Web Based School Health Survey and Medical Inspection Management System

For

Medical Officer of Health Office, Kopay

Vanaja.V

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Web Based School Health Survey and Medical Inspection Management System For Medical Officer of Health Office, Kopay

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This dissertation is submitted in partial fulfilment of the requirement of the Degree of Bachelor of Information Technology (external) of the University of Colombo School of Computing

DECLARATION

I certify that this dissertation does not incorporate, without acknowledgement, any material previously submitted for a degree in any university and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text. I also hereby give consent for my dissertation, if accepted, to be made available for photocopying and for interlibrary loans and for the title and abstract to be made available to outside organizations.

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Date

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Date

ABSTRACT

Health is wealth is the famous proverb. It is truly said for the human beings. Everyone wants to be a healthy person. MOH offices are providing there health services to the community. Head of this office is Medical Officer of Health. In this organization some persons are working such as Supervisory public health inspector, public health inspector, Supervisory public health midwives. Public health inspector is primarily responsible for environmental sanitation, school health work and the control communicable disease .They are providing lot of services but all are in manually. Mostly they are doing field work, so they have to go to every place to take health details and maintain all details in hard copy formats. So they are facing lot of problem to maintain all details for longtime manually, retrieving data immediately, generating monthly and quarterly reports, and couldn't finish their works on time. So they want to computerize their works by using the system.

Through this system they have got lot of facilities such as keep students records like height, weight, BMI, nutritional problems, health defect, all the students details who have health defects and actions which are taken for identified defects, details of school health activities during month, health promotion and educational programs, summary of no of student's details, details about immunization, provided treatments and follow-up, information on health promoting school, no of teachers, physical environment of school, health promoting unit, dental clinic, toilet facilities, water supply, waste management, school premises, school canteen, preparation of mid-day meals, school kitchen, hostel facilities and health promotions. This system provides the daily and monthly reports on every activity which are doing in schools and generate area wise reports and can find yearly reports which convey the details about school activities to MOH. So this system was developed to reduce their workload and giving their excellent and efficient service to the people.

To develop this system some technologies were used such as the UML is used to sketch the blueprints. The object oriented system design is used to design the system. PHP is used as the development language of the system implementation and Apache server is used as local server. Handling the database of the system is carried out using the MYSQL. The system was designed to fulfill the requirements of the administration and staff of the MOH office.

ACKNOWLEDGEMENT

I developed the most effective and efficient system Web based school health survey and medical inspection management system to Medical Officer of Health office, Kopay. I have lot of responsible to tell thank who have helped me to complete this project successfully.

In that case First of all I wish to thank to the almighty God for guiding me in proper way and for all the blessings on me.

Then I would like to thank my client MOH Office, Kopay to give such an opportunity to develop this software and also my thanks to all the staffs who have helped me in good manner.

Next I would like to thank to my great supervisor Mr.K.Venugoban who is guiding me and give me lot of ideas, advices to complete the project work. He spends lot of time to evaluate this project and also I thank my lecturer Mr.S.Theivamainthan to provide basic programming knowledge and instructions.

Then I express my thanks to my parent's to their contribution and continuous assistant those were given me much self-confidence to carry out this project successfully. They encourage me to do the project as well. I would like to convey my thanks to my friends also who have given me advice and encouragement throughout the project. I'm much grateful to all of them.

Finally I would like to thank University of Colombo School of Computing (UCSC) for providing this excellent opportunity to present this project work.

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LIST OF ACRONYMS

MOH – Medical Officer of Health

SPHI – Supervisory Public Health Inspector

PHI – Public Health Inspector

SPHM - Supervisory Public Health Midwife

PHM - Public Health Midwife

RDHS – Regional Director of Health Service.

PHP – Hypertext Pre-Processor

CSS – Cascading Style Sheet

OO – Object Oriented

1NF / 2NF / 3NF – First / Second / Third Normal Form

ER – Entity Diagram

DVD – Digital Versatile Disc

GUI – Graphical User Interface

RAM – Random Access Memory

GB – Gigabyte

SMS – Short Message Service

HTTP – Hypertext Transfer Protocol

UCSC – University of Colombo School of Computing

BIT – Bachelor of Information Technology

CHAPTER 01: INTRODUCTION

Information technology plays a major role in our day to day life. Computers are mostly used in organizations to maintain and manage their records and works. This project also one of the small attempts to archive this objective.

This dissertation describes web based school health survey and medical inspection management system for medical officer of health office, Kopay. It is implemented for MOH, SPHI and PHI to maintain and prepare daily, monthly and quarterly statement and maintenance of the office activities. This office has various activities such as visiting the schools, taking health details of students and schools also, visiting shops and check every things, visiting houses to observe their environments etc.

