field Name	Data Type	Description
date_id	int(2)	Dates ID
date_name	varchar(11)	Date Name
	Table 11 : Dates Table	

## 9. Death notification Table

Field Name	Data Type	Description
d_id	int(11)	Death notification Id
p_id	int(11)	Patient ID
death_date	Date	Death date
immediate_cause	varchar(255)	Immediate_cause
underlying_cause	varchar(255)	Underlying_cause
Contributory	varchar(255)	Contributory
added_by	int(11)	Add User

 Table 12 : Death Notification Table

## **10. Diagnosis Table**

Field Name	Data Type	Description
d_id	int(3)	Diagnosis ID
d_name	varchar(60)	Diagnosis Name
Date	Date	Diagnosis Date

Table 13 : Diagnosis Table

### 11. Dialysis Table

Field Name	Data Type	Description
dialysis_id	int(11)	Dialysis ID
p_id	int(11)	Patient ID
institute_id	int(5)	Institution ID
dialysis_no	int(5)	Dialysis_no
dialysis_date	Datetime	Dialysis_date
Attendance	int(1)	Attendance
added_by	int(11)	Added_by

Table 14 : Dialysis Table

## **12. District Table**

Field Name	Data Type	Description
dis_id	int(3)	District Id
dis_pub_id	int(11)	District Public Id
dis_name	varchar(20)	District name
dis_lifecode	varchar(11)	District life Code
pro_id	int(2)	Province ID
dis_isActive	int(1)	District
		Active(Active=1,DisActive=0)

Table 15 : District Table

# 13. Dpdhs Table

Field Name	Data Type	Description
dpdhs_id	int(11)	RDHS ID
dpdhs_name	varchar(20)	RDHS Name
dpdhs_district	int(3)	<b>RDHS District ID</b>
dpdhs_pro	int(2)	<b>RDHS Provice ID</b>
dpdhs_isActive	int(1)	RDHS
		Active(Active=1,DisActive=0)

Table 16 : Dpdhs Table

## 14. Ds division Table

Field Name	Data Type	Description
ds_id	int(11)	DS Division ID
ds_pub_id	int(11)	DS Division Public Id
ds_name	varchar(40)	DS Division Name
ds_lifecode	varchar(20)	Ds Division life Code
dis_id	int(11)	District ID
ds_active	int(4)	DS Division
		Active(Active=1,DisActive=0)

Table 17 : Ds Division Table

## 15. Genitaria Table

Field Name	Data Type	Description
p_id	int(11)	Patient ID
clinic_type	enum('1', '2', '3')	Clinic Type
clinic_id	int(11)	Clinic ID
genital_abnormality	int(1)	Genital_abnormality
Prostate	int(1)	Prostate
prostate_txt	varchar(255)	Prostate_txt

Table 18 : Genitaria Table

### 16. Gn division Table

Field Name	Data Type	Description
gn_id	int(11)	GN Division Id
gn_pub_id	int(11)	GN Division Public Id
gn_name	varchar(100)	GN Division Name
gn_life_code	varchar(40)	GN Division Life Code
ds_id	int(11)	DS Division Id
gn_active	int(1)	GN Division
		Active(Active=1,DisActive=0)

Table 19 : Gn Division Table

## 17. Histological studies Table

Field Name	Data Type	Description
p_id	int(11)	Patient ID
clinic_type	int(1)	Clinic Type
clinic_id	int(11)	Clinic ID
clinic_date	Datetime	Clinic Date
histo_value	varchar(300)	Histological studies Value
histo_value	varchar(300)	Histological studies Value

Table 20 : Histological Table

## **18. Hormone assay Table**

Field Name	Data Type	Description
p_id	int(11)	Patient Id
clinic_type	int(1)	Clinic Type
clinic_id	int(11)	Clinic Id
clinic_date	Datetime	Clinic Date
Pth	decimal(10,5)	Pth value
Tsh	decimal(10,5)	Tsh value
t3	decimal(10,5)	t3 value
t4	decimal(10,5)	t4 value
d3	decimal(10,5)	d3 value

Table 21 : Hormone Assay Table

## **19. Hospitalization Table**

Field Name	Data Type	Description
hospitalization_id	int(11)	Hospitalization id
clinic_id	int(11)	Clinic id
p_id	int(11)	Patient id
date_of_admission	Date	Admission Date
date_of_discharge	Date	Discharge Date
institution_type	enum('1', '2', '0')	Institution type
institution_name	int(5)	Institution name
blood_transfusion	enum('1', '2', '0')	Blood transfusion(1-Yes,2-

		No)
Reason	varchar(300)	<b>Reason- Blood transfusion</b>
is_related_ckd	enum('1', '2', '0')	Is_related_ckd
reason1	varchar(300)	Reason- Related Ckd
admission_type	enum('1', '2', '0')	Admission_type

Table 22 : Hospitalization Table

## **20. Institutions Table**

Field Name	Data Type	Description
institute_id	int(11)	Institution Id
institute_name	varchar(50)	Institution Name
institute_active	int(1)	Institution
		Active(Active=1,DisActive=0)

Table 23 : Institutions Table

## 21. Moh Table

Field Name	Data Type	Description
moh_id	int(11)	MOH Id
moh_name	varchar(30)	MOH Name
dpdhs_id	int(4)	RDHS Id
moh_IsActive	int(1)	Moh
		Active(Active=1,DisActive=0)

Table 24 : Moh Table

## **22.** Months Table

Field Name	Data Type	Description
month_id	int(2)	Month Id
month_name	varchar(10)	Month Name

Table 25 : Months Table

## 23. Nerve system Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
clinic_type	enum('1', '2', '3')	Clinic Type
clinic_id	int(11)	Clinic Id
conscious	int(1)	Nerve systemconscious
rational	int(1)	Nerve system rational
orientation	int(1)	Nerve system orientation
Gcs	int(5)	Nerve system Gcs
focal_neurological_signs	int(1)	Nerve system
		focal_neurological_signs
focal_neurological_signs_txt	varchar(255)	Nerve system
		focal_neurological_signs_txt

Table 26 : Nerve System Table

## 24. Other comobidities Table

Field Name	Data Type	Description
Id	int(11)	Other comorbidities Id
p_id	int(11)	Patient Id
clinic_type	enum('1', '2', '3')	Clinic Type
clinic_id	int(11)	Clinic ID
other_comobidity	varchar(100)	Other comorbidities
cm_subsection	int(2)	<b>Comorbidities Subsection</b>

Table 27 : Other Comobidities Table

## **25. Patient Table**

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_institute	int(11)	Patient Institution Id
p_fname	varchar(50)	Patient First Name
p_mname	varchar(60)	Patient Midle Name
p_lname	varchar(60)	Patient Last Name
p_gender	enum('f', 'm')	Gender
p_nic	varchar(10)	Patient NIC
p_dob	Date	Patient Date of Birth
per_addr1	varchar(50)	Patient Address -No
per_addr2	varchar(150)	Patient Address -Street
per_addr3	varchar(150)	Patient Address -Town
cur_addr1	varchar(50)	Current Patient Address
cur_addr2	varchar(150)	Current Patient Address
cur_addr3	varchar(250)	Current Patient Address
p_ethnicity	enum('1', '2', '3', '4', '5','0')	Patient Ethnicity
weight	decimal(5,2)	Patient Weight
height	decimal(5,2)	Patient Height
diagnosis	varchar(50)	Patient Diagnosis
p_district	int(11)	Patient District
p_pro	int(11)	Patient Province
p_ds	int(11)	Patient Ds Division
p_moh	int(11)	Patient Moh
p_gn	int(11)	Patient GN Division
longitude	decimal(15,13)	Patient longitude
latitude	decimal(15,13)	Patient latitude
p_contact1	varchar(10)	Patient Contact Number
p_contact2	varchar(10)	Patient Contact Number
p_occupation	varchar(20)	Patient Occupation
p_civil_status	enum('s', 'm', 'd', 'w')	Patient Civil status
smoking	int(1)	Patient Habits
alcohol	int(1)	Patient Habits

betel chewing	int(1)	Patient Habits
next_of_kin_contact	varchar(10)	Next_of_kin_contact
rec_add_date	Datetime	Record_add_date
rec_add_by	int(11)	Record_add_by
add_year	int(4)	Patient Register Year
add_month	int(2)	Patient Register Month
add_date	enum('1', '2', '3', '4', '5','0')	Patient Register Date

Table 28 : Patient Table

### **26.** Patient address Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_no	varchar(255)	Patient Number
p_street	varchar(255)	Patient Street
p_town	varchar(255)	Patient Town
permenent_address	varchar(255)	Patient Address

Table 29 : Patient Address Table

## 27. Patient allergy Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
clinic_id	int(11)	Clinic Id
drug_allergy	int(1)	Drug allergy
specify_drug_allergy	varchar(255)	Specify drug allergy
food_allergy	int(1)	Food allergy
specify_food_allergy	varchar(255)	Specify food allergy

Table 30 : Patient Allergy Table

## 28. Patient blood group Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
blood_group	enum('A', 'B', 'AB', 'O')	Patient Blood group
Rh	enum('p', 'n')	Patient Rh
added_by	int(11)	Record_add_by

Table 31 : Patient Blood Group Table

## 29. Patient bp Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
add_date	Datetime	Register date
systolic	int(3)	Systolic
diastolic	int(3)	Diastolic
clinic_type	int(1)	Clinic type
institution_id	int(11)	Institution id
clinic_id	int(11)	Clinic id

#### Table 32 : Patient BP Table

### **30.** Patient comobidities Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_comobidity	int(3)	Patient comobidities
value	varchar(255)	Patient comorbidities Value
clinic_type	<b>int</b> (1)	Clinic type
clinic_id	<b>int(11)</b>	Clinic id
start_year	<b>int(4)</b>	Start year
start_month	<b>int(2)</b>	Start month

Table 33 : Patient Comobidities Table

## **31. Patient contacts Table**

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_contact	varchar(10)	Patient Contact
	Table 24 - Datient Contact Table	

Table 34 : Patient Contact Table

## **32.** Patient diagnosis Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_diagnosis	int(11)	Patient diagnosis
p_diog_date	Datetime	Patient diagnosis date

Table 35 : Patient Diagnosis Table

## **33.** Patient dialysis Table

Data Type	Description
int(11)	Patient Id
int(11)	Dialysis id
enum('1', '2', '3', '0')	Dialysis
int(1)	Dialysis access
decimal(5,2)	Dry weight
decimal(5,2)	Current weight
varchar(300)	Dialysis plan
	Data Type int(11) int(11) enum('1', '2', '3', '0') int(1) decimal(5,2) decimal(5,2) varchar(300)

Table 36 : Patient Dialysis Table

### **34.** Patient medicine Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
medicine_id	int(11)	Medicine id
clinic_id	int(11)	Clinic id
dosage	float(6,2)	Dosage
frequency	varchar(20)	Frequency

Table 37 : Patient Medicine Table

## 35. Patient other comobidities Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_comobidity	varchar(40)	Patient other comobidities
clinic_type	int(1)	Clinic Type
clinic_id	int(11)	Clinic Id

Table 38 : Patient Other Comobidities Table

## 36. Patient stage Table

Field Name	Data Type	Description
p_id	int(11)	Patient Id
p_stage	enum('0','1', '2', '3', '4', '5')	Patient stage
add_date	Date	Add date
clinic_type	enum('1', '2', '3')	Clinic type
clinic_id	int(11)	Clinic id
added_by	int(11)	Added by

Table 39 : Patient Stage Table

### **37. Pharmaceutical Table**

Field Name	Data Type	Description
phar_id	int(11)	Pharmaceutical Id
phar_name	varchar(70)	Pharmaceutical Name
	Table 40 · Dharmacoutical Table	

**Table 40 : Pharmaceutical Table** 

## 38. Plan of management Table

Field Name	Data Type	Description
clinic_id	int(11)	Clinic Id
p_id	int(11)	Patient Id
consecutive_management	int(1)	Consecutive management
medical_management	int(1)	Medical management
Rrt	int(1)	Rrt
hemodialysis	int(1)	Hemodialysis
ambulatory_pertoneal_dialysis	int(1)	Ambulatory pertoneal_dialysis
renal_transport	int(1)	Renal transport

Table 41 : Plan of Management Table

### **39. Province Table**

Field Name	Data Type	Description
pro_id	int(2)	Province Id
pro_name	varchar(20)	Province Name
pro_lifecode	int(11)	Province life code
pro_pub_id	int(11)	Province public Id
p_IsActive	int(1)	Province Active(1-

		Active, DisActive-0
dis_id ir	nt(3)	District Id

Table 42 : Province Table

## 40. Radiological studies Table

Field Name	Data Type	Description
p_id	int(11)	Patient id
clinic_id	int(11)	Clinic id
clinic_type	varchar(255)	Clinic type
date_time	Datetime	Date time
xrayKUB	varchar(255)	Xraykub
dtpa	varchar(255)	Dtpa
ussKUB	varchar(255)	Usskub
rentalAngiogram	varchar(255)	Rentalangiogram

 Table 43 : Radiological Studies Table

## 41. Respiratory system Table

Field Name	Data Type	Description
p_id	int(11)	Patient id
clinic_id	int(11)	Clinic id
clinic_type	enum('1', '2', '3')	Clinic type
respiratory_rate	int(4)	Respiratory rate
left_air_entry	int(1)	Left air entry
left_vesicular_breathing	int(1)	Left vesicular breathing
left_bronchial_breathing	int(1)	Left bronchial breathing
left_crakles	int(1)	Left crakles
left_ronchi	int(1)	Left ronchi
right_vesicular_breathing	int(1)	<b>Right vesicular breathing</b>
right_bronchial_breathing	int(1)	<b>Right bronchial breathing</b>
right_crakles	int(1)	Right crakles
right_ronchi	int(1)	Right ronchi

Table 44 : Respiratory System Table

## 42. Screening for infection Table

Field Name	Data Type	Description
p_id	int(11)	Description
clinic_id	int(11)	Patient id
clinic_type	int(1)	Clinic id
date_time	Datetime	Clinic type
hbsag	enum('p', 'n', 'NULL')	Screening for infection
	_	Date
anti_hcv_igm	enum('p', 'n', 'NULL')	Hbsag
hiv_serology	enum('p', 'n', 'NULL')	Anti hcv igm
Igg	enum('p', 'n', 'NULL')	Hiv serology
ebv_serology	enum('p', 'n', 'NULL')	Igg
vdrl	enum('p', 'n', 'NULL')	Ebv serology
toxoplasmalgM	enum('p', 'n', 'NULL')	Vdrl

mantoux	enum('p', 'n', 'NULL')	Toxoplasmalgm
		Mantoux

Table 45 : Screening for Infection Table

# 43. Urin analysis Table

Field Name	Data Type	Description
p_id	int(11)	Patient id
clinic_id	int(11)	Clinic id
clinic_type	int(1)	Clinic type
Pc	varchar(255)	Pc
Rbc	varchar(255)	Rbc
hyaline_cast	int(1)	Hyaline cast
epithelial_casts	int(1)	Epithelial casts
granular_casts	int(1)	Granular casts
caco3	varchar(255)	Caco3
calcium_oxalate	varchar(255)	Calcium oxalate
upcr	varchar(255)	Urin pcr
uarc	varchar(255)	Urin arc
u_microalbumin	varchar(255)	Urin microalbumin