1.1 MOTIVATION FOR PROJECT

Public health services are promotion of health and prevention of diseases. We can get this service from any health organizations. Every district has Regional Director of Health Service office to provide health services. Under this RDHS office there are number of Medical Officer of Health offices based on the populations. According to Jaffna district there are twelve MOH offices providing there health services including Kopay MOH office. Leader of this office is Medical Officer of Health. Under his leadership some persons are working such as Supervisory public health inspector, public health inspector, Supervisory public health midwives. Public health inspector is primarily responsible for environmental sanitation, school health work and the control communicable disease. Public health midwives are the workers for family health care at the grass roots level and provides domiciliary services mainly mothers and infants.

They are providing lot of services but all are in manually. Mostly they are doing field work, so they have to go to every place to take health details and maintain all details in hard copy formats. So they are facing lot of problem to maintain all details for longtime manually, retrieving data immediately, generating monthly and quarterly reports, and couldn't finish their works on time.

So they want to computerize their works by using the system. There are two ways to develop the system to do their work. One is windows based software and other one is

web based software. Mostly their works are field work they have to access this system from any place at any time.in this case web based system using PHP and MySQL is suitable to them.

If they use this system they can finish their work on time, all can use at any places and at any time, can generate all reports, can store their all details for long time.

Few of the goals of this project are reducing the workload, time and energy wasting of SPHI and PHI in school health through efficient and excellent timely service.

1.2 OBJECTIVE OF THE PROJECT

Through this system PHI can able to

- Manage all students' health details. This system should keep students records like height, weight, BMI, nutritional problems ,health defect
- Maintain record of students who have health problems this system should have all the students details who have health defects and actions which are taken for identified defects
- Find out monthly statement of school health activities through this system should get the details of school health activities during month, health promotion and educational programs, summary of no of student s details, summary of defect students details, details about immunization, provided treatments and follow-up, information on health promoting school.
- Manage the records about school health survey. This system should have details about no of students, no of teachers, physical environment of school, health promoting unit, dental clinic, toilet facilities, water supply, waste management, school premises, school canteen, preparation of mid-day meals, school kitchen, hostel facilities and health promotions.
- Retrieve school health survey detail summary. This system should provide details of school health survey in all school as a summary
- Generate relevant reports This system should provide the daily and monthly reports on every activity which are doing in schools.

- SPHI can able to generate area wise reports and can find yearly reports which convey the details about school activities to MOH. observe the works of PHIs.
- School community can able to health condition of their school and students health conditions.

1.3 SCOPE OF THE PROJECT

The scope of this project is to develop a web based school health survey and medical inspection management system which support the sore functions of

- Managing students 'health details
- Maintain record of students who have health problems
- Find out monthly statement of school health activities
- Manage the records about school health survey
- Retrieve school health survey detail summary.
- Generate relevant reports

In order to carry out the system effectively and efficiently.

1.4 STRUCTURE OF THE DISSERTATION

Structure of the dissertation is shown the summary of the contents.

In Chapter 2: Explanations were given about Analysis. Some details about existing manual system, drawbacks of the existing manual system were explained and about What are the techniques were used to gather data for the new system, functional requirements ,nonfunctional requirements also described.

In Chapter 3: The structure of the overall system, methodologies used to develop the system and alternate solutions were discussed and also necessary design diagrams are included in this chapter.

In Chapter 4: In this section system implementation techniques are explained. what are the coding are used and how system divided as major modules , submodules and what are the securities are in this system also referred.

In Chapter 5: This is evaluation part of this system. In this section all type of testing have done. Test results and test cases are also explained.

In Chapter 6: This is conclusion part of this system. In this part, finally what we got from this system, what are the future works we have planned to implement and critical assignment also denoted.

In Appendix: Page reference is indicated that what are the resources or pages were referred to write this report.

CHAPTER 02: ANALYSIS

2.1 INTRODUCTION

The success of any new software project is critically dependent on the initial discovery or requirements analysis phase of the project. Analysis [1] is the process of breaking a complex topic or substance into smaller parts in order to gain better understanding of it. Requirement analysis is the most important and fundamental stage in System Development Life Cycle.

2.2 EXISTING MANUAL SYSTEM

MOH office used the manual system for calculations and maintenance of their records. PHI and PHM both of them should be able to manage area wise daily and monthly field activities. SPHI collects information from every PHI in the end of the month then he documents that data. SPHI should be able to calculate overall area wise activities quarterly and yearly. All the students' records are maintained by every school admins. MOH should be able to view all of the main functionalities through the report.

Figure 2.1 represents the existing manual system.