Table 46 : Urine Analysis Table

## 44. User group Table

Field Name	Data Type	Description
ug_id	int(11)	User group id
ug_name	varchar(255)	User group name
accarea	int(1)	Accarea
hos_access	enum('0','1', '2', '3', '4', '5','6','7')	Hos_access
crud_comobidities	int(1)	Crud comobidities
crud_institutions	int(1)	Crud institutions
crud_provinces	int(1)	Crud provinces
crud_districts	int(1)	Crud districts
crud_ds	int(1)	Crud ds
crud_moh	int(1)	Crud moh
add_patient	int(1)	Add patient
update_patient	int(1)	Update patient
delete_patient	int(1)	Delete patient
view_patient	int(1)	View patient
add_clinicdata_doc	int(1)	Add clinicdata doc
view_clinicdata_doc	int(1)	View linicdata doc
add_hosAd	int(1)	Add hosad
delete_hosAd	int(1)	Delete hosad
add_dialysis	int(1)	Add dialysis
update_dialysis	int(1)	Update dialysis
delete_dialysis	int(1)	Delete dialysis
add_rdEvaluation	int(1)	Add rdevaluation
update_rdEvaluation	int(1)	Update
		rdevaluation
delete_rdEvaluation	int(1)	Delete

		rdevaluation
add_postkt	int(1)	Add postkt
update_postkt	int(1)	Update postkt
delete_postkt	int(1)	Delete postkt
add_ug	int(1)	Add User group
edit_ug	int(1)	Edit User group
delete_ug	int(1)	Delete User group
add_user	int(1)	Add user
edit_user	int(1)	Edit user
delete_user	int(1)	Delete user
change_any_pw	int(1)	Change any
		password
change_own_pw	int(1)	Change own
		password

#### Table 47 : User Group Table

## 45. Users Table

Field Name	Data Type	Description
u_id	int(11)	Users id
u_title	int(2)	Users title
u_group	int(11)	Users group
u_fname	varchar(25)	Users fname
u_lname	varchar(20)	Users lname
u_email	varchar(40)	Users email
u_destination	varchar(30)	Users destination
u_gender	int(1)	Users gender
u_dob	Date	Users dob
u_nic	varchar(10)	Users nic
u_province	int(2)	Users province
u_institution	int(11)	Users institution
u_division	int(6)	Users division
u_addr1	int(5)	Users addr1
u_addr2	varchar(40)	Users addr2
u_addr3	varchar(40)	Users addr3
u_name	varchar(40)	Users name
u_pwd	varchar(26)	Users pwd
u_active	varchar(30)	Users active
u_status	int(1)	Users status

Table 48 : Users Table

### **46.** User contacts Table

Field Name	Data Type	Description
u_id	int(11)	Users Id
u_contact	varchar(10)	Users Contact

Table 49 : User Contacts Table

## **Chapter 4: Evolution**

## 4.1. TESTING

Testing is integral part of any application development. A proper testing plan and execution produces the more reliable robust system which also meets the required expectations.Different processes are followed to ensure the systems meet the required specifications. Whenever software is developed it is required to check whether it fulfills those needs. Testing typically consumes 40~50% of development efforts, and consumes more effort for systems that require higher levels of reliability, it is a significant part of the software engineering. As the amount of maintenance and upgrade of existing systems grow, significant amount of testing would also be needed to verify systems after changes are made. Hence it is important to check its potential. The main goal of software testing is to know the errors of the software before the user finds them[29].

## 4.2. The Testing Spectrum

Testing is involved in every stage of software life cycle, but the testing done at each level of software development is different in nature and has different objectives. Unit Testing is done at the lowest level. It tests the basic unit of software, which is the smallest testable piece of software, and is often called "unit", "module", or "component" interchangeably.

### 4.3. Test Plan

The system test is carried out to check whether the system meets the required specification whether it can operate successfully. The following checklist was done during the project execution time.

ID No	Description of Test	Test	Result
Α	Function Testing		
	Check all links		
1	Whether outgoing links from all the pages from the specific	Yes	OK
	domain are tested?		
2	Whether all internal links are tested?	Yes	OK
3	Whether links are jumping on the same pages?	Yes	No
4	Whether there are any orphan pages?	Yes	No
5	Whether any broken links are in all above mentioned links?	Yes	No

	Test for all pages		
6	Whether all validations on each field are checked?	Yes	OK
7	Whether default values of the field are checked?	Yes	OK
8	Whether invalid inputs to the fields in the forms are checked?	Yes	OK
	Database Testing		
9	Whether data consistency is existed?	Yes	OK
10	Whether data integrity and no error are in the data?	Yes	OK
11	Whether database queries are executed correctly?	Yes	OK
12	Whether data is retrieved correctly?	Yes	OK
13	Whether data is updated correctly	Yes	OK
В	Usability Testing		
	Navigation		
1	Whether web sites are easy to use?	Yes	OK
2	Whether instructions are provided clearly, correct meaning and	Yes	OK
	satisfy the purpose?		
3	Whether main menu are provided in each pages and	Yes	OK
	consistent?		
	Content Testing		
4	Whether contents are logical, meaningful, understand easily,	Yes	OK
	free from spelling and grammatical mistakes?		
5	Whether dark color and unsuitable fonts are used?	Yes	OK
6	Whether all the anchor links are worked properly?	Yes	OK
7	Whether images are placed properly with proper size?	Yes	OK
С	Interface Checking		
1	Whether all the interactions between severs are executed	Yes	OK
	properly and errors are handled properly?		
2	If database or web server returns any error message for any	Yes	OK
	quarry by application server, whether application server		
	catches and display these message approximately to users?		
D	Compatibility Testing		
-	Browser compatibility		0.17
1	Whether web application is tested on internet explorer,	Yes	OK
	Fireiox, Google chrome, Opera, Safari browsers with different		
	versions (		1

Table 50 :WebTesting Checklist
### 4.4. Test Cases

This section describes an input, action or event and an expected response, to determine if a feature of in this application system is working correctly. This test plan contains particulars such as test case ID, module name, objective, expected result and the actual result.

Test Case ID: 01	Test Case: Login module	
Activity	Expected result	Actual result
Valid User name and valid	Display the respective main	Display the respective main
password	page.	page.
Attempt to login without	Display Login failure error	Display Login failure error
user name and/or password	message and direct to	message and direct to
	login.php	login.php
Table E1:Test plan for login module		

Test Case ID: 02	Test Case: Patient Registration	
Activity	Expected result	Actual result
Registration for new patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to register without	Display Register failure error	Display Register failure error
first name ,last name,	message and direct to	message and direct to
institution, gender, province,	patient_registration.php	patient_registration.php
district, registered year and		
month		

Table 51:Test plan for login module

Table 52:Test plan for patient registration

Test Case ID: 03	Test Case: ViewPatient Registration	
Activity	Expected result	Actual result
View for patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
Patient id or Patient NIC	message and direct to	message and direct to
	patient_view_registration.php	patient_view_registration.php
field validity Attempt to view without Patient id or Patient NIC	message to required fields Display View failure error message and direct to patient_view_registration.php	message to required fields Display View failure error message and direct to patient_view_registration.php

Table 53:Test plan for view patient registration

Test Case ID: 04	Test Case: Patient Clinic Visit Registration	
Activity	Expected result	Actual result
View for patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
Patient id or Patient NIC	message and direct to	message and direct to
	clinic_visit.php	clinic_visit.php
Attempt to patient clinic visit	Display Register failure error	Display Register failure error
register without institution,	message and direct to	message and direct to
present clinic visit ,next clinic	clinic_visit.php	clinic_visit.php
visit		

Table 54:Test plan for clinic visit registration

Test Case ID: 05	Test Case: Patient Hospital Admission Registration	
Activity	Expected result	Actual result
View for patient: field validity	Display error/warning message to required fields	Display error/warning message to required fields
Attempt to view without Patient id or Patient NIC	Display View failure error message and direct to hospital_admission.php	Display View failure error message and direct to hospital_admission.php
Attempt to patient hospital admission register without institution	Display Register failure error message and direct to hospital_admission.php	Display Register failure error message and direct to hospital_admission.php

Table 55:Test plan for hospital admission registration

Test Case ID: 06	Test Case: Add Dialysis	
Activity	Expected result	Actual result
View for patient: field validity	Display error/warning message to required fields	Display error/warning message to required fields
Attempt to view without Patient id or Patient NIC	Display View failure error message and direct to adddialysis.php	Display View failure error message and direct to adddialysis.php
Attempt to patient add dialysis without institution	Display Register failure error message and direct to adddialysis.php	Display Register failure error message and direct to adddialysis.php

Table 56:Test plan for add dialysis

Test Case ID: 07	Test Case: Add Donor Recipient Evaluation	
Activity	Expected result	Actual result
View for patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
Patient id or Patient NIC	message and direct to	message and direct to
	add_donor_recipient.php	add_donor_recipient.php
Attempt to patient donor	Display Register failure error	Display Register failure error
recipient register without donor	message and direct to	message and direct to
name,gender	add_donor_recipient.php	add_donor_recipient.php

Table 57:Test plan for Add donor recipient evaluation

Test Case ID: 08	Test Case: Field update	
Activity	Expected result	Actual result
View for patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
Patient id or Patient NIC	message and direct to	message and direct to
	field_update.php	field_update.php
Attempt to field update without	Display Register failure error	Display Register failure error
district, ds division	message and direct to	message and direct to
	field_update.php	field_update.php
	Table 58:Test plan for field update	-

Test Case ID: 09	Test Case: Death Notification	
Activity	Expected result	Actual result

View for patient:	Display error/warning	Display error/warning
field validity	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
Patient id or Patient NIC	message and direct to	message and direct to
	death_notification.php	death_notification.php
Attempt to death notification	Display Register failure error	Display Register failure error
without death date, gender,	message and direct to	message and direct to
province, district, ds division	death_notification.php	death_notification.php
	Table 59:Test plan for death notification	

Test Case ID: 10	Test Case: Report Generation for Province Wise	
Activity	Expected result	Actual result
Province Wised Patient count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
province name, year, Time	message and direct to	message and direct to
distribution	province_report.php	province_report.php
Province Wised Patient list	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
province name, year, month	message and direct to	message and direct to
	province_report_list.php	province_report_list.php
Province Wised Death count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
province name, year, Time	message and direct to	message and direct to
distribution	death_notification.php	death_notification.php
Province Wised Age	Display error/warning	Display error/warning
distribution Average Age	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
province name, year, Time	message and direct to	message and direct to
distribution	agedistribution.php	agedistribution.php
Province Wised Age	Display error/warning	Display error/warning
distribution Standard Deviation	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
province name, year, Time	message and direct to	message and direct to
distribution	agedistribution_std.php	agedistribution_std.php
Province Wised Age	Display error/warning	Display error/warning
distribution Age Category	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
province name, year, Time	message and direct to	message and direct to
distribution	agedistribution_cate.php	agedistribution_cate.php

Table 60:Test plan for report generation province wise

Test Case ID: 11	Test Case: Report Generation for District Wise	
Activity	Expected result	Actual result
District Wised Patient count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
district name, year, Time	message and direct to	message and direct to
distribution	district_report.php	district_report.php
District Wised Patient list	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
district name, year, month	message and direct to	message and direct to
	district_report_list.php	district_report_list.php
District Wised Death count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
district name, year, Time	message and direct to	message and direct to
distribution	death_notification_dis.php	death_notification_dis.php
District Wised Age	Display error/warning	Display error/warning
distribution Average Age	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
district name, year, Time	message and direct to	message and direct to
distribution	agedistribution_dis.php	agedistribution_dis.php
District Wised Age	Display error/warning	Display error/warning
distribution Standard	message to required fields	message to required fields
Deviation Search		
Attempt to view without	Display View failure error	Display View failure error
district name, year, Time	message and direct to	message and direct to
distribution	dis_agedistribution_std.php	dis_agedistribution_std.php
District Wised Age	Display error/warning	Display error/warning
distribution Age Category	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
district name, year, Time	message and direct to	message and direct to
distribution	dis_agedistribution_cate.php	dis_agedistribution_cate.php
Table 61:Test plan for report generation district wise		

Test Case ID: 12	Test Case: Report Generation for Institution Wise	
Activity	Expected result	Actual result
Institution Wised Patient count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	institution_report.php	institution _report.php
Institution Wised Patient list	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, month	message and direct to	message and direct to
-	institution _report_list.php	institution _report_list.php

Institution Wised Death count	Display error/warning	Display error/warning
Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	death_notification_ins.php	death_notification_ins.php
Institution Wised Age	Display error/warning	Display error/warning
distribution Average Age	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
institution name year Time	message and direct to	message and direct to
distribution	agedistribution ins nhn	agedistribution ins php
Institution Wised Age	Display error/warning	Display error/warning
distribution Standard	massage to required fields	massage to required fields
Deviation Search	message to required news	message to required metus
Attempt to view without	Diamlary Views failung armon	Diamlary Wiener failung armon
Attempt to view without	Display view failure error	Display view failure error
institution name, year, Time	message and direct to	message and direct to
distribution	ins_agedistribution_std.php	ins_agedistribution_std.php
Institution Wised Age	Display error/warning	Display error/warning
distribution Age Category	message to required fields	message to required fields
Search		
Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	ins_agedistribution_cate.php	ins_agedistribution_cate.php
Institution Wised Dialysis	Display error/warning	Display error/warning
Patient Count Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	dialysis.php	dialysis.php
Institution Wised Dialysis	Display error/warning	Display error/warning
Patient List Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, month	message and direct to	message and direct to
	dialysis_list.php	dialysis_list.php
Institution Wised clinic visit	Display error/warning	Display error/warning
Patient Count Search	message to required fields	message to required fields
	6 1	
Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	clinic_visit.php	clinic_visit.php
Institution Wised Clinic Visit	Display error/warning	Display error/warning
Patient List Search	message to required fields	message to required fields
		message to require metas
Attempt to view without	Display View failure error	Display View failure error
institution name, year, month	message and direct to	message and direct to
· · · · · · · · · · · · · · · · · · ·	clinic visit.php	clinic visit.php
Institution Wised hospital	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·
	Display error/warning	Display error/warning
admission Patient Count	Display error/warning message to required fields	Display error/warning message to required fields

Attempt to view without	Display View failure error	Display View failure error
institution name, year, Time	message and direct to	message and direct to
distribution	hospital_admission.php	hospital_admission.php
Institution Wised Hospital	Display error/warning	Display error/warning
Admission Patient List Search	message to required fields	message to required fields
Attempt to view without	Display View failure error	Display View failure error
institution name, year, month	message and direct to	message and direct to
	hospital_admission.php	hospital_admission.php

Table 62:Test plan for report generation Institution wise

Test Case ID: 13	Test Case: Report Generation for MOH Wise		
Activity	Expected result	Actual result	
Moh Wised Patient count	Display error/warning	Display error/warning	
Search	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, year, Time	message and direct to	message and direct to	
distribution	moh_report.php	moh _report.php	
Moh Wised Patient list Search	Display error/warning	Display error/warning	
	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, year, month	message and direct to	message and direct to	
	moh _report_list.php	moh _report_list.php	
Moh Wised Death count	Display error/warning	Display error/warning	
Search	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, vear. Time	message and direct to	message and direct to	
distribution	death notification moh.php	death notification moh.php	
Moh Wised Age distribution	Display error/warning	Display error/warning	
Average Age Search	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, year, Time	message and direct to	message and direct to	
distribution	agedistribution_moh.php	agedistribution_moh.php	
Moh Wised Age distribution	Display error/warning	Display error/warning	
Standard Deviation Search	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, year, Time	message and direct to	message and direct to	
distribution	moh_agedistribution_std.php	moh_agedistribution_std.php	
Moh Wised Age distribution	Display error/warning	Display error/warning	
Age Category Search	message to required fields	message to required fields	
Attempt to view without	Display View failure error	Display View failure error	
moh name, year, Time	message and direct to	message and direct to	
distribution	moh_agedistribution_cate.php	moh_agedistribution_cate.php	

Table 63:Test plan for report generation moh wise

### 4.4 Concluding Remarks

- Surveillance of Chronic Kidney Disease Management System not only provides an opportunity to the hospital to enhance their patient care but also can increase the profitability of the organization
- Surveillance of Chronic Kidney Disease Management System would enable hospitals to serve the rapidly growing number of health care consumers in a cost-effective manner.
- Surveillance of Chronic Kidney Disease Management System can also save extra money on your current computer hardware shopping. Check up with our executive to more on this.
- Hospital administrators would be able to significantly improve the operational control and thus streamline operations.
- This would enable to improve the response time to the demands of patient care because it automates the process of collecting, collating and retrieving patient information.
- Accounting sometimes becomes awfully pathetic and complex. This product will eliminate any such complexity, since the retrieval of information through its MIS will become virtually on the tip of your fingers

Very important for some, the reduced cost of the manpower would pay for the cost of this product within a short time after its implementation.

### 4.5. Evaluation of the Achievement

The objective of the project is to explore the possibility of entering Chronic Kidney Disease patients' detailsusing Chronic Kidney Disease Management Systembased on Astrological and Numerological aspects which were successfully achieved to fullest support and satisfaction of the supervisorat the completion of the project.

Extensive study and research were done to understand the treatment to the patient, understand the diagnosis name, understand the kidney transparent and understand the prescriptions name as well as the technologies used in each oftheir sites. Further studies helped to gather information regarding the availability of application development tools and different types of data structure. More than 60% of the project time spent on entering parts of Kidney patients details and limitations in each sitesOnce method and tools are found to the system

requirements; implementing methods and theprogram code according to the Baby name Database is toughest task. Even after finding the components need to build the solution, putting everything together and make the system aworking model is a challenging and time consuming task. There are many commercial and open source software tools and standards available in market. Among available technologies, selecting proper tool and technology is another challenging work.

#### 4.6. Lesson Learned During the Project

The time management and communication are vital to deliver on time. Since most of the time spent in depth research, caused problem in keeping up with deliveries in later stages of the project. Also, the fundamental of Numerological and Astrological aspects are learned throughout the project. Though Open Source projects are good to work, sometime too much time spend to solveissues or find solutions due to lack of help or documentation of the open source product used in the project. However without the proper documentation, the time spent and the hard workhelped to achieve a successful customized solution for this project.

### References

- [1].Presidential Task Force on Chronic Kidney Disease Prevention. [Online] Available at: <a href="http://www.presidentialtaskforce.gov.lk/en/kidney.html">http://www.presidentialtaskforce.gov.lk/en/kidney.html</a> [Accessed 2 June 2016].
- [2].Essential Guide to Kidney Disease System. [Online] Available at: <u>http://www.westernhospital.lk/essential-guide-to-kidney-disease</u>[Accessed 2 June 2016].
- [3].American Kidney Foundation. [Online ] Available at: <u>http://www.kidneyfund.org/kidney-disease/chronic-kidney-diseaseckd[</u>Accessed 2 June 2016].
- [4].. Chronic Kidney Disease Management handbook [Online ]Available at:<u>http://kidney.org.au/health-professionals/prevent/chronic-kidney-diseasemanagement-handbook</u>[Accessed 2 June 2016].
- [7]. Entity relationship model [Online] Available at: <u>http://en.wikipedia.org/wiki/Entity-</u>relationship\_model (Accessed 10 July, 2016)

[8]. [Online]Accessible at http://www.health.gov.lk/en/publication/NeGS\_v\_1.pdf(Accessed 15 October, 2016)

[9]. [Online] Accessible at http://www.cert.gov.lk/ (Accessed 15 October, 2016)

[10]. Using Design Goals and Strategies [Online] Available at:<u>http://www.xilinx.com/itp/xilinx10/</u>isehelp/ise\_c\_design\_strategies.htm (Accessed 15 October, 2016)

[11]. [Online]Available at: http://www.w3schools.com (Accessed 15 October, 2016)

[12]. [Online]

Availableat:http://www.maxdesign.com.au/presentation/workshop/index.htm (Accessed 08 November, 2016)

[13]. [Online]Available at: http://www.maxdesign.com.au/presentation/workshop/(Accessed 08 November, 2016 )

[14].

[Online]Availableat:<u>http://classes.engr.oregonstate.edu</u>/ie/winter2004/ie493/classnotes /introcss.html (Accessed 08 November, 2016)

[15]. PHP [Online] Available at: http://en.wikipedia.org/wiki/PHP (Accessed 08 November, 2016)

[16]. MySQL [Online] Available at: http://en.wikipedia.org/wiki/MySQL (Accessed 08 November, 2016)

[17].JavaScript [Online] Available at: http://en.wikipedia.org/wiki/JavaScript (Accessed 08 November, 2016)

[18]. [Online] Available at: http://www.w3schools.com/ajax/default.asp (Accessed 08 November, 2016)

[19]. jQuery [Online] Available at: http://jquery.com/ (Accessed 08 November, 2016)

[20]. [Online] Available at: http://www.appservnetwork.com/ (Accessed 08 November, 2016)

[21]. Marc Delisle (2009), Mastering phpMyAdmin 3.1 for Effective MySQLManagement, Packt Publishing, United Kingdom.

[22]. Robert Moes and Geoff Moes (2005), Beginning MySQL, WroxPrInc, USA.

[23]. [Online] Available at: http://www.adobepress.com/articles/article.asp?p=1604699(Accessed 09 November, 2016 )

[24].Data Definition Language [Online] Available at: <u>http://en.wikipedia.org</u>/wiki/Data\_definition\_language (Accessed 09 November, 2016)

[25].Database schema[Online] Available: http://en.wikipedia.org/wiki/Database\_schema (Accessed 09 November, 2016 )

[26]. [Online]Available at: http://www.php-login-script.com(Accessed 05 August, 2016)

[27]. Srinivas Tamada (August, 2009) Voting system with jQuery, Ajax and PHP [Online] Available at:http://www.9lessons.info/2009/08/vote-with-jquery-ajax-andphp.html (Accessed 05 August, 2016 )

[28]. [Online] Available at: http://www.facebook.com (Accessed 05 October, 2016)

[29]. [Online] Available at: <u>http://static.springsource.org</u>/spring/docs/2.0.x/reference /testing.html (Accessed 05 August, 2016 )

[30]. Health Insurance Portability and Accountability Act of 1996 of United States-[Online] Availableat: http://www.hhs.gov/hipaa/ (Accessed 05 August, 2016)

[31][Online] Available at: http://www.life.gov.lk/ (Accessed 05 August, 2016)

[32][Online] Available at: http://www.hl7.org/(Accessed 05 August, 2016)

[33][Online] Available at: http://www.health.gov.lk/en/publication/NeGS\_v\_1.pdf (Accessed 05 August, 2016 )

## Appendix A

#### **Registration Function**

This System is mainly included the four registration Area. All Registration's done by System Administration.

- EPID User Registration
- PDHS User
- RE user Registration
- MOH User Registration
- Others User



### **User Registration**



Use case name	Login Details	
Main Flow	1. Super Admin Will Enter The Following	
	Primary Login Details	
	• User Name	
	• Password	
	2. Validation required with the user	
	registration module at the Super Admin	
	Level.	
Aston	Sugar Admin	
Actor	Super Admin	
Pre-condition		
Extensions		
Post -condition	Login to the System	

Use case name	User Registration Information	
Main Flow	1. Super Admin will register the user in the	
	system with following details.	
	• user ID	
	• First Name	
	Last Name	
	• DOB	
	• Work In	
	• User Group	
	• User Level	
	• User Name	
	• Password	
	2.Save User Details	
Actor	Super Admin	
Pre-condition	1. Super Admin Login to the System	
Extensions		

Post -condition	User Account Created	
Use case name	View User Registration Information	
Main Flow	1. Super Admin Will Enter The User Level	
	Or Users' Name.	
	User Level	
	• EPID	
	• MOH	
	• RDHS	
	• PDHS	
	• Institution	
	• Other	
	2. View The Existing Registration Initiation	
	Details Of users	
Actor	Super Admin	
Pre-condition	1. Super Admin Login to the System	
Extensions		
Post -condition	Display Registered Users.	

Use case name	Update User Registration Information
Main Flow	1. Super Admin Will Enter The User Level
	Or Users' Name.
	User Level
	• EPID
	• MOH
	• RDHS
	• PDHS
	Institution
	• Other
	2. View The Existing Registration Initiation
	Details Of users
	3. Update Details in particular user.

Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display Registered Users.

Use case name	Delete User Registration Information	
Main Flow	1. Super Admin Will Enter The User Level	
	Or Users' Name.	
	User Level	
	• EPID	
	• MOH	
	• RDHS	
	• PDHS	
	• Institution	
	• Other	
	2. View The Existing Registration Initiation	
	Details Of users	
	3. Change Only The Status From Active To	
	Inactive.	
Actor	Super Admin	
Pre-condition	1. Super Admin Login to the System	
Extensions		
Post -condition	Display only Active Users.	

Use case name	Login Details
Main Flow	1. Super Admin Will Enter The Following
	Primary Login Details
	• User Name
	Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	Super Admin
Pre-condition	
Extensions	
Post -condition	Login to the System

## MOH Area Registration



Use case name	Login Details
Main Flow	1. Super Admin Will Enter The Following
	Primary Login Details
	• User Name
	Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	Super Admin
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	MOH Area Registration Information
Main Flow	1. Super Admin will register the MOH Area
	in the system with following details.
	Province
	• District
	• MOH ID
	MOH Area Name
	2.Save MOH AreaDetails
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	MOH Area Details Save Database

Use case name	View MOH AreaRegistration Information
Main Flow	1. Super Admin Will Enter The MOH Name
	or MOH ID
	2. View The Existing Registration Initiation
	Details Of MOH Area
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display Registered MOH Area.

Use case name	Update MOH Area Registration Information
Main Flow	1. Super Admin Will Enter The MOH Area
	Name or MOH Area ID
	2. View The Existing Registration Initiation
	Details Of MOH Area
	3. Update Details in particular MOH Area.
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display Registered MOH Area.

Use case name	Delete MOH Area Registration Information
Main Flow	1. Super Admin Will Enter The MOH Area
	Name or MOH Area ID
	2. View The Existing Registration Initiation
	Details Of MOH Area
	3. Change Only MOH Area Status From
	Active To Inactive.
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display only Active MOH Area.

### PHI Area Registration



Use case name	Login Details
Main Flow	1. Super Admin Will Enter The Following
	Primary Login Details
	• User Name
	Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	Super Admin
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	PHI Area Registration Information
Main Flow	1. Super Admin will register the PHI Area in
	the system with following details.
	• Province
	• District
	• MOH Area ID
	• PHI Area ID
	PHI Area Name
	2.Save PHI AreaDetails
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	PHI Area Details Save Database

Use case name	View PHI AreaRegistration Information
Main Flow	1. Super Admin Will Enter The PHI Name or
	PHI ID
	2. View The Existing Registration Initiation
	Details Of PHI Area
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display Registered PHI Area.

Use case name	Update PHI Area Registration Information
Main Flow	1. Super Admin Will Enter The PHI Area
	Name or PHI Area ID
	2. View The Existing Registration Initiation
	Details Of PHI Area
	3. Update Details in particular PHI Area.
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display Registered PHI Area.

Use case name	Delete PHI Area Registration Information
Main Flow	1. Super Admin Will Enter The PHI Area
	Name or PHI Area ID
	2. View The Existing Registration Initiation
	Details Of PHI Area
	3. Change Only PHI Area Status From
	Active To Inactive.
Actor	Super Admin
Pre-condition	1. Super Admin Login to the System
Extensions	
Post -condition	Display only Active PHI Area.

## Login Function

## MOH User Login



Use case name	MOH User Login
Main Flow	1. MOH Will Enter The Following Primary
	Login Details
	• User Name
	• Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	MOH User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	MOH View User Detail
Main Flow	1. User Will be able to view the User Details.
	(User profile Details).
Actor	MOH User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	Enter Diseases Details
Main Flow	1. User will login to the system and enter 399
	report details.
	2. Following Details need to be entered.
	Cases notified count
Actor	MOH User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	View Notification Details
Main Flow	1. MOH User will login to the system and
	view notification details.
	2. Following Details need to be entered.
	Notified Details
Actor	MOH User
Pre-condition	
Extensions	
Post -condition	Login to the System

### **RDHS User Login**



Use case name	RE User Login
Main Flow	1. RDHS Will Enter The Following Primary
	Login Details
	User Name
	• Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	RDHS User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	RDHS View User Detail
Main Flow	1. User Will be able to view the User Details.
	(User profile Details).
Actor	RDHS User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	View Report
Main Flow	1. RDHS User will login to the system and
	get the report.
	2. Following Details need to be entered.
	• Week end date
Actor	RDHS User
Pre-condition	
Extensions	
Post -condition	Login to the System

### **EPID** User Login



Use case name	EPID User Login
Main Flow	1. EPID User Will Enter The Following
	Primary Login Details
	• User Name
	• Password
	2. Validation required with the user
	registration module at the Super Admin
	Level.
Actor	EPID User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	EPID User View Detail
Main Flow	1. User Will be able to view the User Details.
	(User profile Details).
Actor	EPID User
Pre-condition	
Extensions	
Post -condition	Login to the System

Use case name	EPID User View Detail
Main Flow	1. User Will be able to view the User Details.
	(User profile Details).
Actor	EPID User
Pre-condition	
Extensions	
Post -condition	Login to the System

### Patient Registration Use Case Diagram



92



HospitalAdmission Use Case Diagram



Dialysis Use Case Diagrams



Recipient Donor Evaluation Use Case Diagrams



Field updates Use Case Diagrams



### Death Notification Use Case Diagrams



# Appendix B- User Manual

1. Login Page

National Renal Registry Epidemilogy Unit	Formation in the second s
Ministry of Health and Indigenous Medicine	
Sign in to your account Please were your name and passwood to log in Username Password	

- For MOH type your user name and password Click "Login"
- For Institution type your user name and password Click "Login"
- For RDHS type your user name and password Click "Login"
- For PDHS type your user name and password Click "Login"