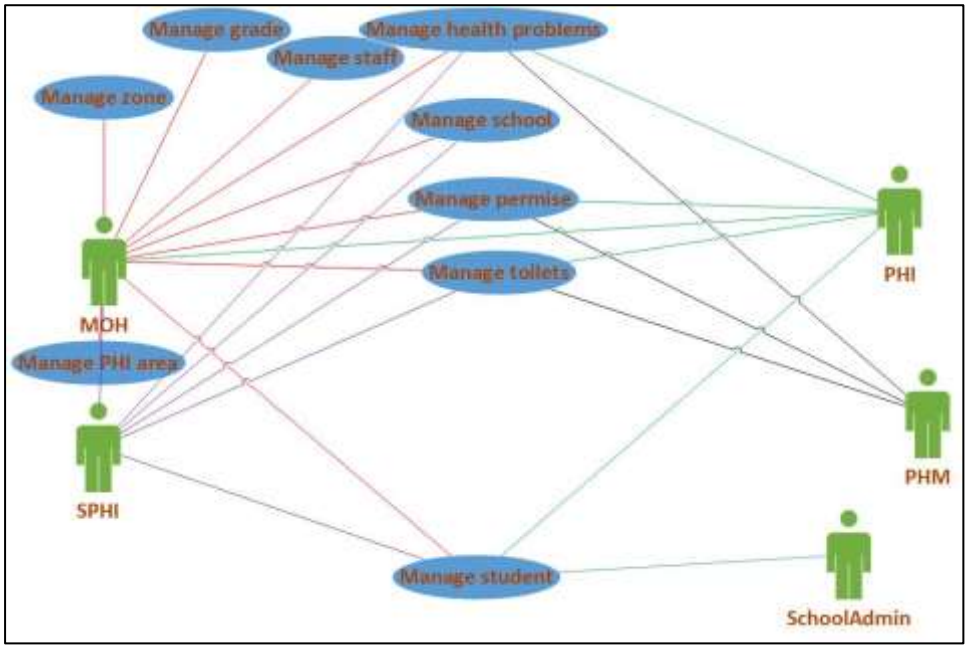


Figure 2.1 Use case diagrams for existing manual system

2.2.1 DAWBACKS OF EXISTING MANUAL SYSTEM

Following drawbacks are identified in current manual system.

- When they do all work for manually they were felt difficulties to manage all records with hand writing.
- They have to prepare all reports such as monthly and quarterly.. so it is difficult to do on time.
- In schools They have to calculate students height ,weight BMI etc. It is difficult to do manually. Error is occurred due to this..
- When they go to work they have to take lot of hardcopy materials with them.
- They were faced difficulties to maintain all documents for long time. lot of spaces have to allocate to save that files.
- May be they lost their important documents due to the natural disaster.

2.3 INFORMATION GATHERING TECHNIQUES

There are many information gathering techniques are used to collect data. Three important techniques were used to gather facts about the existing system.

- Observation
- Interviewing
- Site visit

2.3.1 FUNCTIONAL REQUIREMENTS

Functional requirements specify what system able to perform. Through this system they have to do their school health survey details, all students' medical related details, have to prepare all related reports and pass the message to the parents about their child. These are the main functional requirements of this system.

- System should managing students 'health details
- System should maintain record of students who have health problems
- System should find out monthly statement of school health activities
- System should manage the records about school health survey
- System should give school health survey detail summary.
- System should generate relevant reports

2.3.2 NON FUNCTIONAL REQUIREMENTS

According to nonfunctional requirements how system perform their works for attractively and easy to use, security, maintainability, reliability...etc. These are the non-functional requirements.

- Good computer performance may involve response time for a given piece of work and high availability of the computer system.
- The typical objectives of portability requirements are to ensure that the application can be easiy and quickly.
- Safety is the state of being safe the condition of being protected against physical , financial or other type of failure.
- The user interface should be simple and initiative.
- The System should be easy to use.
- The system should be reliable.

2.3.3 RESOURCE REQUIREMENTS

Hardware requirements

- Pentium 4 system or above
- any printer

Software requirements

1. Development purpose
    - Any operating system (windows 7,10,linux.etc..)
    - Any browser (Chrome, Mozilla Firefox, etc)
    - WAMP Server 2.4
    - PHP
    - MySQL
    - Notepad++
    - MsWord
    - MsProject
    - MsVisio
    - MySQL workbench
    - CSS and JavaScript, HTML
    - Photoshop

2. For implement purpose
    - ❖ Operating system
    - ❖ Any browser
3. Special requirements
    - ❖ internet connection
    - ❖ routers
    - ❖ webhost & domain

2.4 SIMILAR SYSTEMS

Health Plus

Health Plus [3] is a medical themed multipurpose template, a best choice for all your medical related websites in order to boost your online presence and expand your services around the world via online by using this modern and elegantly designed template. This creatively designed template is also a perfect choice for all your websites like medical practices, dentists, doctors, surgeons, hospitals, health clinics, pediatrics, psychiatrist, psychiatry, stomatology, chiropractor, veterinary clinics, medical related practices, conference, environmental, charity, nonprofit, gym, political, activist, spa, Plastic Surgeons, Cosmetic Clinics, Beauty Clinics, Health Care Companies, Pharmaceuticals, gynecology, medical institutions, sports medicine centers, fertility clinics, medical laboratory, ophthalmologist, physiotherapist, psychologist, Nutritionists, Dietitians and much more.