### 2. Home Page

Ó		Nati Ministry o	onal Ren Epidemiolo of Health and I Sri Lar	nal Reg Dgy Unit ndigenou nka	gistry s Medicine	
Home Patien	t Management∽	User Management~	Patient Follow-up~	Reports~	Contact Us	
User : test						• 1 My Account
Home Surveillar	nce on Chronic K	idney Disease in Sri La	nka	The Feid	mistory Unit of	Screening Guidelines
				the Epice the Minist Lanka h surveillanc kidney October hospitals v sentinel sli of selectin as sentine available	whology Unit of as established e on chronic disease since 2013. Thirty were declared as tes. The rationale ig the hospitals a sites was the statistics on the	Chronic Editory Donose Let Lanks

3. Register New Patient



Place Cursor on "Register New Patient"

### Patient Register Form

Ó	National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine Sri Lanka
Home Patient Management~	User Management
Last Login : test	• 👤 My Account 🗠
Patient Registr	ation
Registered year and month * :	Year 🗸 Month 🗸 Day 🔻
Institution * :	Select Institution V Unit V
First Name * :	First Name
Middle Name :	Middle Name
Last Name * :	Last Name
Gender *:	◯ Female ◯ Male
Age :	AGE
NIC :	NIC
Date of Birth :	<b>m</b>

### 4. View Patient

(		Nati Ministry o	onal Ren Epidemiolo of Health and I Sri Lar	ogy Uni Indigeno	t us Medicine	
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
Last Login	: test					• L My Account
Q 5	Search Patient	cyistiatioi	1			~
	Patient ID :		or		Patient NIC :	

Enter Patient ID or Patient NIC -----> Click "Patient Search"

#### Then after Click Conform Patient button

		Ministry c	Epidemiology Unit of Health and Indigeno Sri Lanka	t us Medicine	Factor and the	
н	iome Patient Managemen	t~ User Management~	Patient Follow-up> Reports-	Contact Us		
	r ; test				• 🔔 My Account	
Patient ID	Photo	Full Name	Gender	Phone	Select Patient	
Patient ID 52645	Photo	Full Name Sirisena Perea	Gender Male	Phone	Select Patient	

National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine Sri Lanka								
Home Patient Management∽ U	ser Management -> Patient Follow-up -> Reports -> Contact Us							
Last Login : test		• 🗶 My Account 🗸						
View Patient Reg	gistration							
Q Search Patient		~						
Patient ID : 52645	or Patient NIC :							
Patient ID : Patient Name : Patient NIC : Patient Search 9	52645 Sirisena Perea							
Registered year and 2016 month * :	V September V 1 *							
Institution * :	TH Kurunagala 🗸							
First Name * :	Sirisena							
Middle Name :	Middle Name							
Last Name * :	Perea							
Gender *:	Female • Male							
Age :	AGE							
NIC :	NIC							
Date of Birth :	8							
Permanent Address : No Street Nam	•							

User Registration

National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine											
Home	Patient Manage	ment~	User Manage	ment~	Patient Follow	/-up∨	Reports~	Contact Us			
Last Login	:									🚨 User 🗸	
User	User Registration										
	Title :	Sel	ect Title	Ŧ							
	Username * :										
	User Group *:	Sel	ect User Group	*							
	First Name * :										
	Last Name * :										
	NIC :	NIC									
	Gender * :	O Femi	ale 🔵 Male								
	Date of Birth :				Ê						
C	esignation * :										

5. Update Patient Registration Page

	National Renal Registry       Epidemiology Unit         Ministry of Health and Indigenous Medicine       Image: Compare the second							
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us			
Last Login	Register new Patient					• 👤 My Account		
Lloc	Alter Patient	Desistrat						
Q S	earch Patient Patient ID : Patient Search Q		or	Pe	atient NIC :	~		
			<ul> <li>insert Patie</li> </ul>	ent ID or N	NIC			
			Click Patier	nt Search	Button			
## 6. Patient Follow up Menu

Natio	nal Renal Registry pidemiology Unit Health and Indigenous Medicine Sri Lanka
Home Patient Management~ User Management~	Patient Follow-up∽ Reports∽ Contact Us
User : test	Clinic Visit
Home	Dialysis > Recipient Donor > Evaluation
Surveillance on Chronic Kidney Disease in Sri Lank	Post KT Clinic > Death Notification
	Field Update  Field Update Fiel

i. Patient Clinic Visit Page

ļ		Natio Ministry o	For example, where the example of th			
Home	Patient Management~	User Management~	Patient Follow-up>	Reports~	Contact Us	
User : test						• 👤 My Account 🕤
Patie	ent's Clinic roh Patient Patient ID : Patient Search 9	Visit	or	F	Patient NIC :	~
			insert Patier	it ID or N		
			Click Patient	Search E	Button	

	Ş	2	Ministry o	Epidemic of Health and Sri L	ology Unit d Indigenous anka	Medicine	Professional Con-	
H	lome F	atient Management~	User Management~	Patient Follow-u	p~ Reports~	Contact Us		
	er test						• 1 My Account	
Select Patient	otior	t's Clinio	\ /icit					~
Select Patient	otior	Photo	Full Name		Gender	Phone	Select Patient	*
Select Patient Patient ID 52845	btior	Photo	Full Name Sirisena Perea	_	Gender Male	Phone .	Select Patient	×

Ó		Natio	Dnal Rena Epidemiolog f Health and In Sri Lanl	gy Unit	<b>jistry</b> Medicine	Prime Kin
Home Patient Ma	nagement~ U	ser Management~	Patient Follow-up~	Reports~	Contact Us	
User : test						\$ 👤 My Account 🗠
Patient's (	Clinic Vi	sit				
Q Search Patient						~
Patient ID :	52645		or	F	Patient NIC :	
Patier Patient N Patient Patient	nt ID : ame : NIC : search 9	52645 Sirisena Per 784567902\	rea /			
Present Clinic Visit :			<b>#</b>			
Next Clinic Visit :			<b>#</b>			
Institution *	Select In	stitution	~			

	Inbetween Clinic Visits	~
	Hospitalization Ves  No	
=	Social History	~
	Smoking       Drinking Alcohol       Betel Chewing       Drug Addictions       Other :     Other Social Habits	
≡	Co-mobidities / Past Medical History	^
≡	Past Surgical History	^
≡	Allergy History	^
≡	Clinical Examination	^
≡	Investigations	^

=	Clinical Examination							^
≡	Investigations							^
=	Plan of Management :							^
≡	Prescriptions :	5	Previ	ous Pharm	aceuticals			*
			Clinic No	Clinic Date	Medicine Name	Dosage	Dosage Unit	Frequency
			6	2017- 01-19	hjkn	2.00	g	N
			5	2017- 01-19	gffg	3.00	g	м
			4	2017- 01-19	antibities	3.00	gtt	Tds
			3	2017- 01-19	amilodipine	2.00	9	N
			1	2017- 01-12	1alpha CCF	2.00	g	м
			1	2016- 09-12	Losartan	15.00		3
				View/Ed	lit 🕑			
	Reset 🕼				A	dd Clinic V	ʻisit 🔿	
			_					

## ii. Patient Hospital Admission

	National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine Sri Lanka
Home Patient Management~	User Management -> Patient Follow-up -> Reports -> Contact Us
User : test	• 🧘 My Account 🗡
Patient's Hospi	tal Admission
Q Search Patient	*
Patient ID :	Or Patient NIC :
Patient Scarch	
	insert Patient ID or NIC
	Click Patient Search Putten
Patient's Hospita	al Admission
Q Search Patient	~
Patient ID : Patient ID : Patient Name : Patient NIC : Patient Search Q	or Patient NIC : 34 T.M.Thilakarathne 501053449v
٩	~
Institution * :	Select Institution 🗸
Blood Group :	Select Blood Group * Rh : _ +
Blood transfusion :	Yes No
Reason :	Reason for blood transfusion
Main Diagnosis :	
Main Diagnosis : Diagnosis for the patient admission :	

=	Social History	^	
=	Co-mobidities / Past Medical History	^	
≡	Past Surgical History	^	
≡	Allergy History	^	
≡	Clinical Examination	^	
=	Investigations	^	
=	Plan of Management :	^	
=	Add New Pharmaceuticals :	Previous Pharmaceuticals	
		Clinia No. Clinia Date Mediaina Name Derago Fregueney	
		Cinic No Cinic Dale medicine Name Dosage Frequency	
		No Data	
			1
	Decet 🖓	Add Haspital Admission	
	RESELLE		

iii. Add Dialysis Patient

(	Ó	Natio	Financial No.			
Home	Patient Management×	User Management~	Patient Follow-up~	Reports~	Contact Us	
User : tes	đ					• 👤 My Account
Dial	YSIS earch Patient					~
	Patient ID :		or	F	Patient NIC :	
	Patient Search Q					

Q Search Patient				*
Patient ID :	52645	or	Patient NIC :	
Patient I	D : 52645			
Patient Nam	e : Sirisena Perea			
Patient NI	C : 784567902V			
Patient Se	arch 9			
Institution * :	Select Institution	~		
Dialysis :	O Institutionalize Peritoneal Dialysis			
	O Peritoneal Dialysis			
	Hemodialysis			
Dry Body Weight :				
Present Body Weight :				
Dialysis Date :	2017-01-21			
Next Dialysis Date :		Me Ne	xt Dialysis Time : 01:30 PM	0
Dialysis Plan :	Enter Dialysis Plan			
	Reset 🗷		Add Dialys	s 🖸

### iv. Add Death Notification

(		Natio Ministry o	Dnal Rena Epidemiolog f Health and Ir Sri Lanl	al Reg gy Unit digenou: ka	<b>gistry</b> s Medicine	
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
User : test						• 👤 My Account 🗸
Dea a sea	th Notificat	ion				~
	Patient ID :		or	F	Patient NIC :	

Death Date * :	Year Vear Mon V
Institution :	Select Institution 🗸
Gender *:	C Female C Male
Province * :	Select Province 🗸
District * :	Select District 🗸
Ds Division /MOH	Select Ds Division 🗸
Cause of Death	1
Immediate Cause of Death :	
Underlying Cause of Death :	
Contributory Cause :	

# v. Add field update details

(		Natio Ministry o	Dnal Rena Epidemiolog f Health and Ir Sri Lanl	al Reg gy Unit digenou:	<b>gistry</b> s Medicine	Fireframe Ent
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
Last Login	: test					• 🔔 My Account
	iearch Patient					~
	Patient ID : Patient Search Q		or	Ps	atient NIC :	

Patient	t ID :	5			0		Patient NIC		
D	ationt IF		-						
Pa	atient IL		5	Unathiesa					
Patier	ient NIC		RG	opatilissa					
	ationt Cor	arch O							
	atient see								
Patient Deta	ails								
District * :	Colombo	<b>)</b>			~				
De									
Division :	Kolonna	wa			~				
GN	Select	GN Division			~				
Division :									
Field Undate									
Field Undate Date	a * .	2014		luna		Davi	-		
Tield Opdate Dat		2014	~	June	~	Day	Ť		
Renal Diagno	sis :	CKD				~			
CKD Sta	ne ·	Select State				~			
		Colour Orage				•			
Follow up Stat	tus :	Select Fo	ollow up S	tatus	Ŧ				
Commer	nts :								
•	Set Coor	dinates							
	F	leset 🕜						Save 🕥	

# vi. Add Recipient donor evaluation details

	<u>0</u>	Natio Ministry o	Dnal Rena Epidemiolog f Health and In Sri Lanl	al Reg gy Unit digenou:	<b>gistry</b> s Medicine	IC EMPERATION
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
User : test						• 🗶 My Account 🗡
Reci	pient Donc	or Evaluati	on			
Q Sear	ch Patient					~
I	Patient ID : Patient Search <b>Q</b>		or	F	Patient NIC :	

8 Re	cipient			^	8	Donor Personal	Details			1
	Name :	K Ruinawathi	i			Name *:				
	Permanent Add	ress :				Permanent A	ddress :			
	No.					No.				
	Street	Kandupagama,I	Labunoruwa			Street				
	Name					Name				
	lown					Iown				
	NIC :	507012007/				NIC -				
		3013133314								
Con	tact Details :					Contact Details :				
(Con	Next of Kin tact Detail) :					Next of Kin (Contact Detail) :				
D	ate of Birth :		餾			Date of Birth :			<b>#</b>	
Ger										
	ider": 💽 i	<sup>z</sup> emale 🔵 Ma	ale			Gender*:	) Female (	Male		
Donor	Status	emale 🔵 Ma	ale			Gender*:	) Female ()	Male		
Donor	Status	Female 🔵 Ma	ale	ĥ		Recipient Status :	) Female ()	Male		li
Donor :	Status	Female () Ma	ale			Gender *:	) Female ()	Male		1,
Donor (	Status	Female () Ma	ale	/		Gender *: Recipient Status :	) Female ()	Male		1
Donor :	Status :	-emale () Ma	le			Gender ": Recipient Status :	) Female (	Male		1
Donor S	Status :	-emale () Ma	le		Do	Gender ": Recipient Status : to the Recipient : cumentry	) Female (	Male		<i>li</i>
Donor : to c	Status :	-emale ( Ma	ie		Do	Gender ': Recipient Status : to the Recipient : cumentry proof :	) Female (	Male		
Donor : to c Docum	Status :	emale () Ma	sie		Do	Gender ': Recipient Status : to the Recipient : cumentry proof :	) Female (	Male		
Donor S to c Docur	Status :	emale () Ma			Do	Gender ': Recipient Status : to the Recipient : cumentry proof :	) Female	Male		
Donor S	Blood Group : Rh :	al Studies			Do	Gender ": Recipient Status : to the Recipient : cumentry proof : Stage	) Female ()	Male		
Donor S to c	Status :	al Studies	Recipie		Do	Gender ': Recipient Status : to the Recipient : coumentry proof : Stage Stage I	Voing	Male		
Donor S	A A A A A A A A A A A A A A A A A A A	al Studies	Recipie		Do	Gender ': Recipient Status : to the Recipient : cumentry proof : Stage Stage I HLA 1 UFR	yping Yping	Male		
Donor S to c Docum	A B	al Studies	Recipie		Do	Gender ': Recipient Status : to the Recipient : coumentry proof : Stage Stage I HLA T UFR S. CR	yping satinine	Male		

HLA	Donor	Recipient
A		
в		
DR		
DQ		
	Result	
T ce	Il compatibility test :	Compatible
	(	Not Compatible
Donor \$	Specific Antibodies	
	Class I :	
	Class II :	
No.of r	arevious blood	

	HLA Antibody identification (PRA) Other test (reperify):
	Previous HLA test results (If any)
	HLA Type :
	HLA Antibodies
	Other :
	Report Reference No :
	Date :
	Events of Sensitization
	+ Events of Sensitization
	History of Pregnancies: Yes No
	Ant previous Yes No Transplantations :
	Delivery date of last menancy :
	Details of the requesting consultant
	Name :
Reset 🕼	Register <b>O</b>