Clinical Care

Clinical care [4] is a medical related mobile app, a best choice for all your medical themed mobile apps which is compatible on all platforms of your mobile. This smartly designed mobile app is also a fine choice for all your related websites like Health, dental, veterinary services websites, doctors, hospitals, medical organizations, healthcare related businesses, research centers, pharmacies, pediatric, gynecology, general therapist clinics, family doctors, ambulance, Medical Practices, Surgeons, Dentists, Pediatrician, Psychiatrist, Stomatology, Chiropractor, Cosmetic Clinic, Plastic Surgery Website, Beauty Clinics, conference, environmental, charity, nonprofit, gym, political, activist, business, spa, Physicians, Nutritionists, Dietitians, Personal Trainers, Fitness Coaches, medical diagnosis, health news, health magazine, dental insurance, cancer, neurologist, Infant or Child specialists, rehabilitation, obstetrics, medical laboratory, ophthalmologist, physiotherapist, psychologist and much more.

Global school-based student health survey

The Global school-based [5] student health survey (GSHS) is a collaborative surveillance project designed to help countries measure and assess the behavioral risk factors and protective factors in 10 key areas among young people aged 13 to 17 years. The GSHS is a relatively low-cost school-based survey which uses a self-administered questionnaire to obtain data on young people's health behavior and protective factors related to the leading causes of morbidity and mortality among children and adults worldwide. To access information on the GSHS, to read about where the survey has been implemented, or to review specific results from a country, please click on the appropriate links below and right.

CHAPTER 03: DESIGN

3.1 INTRODUCTION

System design [6] is the process of defining the elements of a system such as the architecture, models and components, the different interfaces of those components and the data that goes through that system. It is meant to satisfy specific needs and requirements of a business or organization through the engineering of a coherent and well running system.

3.2 SYSTEM MODELS AND METHODOLOGIES

There are various software development life cycle models defined and designed which are followed during the software development process. These models are also referred as Software Development Process Models". Each process model follows a Series of steps unique to its type to ensure success in the process of software development.

Following are the most important and popular SDLC [2] models followed in the industry.

- Waterfall Model
- Iterative Model
- Spiral Model
- V-Model
- Big Bang Model

Other related methodologies are Agile Model, RAD Model, Rapid Application Development and Prototyping Models.

In the above system models Prototyping model is suite to develop my system. So prototyping model was chosen. The prototyping model shown in the following Figure 3.1 represents the prototyping model

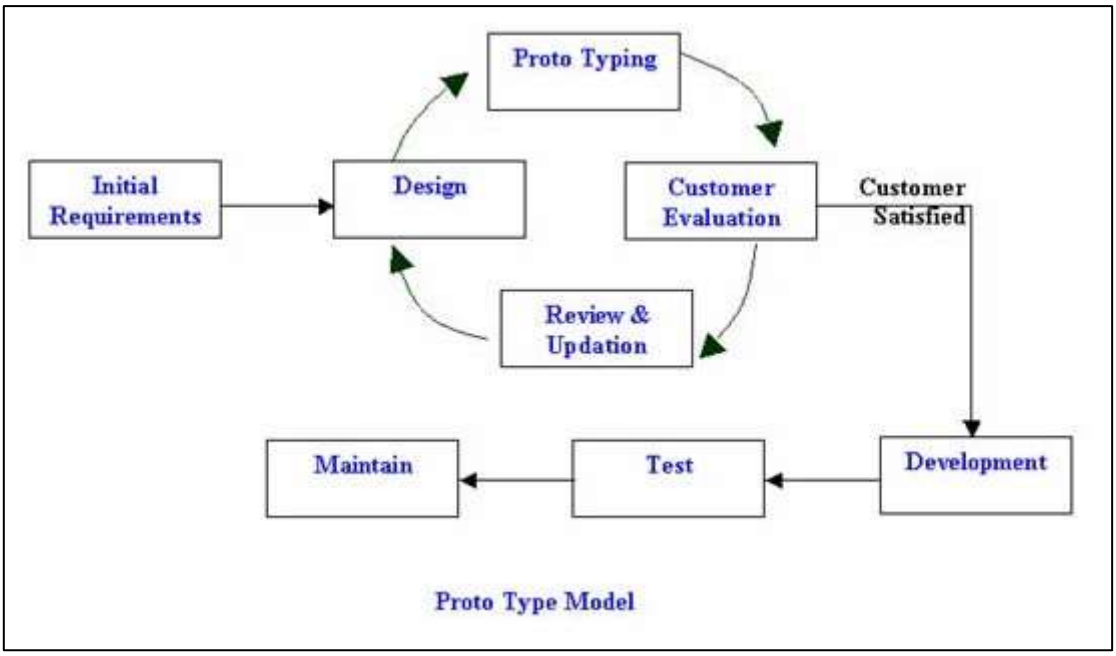


Figure 3.1 Prototyping Model

3.3 ALTERNATE SOLUTION

	Web Based	Windows Based	Network Based
Access from	Any ware	One Place	Limited Place
Number of users	Unlimited	One	Limited
Customizable	easiest	easy	easier than windows based