### 7. Report Generation

Epidemiolog Ministry of Health and In Sri Land	gy Unit digenous N	stry <sup>Medicine</sup>	Endering IN
Home Patient Management~ User Management~ Patient Follow-up~	Reports~ C	Contact Us	
User : test	Distributions	>	My Account
	Individual Patient	t >	
Homo	Dialysis	>	
TIOTTIE	Clinic Visit	>	
	Hospital Admissi	ion >	
Surveillance on Chronic Kidney Disease in Sri Lanka	Recipient Donor Evaluation	3	
	The Epidemiol the Ministry of Lanka has surveillance co- kidney dised October 200 hospitals were sentinel sites. T of selecting th available statis disease burde media reports concerns of th	logy Unit of Health, Sri established on chronic ase since 13. Thirty declared as The rationale he hospitals es was the stics on the m and the and public he presence	Screening Guidelines         Chrunk-Kidney Olseate         Britania         Britania         Britania

## Distribution Report Generation - Province Reports

	2	Nati	onal Rer Epidemiol of Health and Sri La	ogy Unit	<b>ry</b> dicine	E Para Maria
Home Patie	ent Management-	<ul> <li>User Management</li> </ul>	Patient Follow-up~	Reports~ Conts	act Us	
Last Login :					٥	1 My Account
Provinc	ce Repo	ort				
	Province :	North-Central	~			
	Year:	2016	~			
Time I	Distribution :	Monthly - Select Time Distribution Yearly	<u>م</u>	1	Search <b>Q</b>	
		Quarterly				
IIII Iable				_	_	^
III Ta	able					^
Show	10 • entries				Search:	
			Gender			
Pro	ovince		Male	Female	Å	- Iotal
Nort	th-Central		2246	1359		3605
						+
Showi	ing 1 to 1 of 1 entr	ries			Previous	1 Next
						^
		Nort	th-Central 2016	– Sex Distributio	n	≡
			Male	Female		Highcharts.com

Province Report Quarterly



### Province Report Monthly



#### Province Age Category

<u></u>	2	Natio Ministry o	Onal Rena Epidemiolog f Health and In Sri Lanl	al Reg gy Unit digenou:	g <b>istry</b> s Medicine	Forenegative
Home Pa	tient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
Last Login :						• 👤 My Account 🗠
Provin	ce Wice	e Age Cate	gory			1
	Province :	North-Central	~			
	Year:	2016	~			
Time	Distribution :	Yearly	~			
	R	eset 🖌			Searc	h Q



## Province Wise patient registration list

### Select Province Name ----- $\rightarrow$ Click Search Button

9			 Mir	Natio	or El of H	pidemiol ealth and Sri La	og Ind	gy Unit	s N	stry <sup>Medicine</sup>				Facence the	
Home	Patient Ma	nagement~	User Mana	igement~	P	atient Follow-up	/	Reports~	¢	Contact Us					
Last Login	:											•	g	My Account	×
Prov	ince v	vise Pa	atien <sup>.</sup>	t Rep	C	ort									
🛱 Do Total P	wnload EXCE atient	EL 🛛 🗹 Print	: Searct	h						4348					
Show 1	0 🔻 entries	i									Sea	arch:			
Nam	•	Address		Age	ŧ	Diagnosis	¢	Add Year	•	Province	¢	District		Institution	÷
A Alga	ma	-55/8/A,-Asiri p Thunbovila,-Pil	adasa, iyandala.	69		СКД		2015-5-2		Western		Colombo		NINDT	
A Anse	elem	-23/A,-Kuraluw Pedesa, Korala Moratuwa.	eli wella,-	57		СКД		2017-3-2		Western		Colombo		NINDT	
A Anto	ny	-34/10,-Pupudi Kandana.	ugama,-	55		СКД		2015-7-		Western		Gampaha		NINDT	

#### Province Wise Death Notification -Report

Select Province Name --→ Select Year ---→Select Time Distribution--→Click Search Button

(Yearly, Quarterly, Monthly)

	Patient Manag	persent v - User Marsep	Sri Lank amerika Patae	a £ Fultw-up~	Neparta-	Contact	Lbr
th Notification District Wise  Provines  Provines  Reset  Reset Reset  Reset  Reset Reset  Reset Reset  Reset Re	pm -		-			· 1	My Account
Province   Natio-Cardinal	th Notific	ation District	W/isco				
Provinues: Nanthey   Search Q   Search Q   Search Q   Index   Reset CF   Search Q   Index   Norths   Norths   Norths   Norths   Norths   Provinced EXCEL   Northly   a	and a second con	feed her part ( , , 1 , heer ( ) and her ( ) had be	CORP. THE DATE.				
Provinces: National V Search Q Time Manthy Libbinitian Resid C Resid C Reside C							
Neric 2010   Time Manthly   Ubtrinuitian Resid C7     Nerice Search Q     Intel Manthly Image: Search Q     Intel Manthly </td <td>Province I</td> <td>Nath-Central</td> <td>~</td> <td></td> <td></td> <td></td> <td></td>	Province I	Nath-Central	~				
Time Marthy   Reset C     Reset C     Index     Index     Index     ROMS     ROMS<	Nor	2018	~				
Next C?     Search Q       Index     Index       Index     Index <td>Time Usintulan</td> <td>Monthly</td> <td>~</td> <td></td> <td></td> <td></td> <td></td>	Time Usintulan	Monthly	~				
Indele     Indele <td></td> <td>Reset CP</td> <td></td> <td></td> <td>See</td> <td>rch Q</td> <td></td>		Reset CP			See	rch Q	
Index       Saurut:         Norths       March       April       May       June       July       August         Norths       0       0       0       0       0       0       0         Norths       1       0       0       0       0       0       0       0         Norths       1       0       0       0       0       0       0       0         Norths       1       Prove       Prove       1       Next       1       Next         Northly       If Print       <							-0
Tuese these Totals entries Search NOMS MONTS January Peteruary March April May June July August / North 1 0 0 0 0 0 0 0 0 0 4 towing 1 to 1 of 1 vertices Providua 1 Next Providua EXCEL Of Print Monthly							
North     Saurch       North     1	e (Inde						
North 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	territoria ( and a state	and a second sec		Se	with.		
In     Native     Landary     Landary <t< th=""><th>NDW [ 10 4] entrie</th><th></th><th></th><th></th><th></th><th></th><th></th></t<>	NDW [ 10 4] entrie						
North- Control     0     0     0     0     0     0       Itswing 1 to 1 of 1 writes     Previous     1     Next       It Oownload EXCEL     D? Print     It     It	RDHS	C January Robert	untel March	Anni I	and here	a later	Automat
	MOHS MOHS	5) January) Pebr	uary) March	April N	lay i June	( July)	August
Itaving 1 to 1 of 1 writes Provided EXCEL DP Print Monthly	MDHS MDHS 10 Noth-	5) January) Pebn	uary) March (	April M	une (	i yluty i	August
Converse of the other sectors  Converse of the other sectors  Menthly   R  R  R  R  R  R  R  R  R  R  R  R	RDHS MDHS ID Noth- Cetra	5) January) Peter	uary ( March ) D	April M	ay June	r yluto r	August
Monthly =	NOHS NOH	S) January) Patri ( 1 0	uary (March) 0	April M	ay i June	i yluk i	August 0
Monthly =	RDHS RDHS RDHS RDHS / North- Oentra A	5 January Peter	uary March I	April M	ay i Jane Q Prov	ylub : 0 has t	August
Monthly =	North- ID North- Contra Moving 1 to 1 of Convertised ED	5 January Pelon 4 1 0 1 vetrass VCEL D7 Print	overy (March ) 0	April M	ay ( June 0 Phy	yluty : 0 tuus t	August
a Pales Care	North- ID North- Oentra Moving 1 to 1 of	5 January i Pater 4 1 0 1 ortries xCEL DP Print	uary March I	April M	ay i June Q	( ylut, ) : 0 1 1 1	August 0 Pect
	RDHS RDHS RDHS RDHS North- Central Inoving 1 to 1 of Download E	5 January Peter 4 1 0 1 untrase KCEL DP Print	uary March   0	April M	a a Prev	u uly)	August 0 Nect
	North- ID North- Central  North- Central  Download E	5 January Pelon 1 0 1 untries XCEL D7 Print	uary March a Monthly	April M	ay I June	r July ) D has <u>t</u>	August
	RDHS - RDHS ID Noth- Centra Moving 1 to 1 of Control (1) Control	5 January (Peter 1 1 0 1 antrines ACEL CPrime	uary March 0 Monthly	April M	lay   June	α July ) Ω bass <u>t</u>	August
	ROHS A ROHS ROHS A ROHS / North- Central Rowing 1 to 1 of Download E	5 January Peter 1 0 1 unities CEL D'Print	uary March	April M	a a Prev	auly )	August
	ROHS ROHS ROHS ROHS / North- Central Rowing 1 to 1 of Download E	5 January Peter 1 Unitrase ICEL D7 Print	uary March I	April 0	ay June	u July)	August
	ROHS ROHS ROHS ROHS / North- Contra Automing 1 to 1 of Powerload E	5 January Pelon 1 0	uary March I	April M	lay   June	a auty i	August
	RDHS RDHS RDHS RDHS / North- Centra / North- Centra / Contra / Contra	5) January) Palon ( 1 0 1 untries XCEL DP Paint	uary March a Monthly	April M	lay   June	a auty)	August 0 Period Period Period Period
	RDHS RDHS RDHS RDHS / North- Central Rowing 1 to 1 of Download ED	5 January Peter 1 0 1 unities NCEL DP Print	uary March 0 Monthly		lay   June	α α taus t	August

	Mini	Epider stry of Health	miology ( and Indig iri Lanka	Unit enous Me	dicine			to
Paliet Menge	amentiv Lise	r Management -	Pallert Fr	alas-ap-	Hepatav	Ontac	t Us	
aii.					1	+ 2	Wy A	10000
Phoence : Nee : Detrobution :	Auth-Cantra 2018 Guarterty	• j• j• j•	•		Star	sch Q.		
Cladins: Happer Incol (10 +) writing IRDHS ID + IR	x DHS (	Quarter 1 ( )	Quarter 2	See	de	carter 4	To	tal.
RDHS ID + R	s DHS ( D-Central 1	Quarter 1 ( )	Quarter 2	See Quarter	edi:	arter 4	1 Tel	64
E Dadred Hapart Nov (10) within RDHS ID - RD 7 No Rowing To 1 of 1 Commond EX	s DHS 1 strines CEL C? Prin	Guarter t ( ) i G	Guarter 2	See 1 Quarter	ste 3 + Qe D Pres	nation 4	1 Tol 2	<b>tal</b>
E Dathet Hapart Row (III -) within ROHS III - R 7 Nor Rowing T to 1 of 1 Commond Dot	s DHS 1 DH-Cartnel 1 Sether CEL DP Print Ner	Guarter t ( ) 0 10 11 11 11 11 11 11 11 11 11 11 11 1	Quarter 2 8 - Quarter	See Guarter 1	de 3 + Qu Pres llan	arter 4	1 Tol	tal Nect
E Datrict Hapart	x DHS HIH-Oerine 1 erine CEL D*Priv Nor	Quarter t ( ) B th-Central 201	Querter 2	See	di 0 3 0 Qu Pres	nartor 4	1 Tel 2 1 7	tal Nect

## Province Wise Death Notification – Quarterly Report

### Province Wise Death Notification list

	Nati	onal	Rena	al Regi	str	y		l				
	Ministry	Epide of Health	miolog and In Sri Lank	gy Unit digenous I a	Medi	cine	Epstemicing Una					
Home Patient Ma	anagement~ User Management~	Patient Fo	llow-up∨	Reports~	Contact	Us						
Last Login :							• 👤 My Accour	nt Y				
Death No	otification list											
Western	~											
B Download EXC	EL 🕑 Print Search											
Total Patient						4						
Show 10 🔻 entrie	5					Search:						
Name 4	Address	\$ Age \$	Death Date <sup>‡</sup>	Immediate Cause	ŧ	Underlying Cause	Contributory 👙	Comments	÷	Province 👙	District ‡	Ins
ALUTH GEDARA DASANAYAKA	-17-Dewagiriya-WILGAMUWA	62	12 / 16 / 2016	CKD, Gram negative sept	icemia	Septic Shock	Hypertension, DM, Seronegative Arthritis			Western	Gampaha	NIN
								Transfered fr Mulleriyawa Chest infecti	om B.H. due to Scr-6.6, ? on, WBC-20200,			
KANTHIMENIKE	.985.							Four HD dor	e via AVF, Blood			L

#### Province Wise Audit Report

Select Province Name --- Select Year --- Select Time Distribution --- Click Search Button

Index Maragement V User Maragement V Hallest Falore-op V Reports V Contact List    All  Image Index Province Level   Province: Search Q:   Near: 2018   Near: 2018   Near: 2018   Near: 2018   Near: 2018   Name: 2018   Name: 2018   Search Q: Search Q:   For the search Q:   Name: 2018   Search Q: Search Q:   For the search Q:   Name: Name:   Search Q:   Name: Name:   For the search Q:   Name: Name:   Search Q:   Name: Name:   Search Q: Name: Na	Index Management · User Management · Malert Palae-op · Nepatia · Carinet Lister Management · Malert Palae-op. · Nepatia · Carinet Lister Management · Malert Palae-op. · Mapping · Market Agent · Market · Mark		Natio Ministry o	Epidemiology Fleath and Indig Sri Lanka	Registry Unit renous Medicine	2
Alt Report Province Level		i Thiles Marse	persent - User Morae	gement - Patient P	alavi-up~ Risparl	are Contact Lis
dit Report Province Level  Province   Rath-Carini  Rest C  Res	dit Report Province Level	ante -				+ 1 My Account
Province facto-Central   See: 2019  See: 2019  See: 2019  See: 2019  See: 2019  See: 2019  Reset CF  Reset	Provence: Feath-Central V Ner: 2018 V Imme Martin/ Detribution Based CF Based CF Bas	dit Report	Province Le	wel		
Ner:     2018       Ner:     2018       Ner:     Ner:       Ner:     Ner:       Northly     Search Q       Northly     Search Q       Northly     Search Q       Northly     Northly       Northly     Northly       Northly     Northly	Nerr     2016       Imme     Marthy       Descriptions     ResetCr       State     Search Q       Index	Provision :	Nath-Central	<b>v</b>		
Image     Martify       Reset 02     SearchQ       Index     SearchQ       Index     SearchQ       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     A       Province     January     Fobruary     March     April     Mary     June     July     July       Province     March     March     March     March     March     Mar	Image     Martiny     W       Descriptions     Reset CF     Search Q       Index     Search	Not :	2018	~		
Reset C  Reset C  Reset C  Search Q  Search Q  E lada  TroyInce Province January Pebruary March April May June July  J  Nath Castral  North Castral  North  Province	ResetTr Search Q	Time Ostrbuton	Maribly	4		
E ladar Draw 10. • entres Seends Province January Pebruary March April May June July P North- B47 333 343 250 211 267 228 20 Province I Province Province Province I Provinc	E lada Store D animes Province, Province January Pobruary March April May June July A 7 North- BH7 303 343 250 211 267 228 20 4 Storeng 1 to 3 of 1 writes Province EXCEL CP Print Download EXCEL CP Print D Download EXCEL CP Print D Download EXCEL CP Print D D D D D D D D D D D D D D D D D D D		Reset CP			Search Q
	The later series datures Province datures Province datures Province datures Province datures Province datures Province datures series s	52-	di			
Browners Search	Bits         Stands         Stands           Province         January         Petruary         March         April         March         July         A           1         Nath- Central         547         333         343         250         211         287         228         20           4         Image: Standard	G Table				
Province, Province January Pebruary March April May June July 7 10 10 10 10 10 10 10 10 10 10	Province, Province January Pobruary March April May June July A 7 Nath- 64 203 363 250 211 267 228 20 4 Browing Tu 5 of Lenthes First Bounded EXCEL CF Print 5 Monthly = 5 Monthly = 5 5 5 5 5 5 5 5 5 5	Show 10 . • antra			Sents	
Central Ori Lin Pic Lin Lin Lin A Showing 1 to 3 of 1 entires  Provided EXCEL  Print  Menthly  Print  Print	Central With Line And Line Line Line Line Line Line Line Line	North	the say	February Mar	da April Mar	y June July A
Showing i to i of 1 writes (Provided EXCEL If Print)	Showing 1 to 3 of 1 without 1 Need Download EXCEL IP frint Menthly Tel Solution S	04	dinal (1997)		230 211	201 220 200
Showing it to 3 of 1 writing (1) Provided (2) (2) Private (2) (2) (2) (2) (2) (2) (2) (2) (2) (2)	Showing the 3 of Functions Provided EXCEL OF Print Menthly Too So So So So So So So So So					
B Dentilies Dente: Drynn	Monthly =	Showing 1 to 5 of	1 entries			Yevhaus 1 Nect
Menthly Files	Monthly =	Baundarder				
Monthly References	Monthly 1000 100	Download E				
	100 50 50 50 50 50 50 50 50 50	Download E				
	50 50 50 50 6 50 6 50 6 50 6 50 50 50 50 50 50 50 50 50 50	Download D		Menthly		;
	50 50 50 50 50 50 50 50 50 50	B Download D		Monthly		=
	eo o o je fat lie år Mer je je je årg far De fat be be	Download E		Monthly		=
	100	Download E		Monthly		=
0	200 Der Rei Ner Jer May jur jul Jug Ster Der Ner Der	Downhad E		Monthly	K	, = / • Nimber
· · · · · · · · · · · · · · · · · · ·	0 jan Nai laan Jan Nag jan jat Jang Say Dan Nain Dan	Contribut E		Menthly	$\sim$	
ten find like dan blan ber bit han fan fan fan fan	And the second	Downhad E	~	Menthly	$\nearrow$	; = 