Table 3.1 Alternative Solution

In this system users access from any ware and they want to access the system for data gathering and modification from their places, there is several PHI officers want to access the system for these reasons based on above Table 3.1 web based is most suitable for this system.

3.4 PROCESS DESIGN

Design phase is an important activity of system development project. The outcomes of system analysis phase used as the input to the system design phase. The design was completed through three stages and they are,

1. Database design
2. Application and architecture design
3. Interface design

Following activities occurred during the design phase

- Defining which part of the system will be handled by the software, which will be hardware and which will be manual.
- The ER model was transformed into relational model.
- The relational model is normalized. The normalization is a technique to maintain the database consistency and non-redundancy.

3.4.1 DATABASE DESIGN

The database design [7] process includes detailed design of database according to the ER diagram created in analysis phase. Data models which were developed during the data modeling phase are translated into data structures suitable for the selected database technology.

Normalization

Normalization is a procedure of decomposing unacceptable relations into smaller relations. Purpose of the Normalization is to maintain consistence. On redundancy and reduce data storage space of relations. There are several levels of Normalization.

First Normalization

First normal form of a relation ensures that there are no multivalued attributes in that relation.

Second Normalization

Normalization to second normal form removes partial functional dependencies to composite keys.

Third Normalization

Normalization to second normal form removes any transitive dependencies of the relation.

Figure 3.2 represents the ER diagram of the system

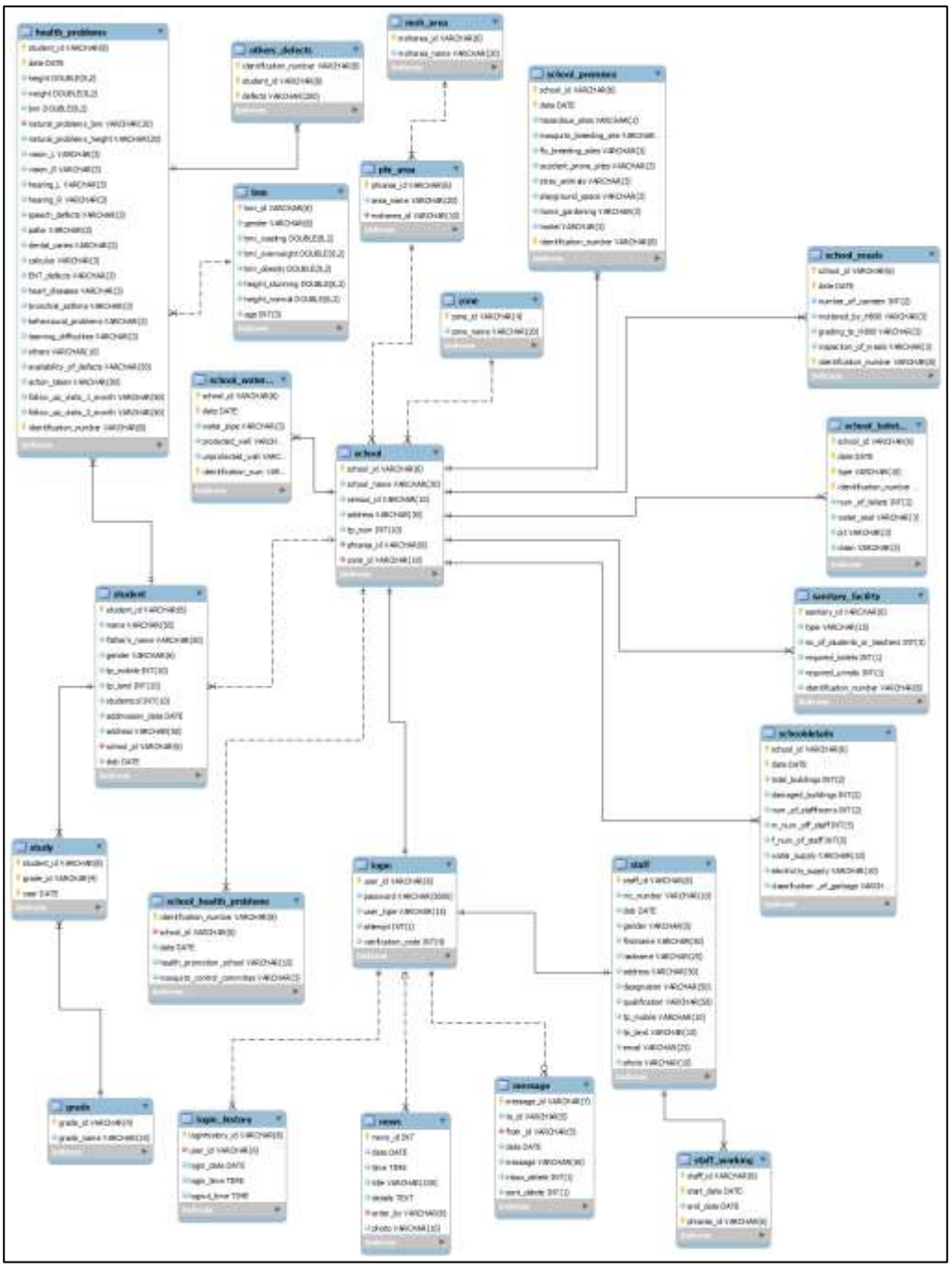


Figure 3.2 ER diagram for this system

3.4.2 APPLICATION ARCHITECTURE DESIGN

Use case diagram

A Use case diagram is a graphic depiction of the interactions among the elements of a system. A use case is a methodology used in system analysis to identify, clarify and organize system requirements.

Figure 3.3 is represents the Use case diagram of the system

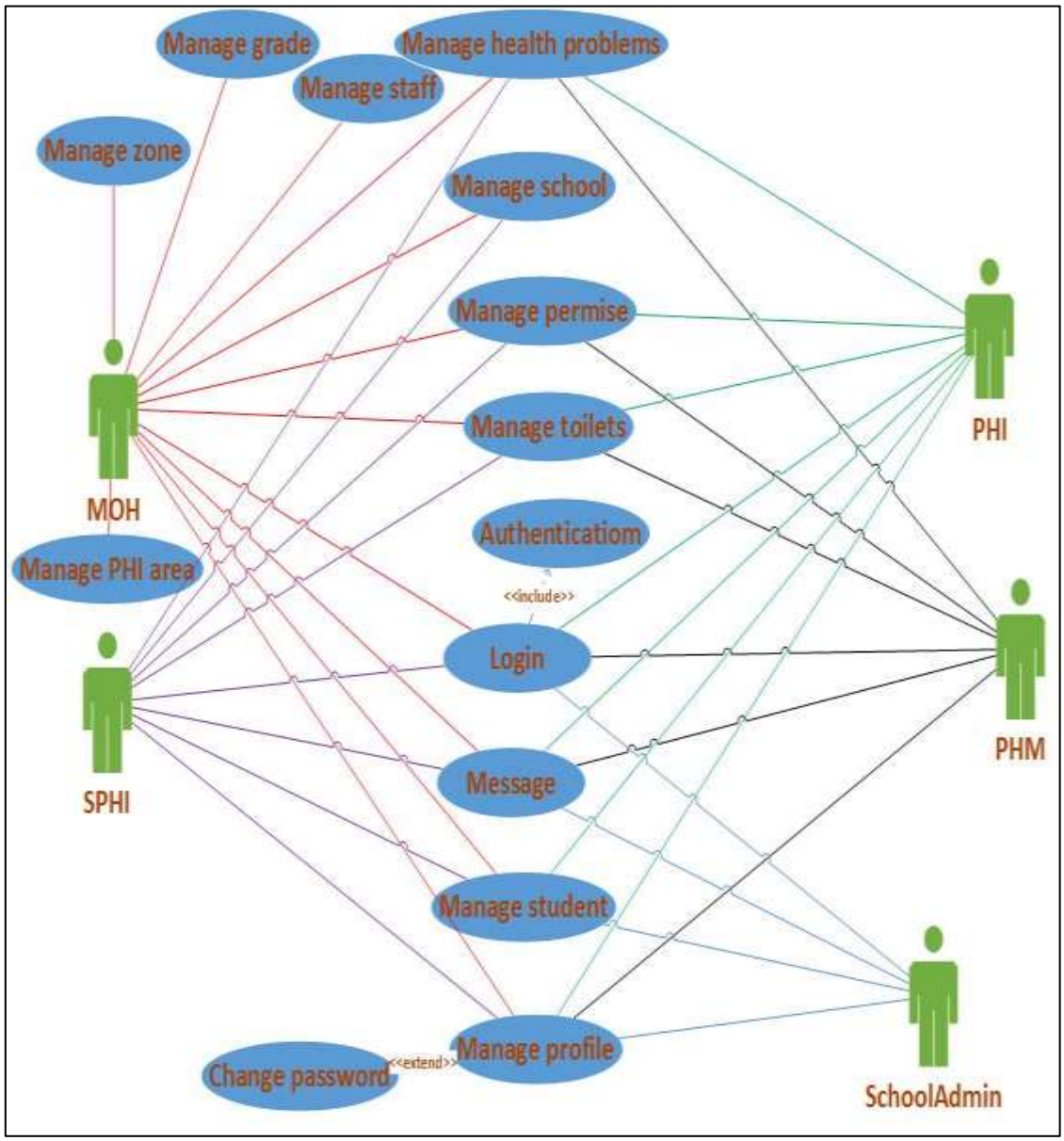


Figure 3.3 Use case diagram for this system

Use case scenario

Use case scenario is a single path through the use case. Refer Table 3.2, 3.3, 3.4