(Yearly, Quarterly, Monthly)

#### Province Wise Audit Patient Name List

Ó		Natio E Ministry of I	nal Ren Epidemiolo Health and I Sri Lar	al Regi	<b>stry</b> Medicine		Evenence for
Home Patient	Management~ User M	/lanagement~	Patient Follow-up∽	Reports~	Contact Us		
Last Login :						• 1	My Account 🗠
Audit Re	port Provi	nce Lev	/el				
Western Download E Show 10	KCEL Print Se	v 2017		✓ Jan	Jary Searc	•	
Name 🄺	Address 👙	Register 🜲 Date	Province 👙	District 👙	Institutional 🜲	мон 👙	Add Date 🝦
A Chandrawathi	-28,"Kills Niwasa ",- Jaithara,-Ranala.	2015-5-	Western	Colombo	NINDT	Mirigama	2017-01-23 08:46:33
A Jayaratna	-163/D,- Bandaranayaka Rd,- Gampaha.	2015- 5- 0	Western	Gampaha	NINDT	Negombo	2017-01-25 11:06:10
A Krishantha	-12,-Agalaoya,- Giladuru kotte.	2015-6-	Western	Colombo	NINDT	Mirigama	2017-01-04 09:26:23
A P Margaret	-391,- Thalawathugoda,- Pannipitiya.	2017-2-0	Western	Colombo	NINDT	Wattala	2017-01-16 08:26:37

#### Province Wise GIS Map

		Nati Ministry o	onal Renal Registry Epidemiology Unit of Health and Indigenous Medicine Sri Lanka
Home	Patient Management~	User Management~	Patient Follow-up-v Reports-v Contact Us
ast Login	Ê.		• 🤰 My Account 🗹
GIS	Map Yearly	/	
S	elect Province	~	
🗑 Do	wnload EXCEL 🛛 🖉 Pri	nt Search	
DS Di	vision		Count
Dimbu	lagala		195
Elahera	a		694

Mihinthale	401	
Nachchadoowa	213	
Nochchiyagama	516	
Nuwaragam Palatha Central	1133	
Nuwaragam Palatha East	212	
Padaviya	1056	
Palagala	164	
Palugaswewa	9	
Rajanganaya	228	
Rambewa	1532	
Thalawa	841	
Thamankaduwa	586	
Thambuttegama	247	
Thirappane	821	
Welikanda	545	
Welioya	329	
Total Patient	17599	



#### MOH Patient List

Select Ds Division Name ----→Select Year and Moth ----→Click Search Button

If you Want to update patient details **"Click edit patient"** Button and you want to update field update date details **"Click Edit Field "**Button

Ô		Na Minist	Epide Epide	Renal R miology Ur and Indigen Sri Lanka	egistr nit ous Med	<b>y</b> icine		
Hon	ne Patient Man	agement~ Use	Management~	Patient Follow-up*	Reports-	Contact Us		
Last Login :							Account	t i
MOH Pa	atient R	eport						
- Select DS	Division	~	- Year -	~	- Month -	~		
8 Downloa		Print Search						
Show 10 •	entries		-			Gearch		
Patient _ *	NIC 0	Nome 0	Address 0	Diagnosis 0	Add Year 0	Ds 0	Action	0
52140	61859D402V	V.M Aberathne	-28/8,- Bogaha hena Ra,- Villawatta,	000	2016	Colombo	C Edit patient	
52157	870323360V	M Y M Akram	-211/31,- Grand Pass,- Calombo 14.	Under Investigation	2016	Colombo	C Edit patient	
52198		M Femando	-87, Sent Benadil Rd Kotahena.	Under Investigation	2016	Colombo	Edit patient	
52200	602700895V	A G Nowez	-180/11,- Grand pass RdColambo 14.	00	2016	Colombo	Edit patient	
54758	512891756V	C M S Wjesinghe	-55/20,-Paliya Rd, Mattakkulya,- Calombo 15,	000	2016	Colorribo	Edit patient	
54961	523403230V	V Balakeishnan	-5/12/8,- Umbochchi Pedesa, Aduruppu street, Colombo 13,	Under Investigation	2014	Colombo	C Edit patient	

MOH Field update Count Yearly Report

Select Ds Division Name→Select Year-> Select Time distribution -> Click Search Button

	Natio Ministry o	Dnal Ren Epidemiolo f Health and I Sri Lar	ogy Unit	gistry t us Medicine	Exercise Car
Home Patient Managemer	t~ User Management~	Patient Follow-up~	Reports~	Contact Us	
Last Login :					• 🙎 My Account
Field Update	- Select DS Division	~			
Year :	Select Year	~			
Time Distribution :	Select Time Distribution	n 🗸 🗸			
	Reset 🗷			Search	٩Q

Moh Field update list

Ó	National Renal Registry Epidemiology Unit Ministry of Health and Indigenous Medicine Sri Lanka
Home Patient Management~	User Management - Patient Follow-up - Reports - Contact Us
Last Login :	• 💽 My Account 🗠
Field Update I	Report
Select DS Division	✔         Year         ✔         Month         ✔
🗑 Download EXCEL	Print Search
Show 10 • entries	Search:
Patient ID NIC 👙	Name   Address   Diagnosis   Field Update Date   Follow up Status   Comments   Comments
	No data available in table
Showing 0 to 0 of 0 entries	FirstPreviousNextLast

Province Wise Average Age Report

Select Province Name→Select Year-> Select Time distribution -> Click Search Button

	Ministry	Epidemic of Health and Sri L	nal Re logy Unit Indigenor anka	gistry : us Medicine		
Patient Manag	gement~ User Management~	Patient Follow-up	Reports	Contact Us		
in :					• <b>1</b> N	ly Accoun
e Distrik	oution Provinc	ce Vice				
Provin	ice : North-Central	~				
Ye	ear : 2016	~				
Time Distributi	on : Yearly	~				
Table	Reset GP			Search (	Q.	
-	Gender					
			Average Age	Female	0	Total
Province	Average Age Male					
Province -	Average Age Male 47.765432098		49.927710843		_	48.882

Province Wise Standard diviation Age Report

Select Province Name→Select Year-> Select Time distribution -> Click Search Button

	A CONTRACTOR OF	Sri Lanka		Conservation of the second
e Patient Managerre	ent - User Management -	<ul> <li>Patient Follow-up * Re</li> </ul>	ports- Contact Us	04.
igin :				• 🔔 My Account
e Distribu	tion Provinc	e Vice		
0 0.00 000		.0 1100		
	CONSISTER OF A	2012/22/11		
Province :	North-Central	×		
Year:	2016	×		
Time Distribution :	Yearly	~		
Time Distribution :	Yearly Reset [2]	×	Search	q
Time Distribution :	Yeally Reset 🕼	<b> </b> *]	Search	Q
Time Distribution :	Yeady Reset G	×	Search	a,
Time Distribution :	Yesky Reset	×	Search	a
Time Distribution : C2 Print Table Show (10 • ) entries	Veatry Reset D	<b>v</b> ]	Search Gearch	a
Time Distribution : CP Print Table Show To • entries Get Browloos	Yearly Reset (2)	×	Search Search	rq Total Bandaro
Time Devioution : C? Print Toble Show TO + entries Province Get Sta	Yearly Reset (2) nder ndard Devlation Age Male	V Standard Dr	Search Bearon	Total Bandard Age
Time Devicution :           CP Print           III           Table           Snow (D + entires)           Province           Resolution :           North- Central           19.2	Yearly Reset (7) nder ndard Devistion Age Maie 870	V Standard Dr 18.1529	Search Bearch eviation Age Pemale	Total Standard Age 18.8769

Province Wise Diagnosis age category report

Select Province name→Select year and Time distribution ->select diagnosis name->click search button

×	Natio Ministry o	onal Renal Epidemiology ( If Health and Indig Sri Lanka	Registry Unit enous Medicine	2
me Thibert Manag	ernerit - Uner Mark	gement - Patient Fr	alaw-up- Naparlare	Contact Us
Logn :				<ul> <li>If My Account</li> </ul>
agnosis Wi	ce Age Cat	egory		
Province	North-Central	×		
Near	2016	~		
Eime Deinflution	Sarly	×		
Uberroots	CKU	~		
	Reset CP		Sear	dh Q
Central 3	18 20 59 Inffitus CEL <b>C</b> ? Print	114 202 20	a na 13. a Phina	a a h
Download EX				
B Download D				^
B Download D		Age Category		~
B Download D		Age Category		=
B Download D		Age Cetegory		=
B Download D		Age Cetegory		* Refere Course
B Download EX		Age Category		+ Refere Carro
Bownload D	]	Age Category		- Neiro Care
B Download D	1 1 2 2	Age Category		* Refere Cores

Province Wise Diagnosis patient count report

Select Province name→Select year and Time distribution ->select diagnosis name->click search button

	Ministry of He	al Renal demiology salth and Indig Sri Lanka	Registry Unit tenous Medici	ne	
Palant Manag	amani - Usar Managam	writ v – Palaert I	ulue-up- Nep	arta~ Can	tact Lis
					1 My Account
vince Dia	gnosis Report				
Province -	North-Gentral	×			
Nor :	2018	~			
Time Detribution	Monthly.	×			
Cheptoste	GKUlu	~			
	Reset CP	and benefit	1	Search Q	
Province Pro	er ovince January F Un 428 34 trai	ubruary Man	Seech chi Aprili M 304 28	Nay June 8 347	July Ac
Province Pro	o rovinos January F th trat trat setthos ccet. <b>D</b> ? Print	ndoruany Man 1 287	Search 25   April   1 304 28	fay   June 8 34/ Phastaas	337 352
Province -	er ovince January F the 428 34 Tachter KEL IP Print	ubruary Man	Search 25   April   1 304 28	Ray i June 8 347 Phenisse	- July Au 337 392 •
Province -	er ovince January F the 428 34 Factories KEL IP Print	ubruary Man 1 28/	Seerch 28   April   1 304 28	fay i June 8 347 Previsor	- July Au 337 352 • 1 74ed
Provence Pro	er ovince January P the 428 34 Factives KEL IP Press	Manthiy	Seech 26   April   1 304 28	Ray   June 8 347   Previtase	July Au     J
Province Pro	er ovince: January P th- trai 428 34 Larithus CEL IP Print	obruary Man 1 287	Search 29   April   1 304 28	Ray   June 8 347 Previtace	July Au 337 352 ) 1 /feet
Provence Pro	er ovince January F tha 428 34 Tathies XEL IP Print	Nanthiy	Seerch 28   April   1 304 28	Ray   June 8 347   Travitase	<ul> <li>July Au</li> <li>337 392</li> <li>1 7/set</li> <li>1 7/set</li> </ul>

Dialysis Patient Count Report

Select Institution name ->Select year -> Select Time distribution(Yearly,Quaterly,Monthly)->Click Search Button

	Nati Ministry o	onal Rena Epidemiolog of Health and Ind Sri Lanka	l Registry y Unit ligenous Medicir	ne	<b>M</b>
torne Palaint Mana	gement - Liser Man	agamani - Palant	Folge-up- Nep	orta- Contact	Us
e Logn -				1.12	My Account
Nalysis Patio	ent Count R	eport Ins <mark>t</mark> iti	ution		
institution : Your	UH Padawiya 2018	<b>&gt;</b>			
Distribution :	Reset C?	<b>v</b>		SearchQ	
8					^
Show 10 antr	eor		Stands		11
Institution	January Februa	Varch Ap	nii May Jun	e July A	ugust Si
CHI Padawiya	a a	0 0	0 0	0 1	0
Showing 1 to 1 of	t ordinor XCEL GP Print			Prievinus 2	Next
1-					
8		- Marcalas			~
8 <b>4</b>		in the second se			-
14		/	$\langle \Lambda \rangle$	•	Radava Cauras
		1	11/1		

### Dialysis Patient Name List Report

Select Institution Name ->Select Year and Month -> Click Search Button

Home P t Login : Malysis Pa	atient Management~	User Mar	nagement∨ Patien	nt Follow-up∨	Reports~	Contact Us			
it Login : Dialysis Pa	tient Lisi								
ialysis Pa	tient List							3	My Account
- Select Institution -	GP Print Se	earch	- Year -	~	- N	fonth –	~		
Show 10 • entries						S	earch:		
Name 🔺 🔺 Add	ress 🌣 🕴 Diagr	nosis 🗘	Dialysis 🗘	Dialysis Access	0 1	Dry Weight 0	Current Weight	• •	Dialysis Plan ¢
Sirisena Perea	CKDu		Institutionalize Peritoneal Dialysis			35.00	65.00		weak

Clinic Visit Patient Name List Report

<u>Č</u>		Natio Ministry of	Epidemiology Uni Health and Indigenc Sri Lanka	egistry t bus Medicine		Fundamental State
Home	e Patient Manage	ement~ User Manage	menty Patient Follow-upy Re	eports~ Contact Us		
.ast Login :					3	My Account
Clinic Vis	sit Patier	nt List				
Select Instit	KCEL 2 Print tries Potient ID 0	V     Ye       Search     Patient       Name     0	Address o a	- Month S Gender 0	earch: Diagnosis c	Next Clinic ¢ Visit
00:00:00	52645	Sirisena Perea		m	CKDU	00:00:00
2017-01-19 16:27:02	52663	Bandage Malhami	-Mamaduwa road- Kachchakodiya-vavuniya	m	CKD	2017-01-19 16:27:02
2017-01-22 06:53:59	52663	Bandage Malhami	-Mamaduwa road- Kachchakodiya-vav <mark>uniy</mark> a	m	CKD	2017-01-22 06:53:59
2017-01-22 07:09:40	53402	Premarathnage Manel Premakanthi	NEDUNKULAMA-VAVUNIYA	t	CKD	2017-01-22 07:09:40
2017-01-22 09:33:15	53360	KANDATHE KALUHAMI	MAHAKACHCHAKODIYA- VAVUNIYA	m	СКД	2017-01-22 09:33:15

## Clinic Visit Patient Count Report

	Ministry o	Epidemiology f Health and Ind Sri Lanka	/ Unit Igenous Medic	ine	
Palent Marse	gement - User Mana	gement - Patient	Falaveap+ Pla	ourlay Contac	( i.)w
un -				10.1	My Account
lic Visit Re	eport				
Institution :	UH Wentedung	×			
Ner	,2017	~			
Timsi Osinbulian :	Marithly	*			
	Reset C			Search Q	
32 					
3					1
Show 10 • entri	H0.		Search	[	
Institution	January February	y March Apr	si May Ju	iel July A	kugust S
Institution   DH Memoture	January i Pebruary	y March Apr 7 0	stis May Ju	ne July J	luguat ) Si
Inabitution   UH Manature	January February	y March Apr 7 0	sti Mary Ju	sel July /	ugust) Br 0 •
Inablution   DH Manakase 4 Showing 1 to 3 of	January I - Pebnar 20 78 1 ventries	yi Marchi Apr 7 0	ali May Ju	o o	agust S 0 • 1 Ned
Enablation   DH Manadame   4   Showing 1 to 3 of	January I Pebnar 20 78 1 ontries XCEL <b>D? Print</b>	y March : Apr 7 0	als May Ju C D	a a Previtaas	0 0 1 1 1
Enablation   DH	January I Pebruary 20 78 1 antries 2021. D? Print	y March : Apr	sts May Ju C O	o o Previtatos	0 1 74ed
Institution ) DH Manadame ( Showing 1 to 5 of Oownload E	January I Pebnar 20 78 1 antres 2019 IV Print	y March Apr	sts May Ja	o o	0
Institution ) DH Mercelone Showing 1 to 5 of Download E	January I Pebruary 00 78 1 entries XCEL <b>C? Print</b>	y March Apr 7 0 Monthly	sti May Ja	se July A	0 1 Ned
Enablation   DH Memature Showing 1 to 5 of Download 2 3	January I Pebnar 20 78 1 entries XCEL <b>D?</b> Print	y March Apr	sts May Jan	o o	luguat   S 0 1 Thed
Institution ) DH Marnature	January I Pebnar 10 78 NCEL <b>C</b> l'Print	y March Apr	sts May Jan	Prevenue	0 1 Nod
Institution   DH Marnature A Browing 1 to 5 of B Download E at	January I Pebnar 00 78 1 entries XCEL <b>C?</b> Print	y March Apr	sts May Jan	se July A	I The I
Institution ) DH Mematane  Showing 1 to 5 of  Download 2  Se	January I Pebnar 00 78 1 entries XCEL <b>D?</b> Print	y March Apr	sts May Jan	ne July /	I Theol
Institution ) DH Marnature	January I Pebnar 0 78 I antries KCEL C? Print	y March Apr	sts May Jan	ne July J	l Thed
Institution ) DH Mamatans	January I Pebnar 00 78 1 entries XCEL 07 Print	y March Apr	sts May Jac	ne July /	loguat   B 0 1 Tecl =

Individual Patient Reports

i. Individual Patient Clinic visit report

National Renal Registry       Epidemiology Unit         Ministry of Health and Indigenous Medicine       Sri Lanka									
Home	Patient Management	✓ User Management√	Patient Follow-up~	Reports~	Contact Us				
User : test	á.					• 👤 My Account 🗸			
Indiv	/idual Pat	ient Clinica	al Report						
Q Sea	rch Patient					*			
	Patient ID : 526	45	or		Patient NIC :				
	Patient Search (	٦							

ii. Conform Correct Patient

		Nationa	Renal Re	gistry	
<u> </u>		Epid Ministry of Heal	emiology Unit th and Indigenou Sri Lanka	ıs Medicine	Fundamentality (Nor
Home Patient Mana	igement∽ User	Management~ Patient F	ollow-up~ Reports~	Contact Us	
Select Patient					~
Patient ID	Photo	Full Name	Gender	Phone	Select Patient
52645		Sirisena Perea	Male	-	۲
52645		Sirisena Perea	Male	-	©
					Close

## iii. Report Part

Ô	National Epider Ministry of Health	Renal Registry miology Unit and Indigenous Medicine of Lanka		<b>1</b>		
Harrie Packert Marie	gement~ User Management~	Patient Follow-up+ Heport	ev Contact L	.ba		
ther - host			· 1	My Accuré		
Individual Pa	tient Clinical Rep	ort				
Q. Search Palaet.						
Patient ID: S Patient ID Patient Nation Patient Net Patient Server	52945 Sizierra Perna Peres Patzar de Q	or Pollent NIC				
Intelsion One Vala Collepse Intelsion	en Clinic Voits - Salect To	pics - 🔽				
S Infelween Ciric	VMDa			^		10- 10- 10-
Ho apitalization	Hospital Admission Institu Type Type	ation Institution Date of Type Admissio	n Data of Discharge	Based Transferration	Blood Tensfusion Reson	Related CRD Reason
No	nalated to https://docates/ docates	Na 1 2018-12-0	1 2018-12-01	Ť	*****	an 1
Investigations Collepse Invest © Investigations © Decemptory © Lpst	igations + - Solie: Ltg	aka - 🛛 🖌		· · ·		
🕼 Tabe Cha	ebrol			~		
Clini	e No Clinic Data	Total Cholesterol				
1	2018-12-01	33.00				
<u> </u>	2018-09-12	2.00				
4 10 12 12	~			=		
25-452						

Individual Patient Death Notification Report

(		Ν	National Epide Ainistry of Health	Renal Re miology Un and Indigend Sri Lanka	e <b>gistry</b> it ous Medicine	E Bandad	
Home	Patient Manag	gement~ User M	anagement~ Patient Fo	llow-up~ Reports	<ul> <li>Contact Us</li> </ul>		
User : test						• 👤 My Acc	ount 🔨
Dea a see	th Noti	fication	Report				~
	Patient ID : Patient I Patient Nam Patient NI Patient Se	52645 D : 5 Ne : 5 C : 7	52645 Sirisena Perea 784567902∨	or	Patient NIC :		
8	Death Notificat	ion Report	Immediate Cause of De	ath Hardashi	on Cause of Death	Contribution: Cause	^
c	DH Padawiya	2016	CKDUIII	скри	ng outse of Death	CKDV	

Individual Patient Dialysis Report

	Å		Natio	nal Renal	Registry		
2			Ministry of	Epidemiology Health and Indi Sri Lanka	genous Medicine		For succession
me	Patient Manage	mentr	User Management*	Patient Follow-up*	Reports* Contact Us		
test	8						1 My Account
div	/idual P	atier	t Dialvsis	Report			
				1020142-5585			
Sea	with Patient						
	Patient ID :	52645		or	Patient NIC :		
	Patient ID	i - E	52645				
	Patient Name		Sirisena Pere	ea			
	Patient NIC		784567902V				
1	Patient Sear	rch Q					
2	Dialysis Report						^
8	Disiysis Report	Dialysis	Anteriovenous Fish	ula Dry Body Velght	Present Body Velgit	Dialysis Date	A Dialysis Plan
8	Dialyss Report Institution DH Fadawiya	Dialysis 1	Arteriovenous Fists	ula Dry Body Weight	Present Body Weight	Dialysis Date	A Dialysis Plan weak
8	Dalyss Report Institution DH Padawiya BH Kalothigolawa	Distycle 1	Arleriovenous Fish	ula Dry Body Velght 38.00 56.00	Present Body Velght 65.00 52.00	Dialysis Date 0000-00-00 0000-00-00	A Diatysis Plan weak Kidney
2	Dialysis Report Institution DH Radawiya BH Kabihigolawa 70	Dialysis 1	Arleriovenous Fista 0 0	als Dry Body Weight 38.00 56.00	Present Body Velght 65.00 52.00	Otatyste Date 0000-00-00 0000-00-00	A Dialysic Pinn weak Köney
8	Dialysis Report Institution DH Padawiya BH Kabihigolawa 70	Dialysia 1	Arterlovenous Fiste	ula Dry Body Weight 35.00 56.00	Present Body Velight 65.00 52.00	Olatyste Data 0000-00-00 0000-00-00	Clistyste Pilen weak Kidney
2	Dialysis Report Institution DH Padawiya BH Kaothigolawa 70 es	Dialysis 1	Arterlovenous Fish	ula Dry Bony Watph 35.00 56.00	Present Body Yalght 65.00 52.00	Diatysts Date 0000-00-00 0000-00-00	Clatystic Plan weak Kidney
2	Diajas Report Institution DH Radawiya BH Kabithgolawa 70. 	Dialysis 1	Arterlovenous Fish	ula Dry Bony Watph 35.00 56.00	Present Body Yalght 65.00 52.00	Diatysts Date	A Dialysis Plan weak Kdney
2	Dialyss Report Enchlation DH Padawiya BH Kabithigolawa 70 55 29 50	Otalysta 1	Artertovenous Fish	uls Dry Body Weight 35.00 56.00	Present Body Velght 65.00 52.00	Diatysts Date 0000-00-00 0000-00-00	A Diatysis Plan wesk Korney
0	Dialyss Report Enchlation DH Padawiya BH Kabithigolawa 70 55 2 e0 55	Dialysis 1	Artertovenous Fish 0 0	uls Dry Bony Weight 35.00 56.00	Present Body Velght 65.00 52.00	Olatysta Date 0000-00-00 0000-00-00	A Dialysis Plan Wesk Hidrey
	Dialyss Report Brichfurition DH Padiawiya BH Kabithigolawa 70. 65 	Distyste 1	Artertovenous Fish	ule Dry Bony Weight 35.00 56.00	Present Body Veight 65.00 52.00	Diatysis Date 000-00-00 0000-00-00	A Dialysis Plan Wesk Kidiney
2	Dialyss Report Brichfulfion DH Padawiya BH Kabithigolawa 70 65 27 65 55 55 50	Distysis 1	Arbedovenous Fish 0 0	uls Dry Bony Weight 35.00 56.00	Present Body Veight 65.00 52.00	Otaryete Date 0000-00-00 0000-00-00	A Dialysis Plan weak Kidiney E
0	Dialyss Report sestitution Dri Padawiya Bri Kabithigolawa 70 65 27 65 55 50 50	Dialysis 1	Arbedovenous Fish 0 0	uls Dry Bony Weight 35.00 56.00	Present Body Vergini 65.00 52.00	Charyeste Darle     coco-co-co     coco-co-co	A Distyste Plan weak Kdsney E
	Dialyss Report anstitution CH Radawiya BH Kabthigolawa 70. 53. 29. 60. 55. 50. 	Dialysis 1	Arterforenous Fish 0 0	ds Dry Bony Weight 35.00 56.00	Present Body Verget	Otatyste Date 0000-00-00 0000-00-00	A Distyrate Plan Weak Kiginey

## All Island Patient list Report

		Nati Ministry o	onal Ren Epidemiolo of Health and I Sri Lar	ogy Unit	<b>gistry</b> t us Medicir	ne		Fademicing the		
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us					
ast Login :							0	My Accour	nt 🗡	
	Island Pat	ient Repoi	rt							
Total Pa	atient				39371					
Name		Address			Age	Diagnosis	Add Year	Province	District	Institution
Abdul W	ahith Sharieff	-12/2-Saman mv-Galawi	lawattwa Homagama		45	CKD	2017- 1-	Western	Colombo	GH Sri Jayewardenepur
Kanthi Il	nelagedera	-108/6c-Shalawa rd Mirih	nana-Nugegoda		49	CKD	2017-	Western	Colombo	GH Sri

## All Island Death Report

		Natio Ministry of	Epiden Health	<b>ena</b> niolog and Ind	I Registry y Unit ligenous Medic	ine		For an and the second			
Home	Patient Managem	ent~ User Management~ F	Patient Follov	v-up~ R	eports~ Contact Us						
Last Login :								• 👤 My Accour	ıt 🔨		
	ISLAND E	Print Search									
Total P	atient						5				
Show 10	) 🔻 entries					Search					
Name	e 📑 Ad	dress 🗍	¢ Age ♦	Death Date <sup>♣</sup>	Immediate Cause 🖨	Underlying Cause	\$	Contributory 🜲	Com	ments	\$ Prov
ALUTH	GEDARA	Dewagiriya-WILGAMUWA	62	2016-12-	CKD, Gram negative	Septic Shock	,	Hypertension, DM,			Weste

## All Island GIS Map Report

	National Renal Registry       Epidemiology Unit       Image: Comparison of the alth and Indigenous Medicine Sri Lanka									
Home	Patient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us					
Last Login :	ž.					• 🚺 My Account 🗸				
	Map Yearly wnload EXCEL 🛛 🕼 Pri	nt Search								
DS Div	rision					Count				
Addalai	chenai					225				
Agalaw	atta					1				
Akmee	mana					4				
Akuran	a					.1				
Akures	sa					16				



#### All Island Death Report

2	<u> </u>	Ministry o	Epidemiolog f Health and In Sri Lank	gy Unit digenous (a	Medicine	Fadrendays Una
lome	Palient Management~	User Management~	Patient Follow-up~	Reports~	Contact Us	
ist Login	Register new Patient					<ul> <li>My Account</li> </ul>
	Alter Patient					
🖁 Do DS Div	wnload EXCEL 🛛 🖉 Pri	nt Search			Count	
Do DS Div Attana	wnload EXCEL 🔵 🗗 Pri rision galla	nt Search			Count	
<ul> <li>Do</li> <li>DS Div</li> <li>Attana</li> <li>Gampa</li> </ul>	wnload EXCEL <b>C</b> Pri rision galla Iha	nt Search			Count 1 1	
Do Do Dis Dis Attana Gampa Kaduw	wnload EXCEL <b>IP Pri</b> <b>rision</b> galla aha ela	nt Search			Count 1 1 1 1	
B Do DS Div Attana Gampa Kaduw Medad	wnload EXCEL Pri rision galla aha ela umbara	nt Search			Count 1 1 1 1 1 1 1 1 1	
DS Div Attana Gampa Kaduw Medad	wnload EXCEL <b>C</b> Pri rision galla sha ela umbara angoda	nt Search			Count 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	