Use case:	Login
Actor:	MOH, SPHI, PHI, PHM, School Admin
Discription:	Allow to Access the page if it is correct username and password.

Table 3.2 Login

Use case:	Manage staff
Actor:	MOH, SPHI
Discription:	Maintain the details of staff and their works.

Table 3.3 Manage Staff

Use case:	Manage student
Actor:	SPHI, PHI, PHM, SchoolAdmin
Discription:	Maintain the health details of students.

Table 3.4 Manage Student

Class diagram

The class diagram [8] is the main building block of object oriented modelling. It is used both for general conceptual modelling of the systematics of the application and for detailed modelling translating the models into program code.

Figure 3.4 is represents the Class diagram of the system

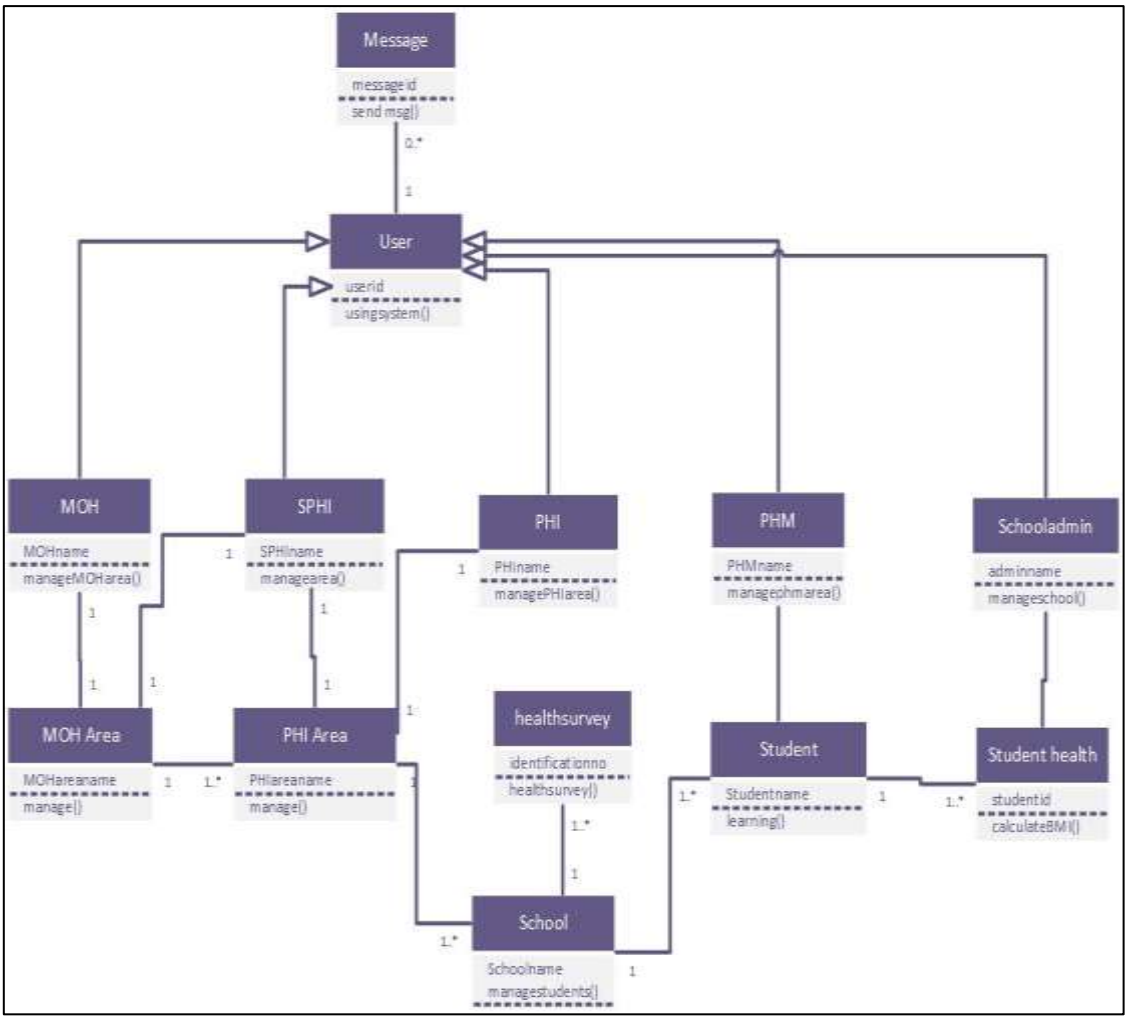


Figure 3.4 Class diagram for this system

Sequence diagram

A sequence diagram [9] is an interaction diagram that shows how objects operate with one another and in what order. It is a construct of a message sequence chart.