### Appendix C

### Source Codes C1. Login.php This file (login.php) has following codes;

```
<?php
  session_start();
  $_SESSION['username'] = '';
 if(empty($_SESSION['username']))
    session_unset();
    session_destroy();
 }
?>
<html lang="en" class="no-js"><!--<![endif]--><!-- start: HEAD --><head>
<title>CKD</title>
<!-- start: META -->
<meta charset="utf-8">
<!--[if IE]><meta http-equiv='X-UA-Compatible' content="IE=edge,IE=9,IE=8,chrome=1" /><![endif]-->
<meta name="viewport" content="width=device-width, initial-scale=1.0, user-scalable=0, minimum-scale=1.0, maximum-scale=1.0">
<meta name="apple-mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-status-bar-style" content="black">
<meta content="" name="description">
<meta content="" name="author">
<!-- end: META -->
<!-- start: MAIN CSS -->
k rel="stylesheet" href="../assets/plugins/bootstrap/css/bootstrap.min.css">
k rel="stylesheet" href="../assets/plugins/font-awesome/css/font-awesome.min.css">
k rel="stylesheet" href="../assets/css/main.css">
k rel="stylesheet" href="../assets/css/main-responsive.css">
k rel="stylesheet" href="../assets/css/theme_light.css" type="text/css" id="skin_color">
<!--[if IE 7]>
k rel="stylesheet" href="..//plugins/font-awesome/css/font-awesome-ie7.min.css">
<![endif]-->
<!-- end: MAIN CSS -->
<!-- start: CSS REQUIRED FOR THIS PAGE ONLY -->
<!-- end: CSS REQUIRED FOR THIS PAGE ONLY -->
</head>
<!-- end: HEAD -->
<!-- start: BODY -->
<body class="login example2">
<div class="row">
<!--<div class="col-lg-12">
<img class="img-responsive center-block" src="../assets/images/login1.png"/>
</div>-->
<br/>
<div class="col-sm-3"><img class="img-responsive center-block" src="../assets/images/national.png"/></div>
<div class="col-sm-6">
<div class="col-sm-12 row text-center"><h2>National Renal Registry</h2></div>
<div class="col-sm-12 row text-center"><h3>Epidemilogy Unit</h3></div>
<div class="col-sm-12 row text-center"><h3>Ministry of Health and Indigenous Medicine</h3></div>
</div>
<div class="col-sm-3"><img class="img-responsive center-block" src="../assets/images/epid.png"/></div>
<br/>
<!--<div style="width: 1000px; margin:10px auto"><img src="../assets/images/national.png" style="float:left;"/><img
src="../assets/images/epid.png" style="float:right;"/>Chronic Kidney Disease Surveillance System</br>
<span style="font-size: 22px">Epidemilogy Unit, Ministry of Health</span></div>-->
</div>
```

<div class="main-login col-sm-4 col-sm-offset-4"> <!-- start: LOGIN BOX --> <div class="box-login" style="display: block;"> <h3>Sign in to your account</h3> Please enter your name and password to log in. <form id="loginForm"> <div class="alert alert-danger" id="error" style="display: none;"></div> <fieldset> <div class="form-group"> <span class="input-icon"> <input type="text" class="form-control" name="username" placeholder="Username"> <i class="fa fa-user"></i></span> </div> <div class="form-group form-actions"> <span class="input-icon"> <input type="password" class="form-control password" name="password" placeholder="Password"> <i class="fa fa-lock"></i> </div> <div class="form-actions"> <button type="submit" id="loginBtn" class="btn btn-purple pull-right"> Login <i class="fa fa-arrow-circle-right"></i> </button> </div> </fieldset> </form> </div> <!-- end: LOGIN BOX --> <!-- start: COPYRIGHT --> <div class="copyright"> <?php echo date("Y")?> © Epidemiology Unit </div> <!-- end: COPYRIGHT --> </div> <script src="../assets/plugins/jQuery-lib/2.0.3/jquery.min.js"></script> <!--<![endif]--> <script src="../assets/plugins/jquery-ui/jquery-ui-1.10.2.custom.min.js"></script> <script src="../assets/plugins/bootstrap/js/bootstrap.min.js"></script> <script src="../assets/plugins/blockUI/jquery.blockUI.js"></script> <script src="../assets/plugins/perfect-scrollbar/src/jquery.mousewheel.js"></script> <script src="../assets/plugins/perfect-scrollbar/src/perfect-scrollbar.js"></script> <script src="../assets/plugins/less/less-1.5.0.min.js"></script> <script src="../assets/plugins/jquery-cookie/jquery.cookie.js"></script> <script src="../assets/js/main.js"></script> <!-- end: MAIN JAVASCRIPTS -->

```
<script>
 jQuery(document).ready(function() {
    Main.init();
    $('#error').hide();
    $('#loginForm').submit(function(e){
      e.preventDefault();
      $.ajax({
        url:"../BLL/login_BL.php",
        type : "POST",
        data : $("#loginForm").serialize(),
        cache : false,
        success:function(data){
          if(data != 0){
             $('#error').hide();
             window.location.href = "home.php";
          }
          else{
             $('#error').show().html("Username or Password is invalid");
          }
        }
      })
    })
    $('#username').keypress(function(e){
      if(e.keyCode==13)
         $('#loginBtn').click();
    });
    $('#password').keypress(function(e){
      if(e.keyCode==13)
         $('#loginBtn').click();
    });
 });
</script>
<!-- end: BODY -->
</body></html>
```
## C2. Home.php

```
<?php
session_start();
if(empty($_SESSION['username']))
{
 header('Location: ../PL/Login.php');
}
require_once("../includes/layout/header.php");
require_once("../BLL/patient_BL.php");
require_once("../DL/dbConnection.php");
require_once("../BLL/userGroup_BL.php");
require_once("../DL/select1.php");
?>
<!-- start: CSS REQUIRED FOR THIS PAGE ONLY -->
k href="../assets/plugins/bootstrap-modal/css/bootstrap-modal-bs3patch.css" rel="stylesheet" type="text/css"/>
k href="../assets/plugins/bootstrap-modal/css/bootstrap-modal.css" rel="stylesheet" type="text/css"/>
<!-- end: CSS REQUIRED FOR THIS PAGE ONLY -->
k rel="shortcut icon" href="favicon.ico" />
</head>
<!-- end: HEAD -->
<!-- start: BODY -->
<body class="page-full-width layout-boxed bg_style_2 header-default">
<!-- start: HEADER -->
<div class="navbar navbar-inverse navbar-fixed-top">
<div class="navbar-header">
<!-- start: LOGO -->
<img src="../assets/images/ckd_cover_photo.png" class="img-responsive">
<!-- end: LOGO -->
<!-- start: RESPONSIVE MENU TOGGLER -->
<button data-target=".navbar-collapse" data-toggle="collapse" class="navbar-toggle" type="button">
<span class="clip-list-2"></span>
</button>
<!-- end: RESPONSIVE MENU TOGGLER -->
</div>
<!-- start: TOP NAVIGATION CONTAINER -->
<div class="container">
<div class="navbar-tools">
<!-- start: HORIZONTAL MENU -->
<?php
      include("../includes/layout/navigation.php");
      2>
<!-- end: HORIZONTAL MENU -->
<!-->
</div>
</div>
<!-- end: TOP NAVIGATION CONTAINER -->
</div>
<!-- end: HEADER -->
<!-- start: MAIN CONTAINER -->
<div class="main-container">
<!-- start: PAGE -->
```

```
<div class="main-content">
<div class="container" style="min-height: 760px;">
<!-- start: PAGE HEADER -->
<div class="row">
<div class="col-sm-12">
<!-- start: STYLE SELECTOR BOX -->
<!-- end: STYLE SELECTOR BOX -->
<!-- start: PAGE TITLE & BREADCRUMB -->
User : <?PHP echo $_SESSION['username']; ?>
<form class="sidebar-search">
<div class="form-group">
<!-- start: TOP NAVIGATION MENU -->
<!-- start: USER DROPDOWN -->
<a data-toggle="dropdown" data-hover="dropdown" class="dropdown-toggle" data-close-others="true" href="#">
<img src="../assets/images/user.jpg" class="circle-img" alt="">
<span class="username">My Account</span>
<i class="clip-chevron-down"></i>
</a>
<a href="">
<i class="clip-user-2"></i>
 View My Profile
</a>
<a href="">
<i class="clip-pencil-3"></i>
 Edit My Profile
</a>
<a href="../BLL/logout_BL.php">
<i class="clip-exit"></i>
 Log Out
</a>
<!-- end: USER DROPDOWN -->
<!-- end: TOP NAVIGATION MENU -->
</div>
</form>
<div class="page-header">
<h1>Home</h1>
</div>
<!-- end: PAGE TITLE & BREADCRUMB -->
</div>
</div>
<!-- end: PAGE HEADER -->
```

137

<!-- start: PAGE CONTENT --> <a href="#top" ></a> <div class="row"> <div class="col-sm-12"> <div class="panel panel-default"> <div class="panel-body"> <form role="form" class="form-horizontal" id="" method="post"> <div class="row"> <div class="col-sm-9"> <div class="panel panel-default"> <div class="panel-heading"> <i class="fa fa-external-link-square"></i> <b>Surveillance on Chronic Kidney Disease in Sri Lanka</b> </div> <div class="panel-body"> <div style="float: left"><img width="500px" src="../assets/images/institutions.png" class="img-responsive"/></div> The Epidemiology Unit of the Ministry of Health, Sri Lanka has established surveillance on chronic kidney disease since October 2013. Thirty hospitals were declared as sentinel sites. The rationale of selecting the hospitals as sentinel sites was the available statistics on the disease burden and the media reports and public concerns of the presence of the disease in geographic locations. Based on the hospital statistics and the statistics at the renal research unit, the Polonnaruwa and Anuradhapura districts and geographically adjacent areas namely, Dehiattakandiya, Girandurukotte, Welioya, Polpithigama, Padavi Sripura, Wilgamuwa and Vavuniya South Divisional Secretariat divisions were proclaimed as high risk areas. The hospitals catering to the populations in the proclaimed areas were selected as sentinel sites, namely < 0 |> DH Padaviya DH Madawachchiya BH Kebithigollawa BH Thambuttegama DH Kekirawa BH Medirigiriya DH Hingurakgoda DH Bakamuna DH Welikanda DH Aralaganwila DH Nikawewa >DH Padawi Sripura DH Girandurukotte DH Galenbindunuwewa TH Anuradhapura GH Polonnaruwa GH Vavuniya BH Dehiattakandiya DH Hettipola DH Kahatagasdigiliya DH Sampathnuwara 

Another set of hospitals were selected on the basis of patients referral mechanisms, resource availability
including availability of specialists' services, having renal clinics, which are as follows,
<0 >
<li>SBH Mahiyangana</li>
<li>GH Mullaitivu</li>
<pre>cli&gt;TH Kurunegala</pre>
<li>TH Kandy</li>
01
cn style="text align: justify"\Eurther the following institutions were selected considering the potentials of having the disease anecdetal
space on the presence of disease and public concerns on the presence of the disease
reports on the presence of disease and public concerns on the presence of the disease. () p>
<ii>GH Mannar</ii>
0
<pre>As the surveillance continues, the list of sentinel sites could be evolved based on the evidence</pre>
generated.
<div class="col-sm-3"></div>
<div class="panel panel-default" id="cvClinicVisitPnl"></div>
<div class="panel-body"></div>
<div class="col-sm-12"></div>
<img class="img-responsive" src="/assets/images/Screening_Guidelines_CKD_Cover.jpg"/>
<pre><div class="col-sm-12 text-center"></div></pre>
<a class="btn btn-purple" href="/assets/pdf/Screening_Guidelines_CKD.php">Download</a>
<i class="fa fa-arrow-circle-o-down"></i>
<pre><div class="panel panel-default" id="cvClinicVisitPnl"></div></pre>
<pre><div class="panel-body"></div></pre>
<pre></pre>
<pre><img_lass="img_responsive" src=" /assets/images/clinical_management_guidline_IPG"></img_lass="img_responsive"><hr/></pre>
<pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>/ div class="col-sm-12 text-center"&gt;</pre>
<pre><a braf=" /assats/ndf/Clinical%20Management%20GuidelinesPDE nbn" class="btn btn-nurnla">Download</a></pre>
s/uiv>

</div> </div> </div> <?php include("../includes/layout/footer.php"); ?> <!-- start: JAVASCRIPTS REQUIRED FOR THIS PAGE ONLY --> <script src="../assets/plugins/jquery-inputlimiter/jquery.inputlimiter.1.3.1.min.js"></script> <script src="../assets/plugins/autosize/jquery.autosize.min.js"></script> <script src="../assets/plugins/select2/select2.min.js"></script> <script src="../assets/plugins/jquery.maskedinput/src/jquery.maskedinput.js"></script> <script src="../assets/plugins/jquery-maskmoney/jquery.maskMoney.js"></script> <script src="../assets/plugins/bootstrap-datepicker/js/bootstrap-datepicker.js"></script> <script src="../assets/plugins/bootstrap-timepicker/js/bootstrap-timepicker.min.js"></script> <script src="../assets/plugins/bootstrap-daterangepicker/moment.min.js"></script> <script src="../assets/plugins/bootstrap-daterangepicker/daterangepicker.js"></script> <script src="../assets/plugins/bootstrap-colorpicker/js/bootstrap-colorpicker.js"></script> <script src="../assets/plugins/bootstrap-colorpicker/js/commits.js"></script> <script src="../assets/plugins/jQuery-Tags-Input/jquery.tagsinput.js"></script> <script src="../assets/plugins/bootstrap-fileupload/bootstrap-fileupload.min.js"></script> <script src="../assets/plugins/summernote/build/summernote.min.js"></script> <script src="../assets/plugins/ckeditor/ckeditor.js"></script> <script src="../assets/plugins/ckeditor/adapters/jquery.js"></script> <script src="../assets/js/form-elements.js"></script> <script src="../assets/js/accessPriviladgesJs.js"></script> <script src="../assets/plugins/bootstrap-modal/js/bootstrap-modal.js"></script> <script src="../assets/plugins/bootstrap-modal/js/bootstrap-modalmanager.js"></script> <script src="../assets/js/ui-modals.js"></script> <script src="../assets/js/dropdownPopulation.js"></script> <script src="../assets/plugins/bootstrap-paginator/src/bootstrap-paginator.js"></script> <script src="../assets/plugins/jquery.pulsate/jquery.pulsate.min.js"></script> <script src="../assets/plugins/gritter/js/jquery.gritter.min.js"></script> <script src="../assets/js/ui-elements.js"></script> <!--<script src="../assets/plugins/bootbox/bootbox.min.js"></script>--> <!-- end: JAVASCRIPTS REQUIRED FOR THIS PAGE ONLY --> <script> jQuery(document).ready(function() { Main.init(); FormElements.init(); }); </script> <!-- end: BODY --> </body></html>