Figure 3.5 is represents the Sequence diagram of the system

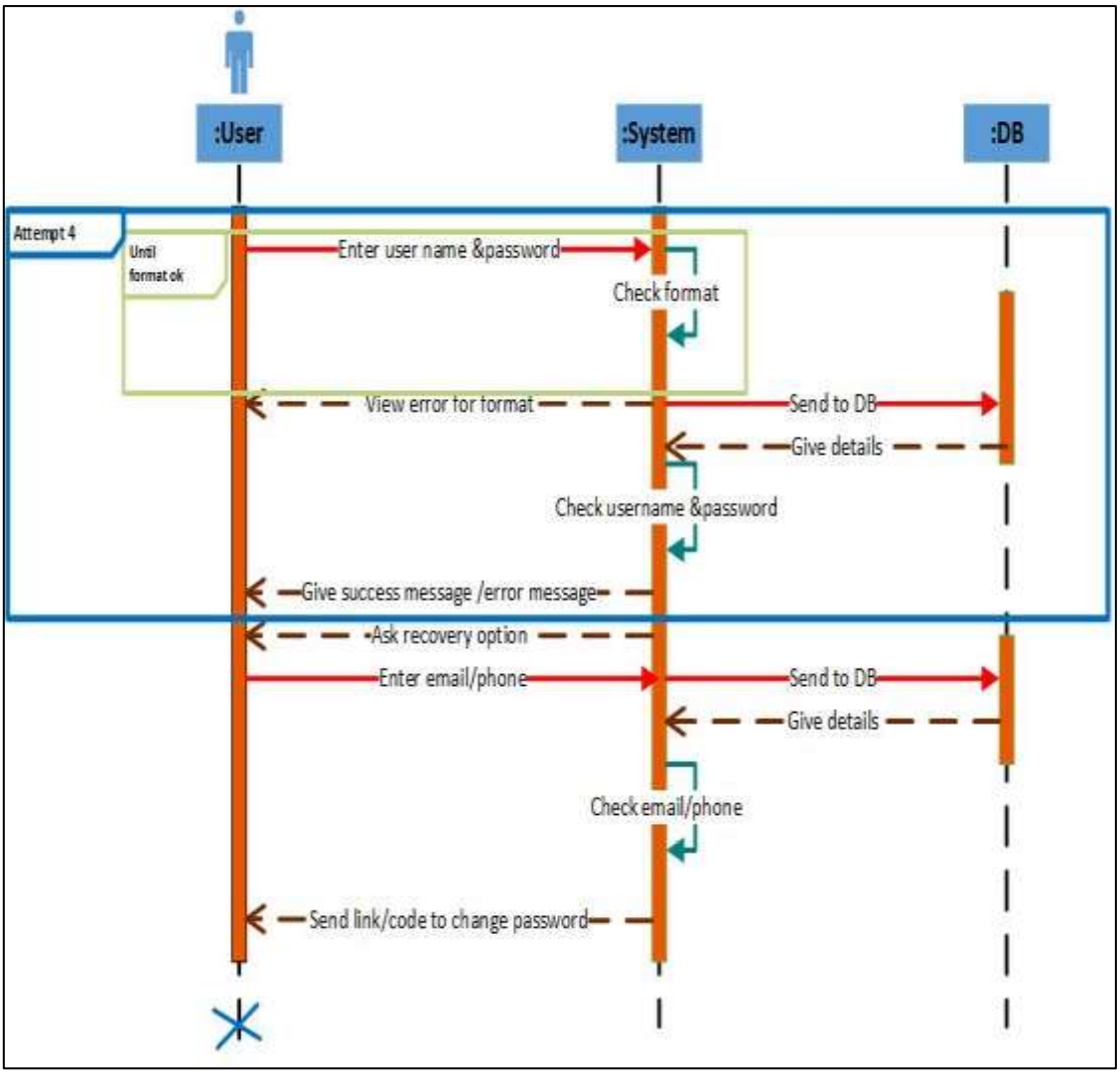


Figure 3.5 Sequence diagram for this system

Activity diagram

Activity diagrams [10] are graphical represent actions of work flows of stepwise activities and actions with support for choice, Iteration and concurrency.in the Unified Modelling Language activity diagrams are intended to model both computations and organizational processes.

Figure 3.6 is represents the Activity diagram of the system

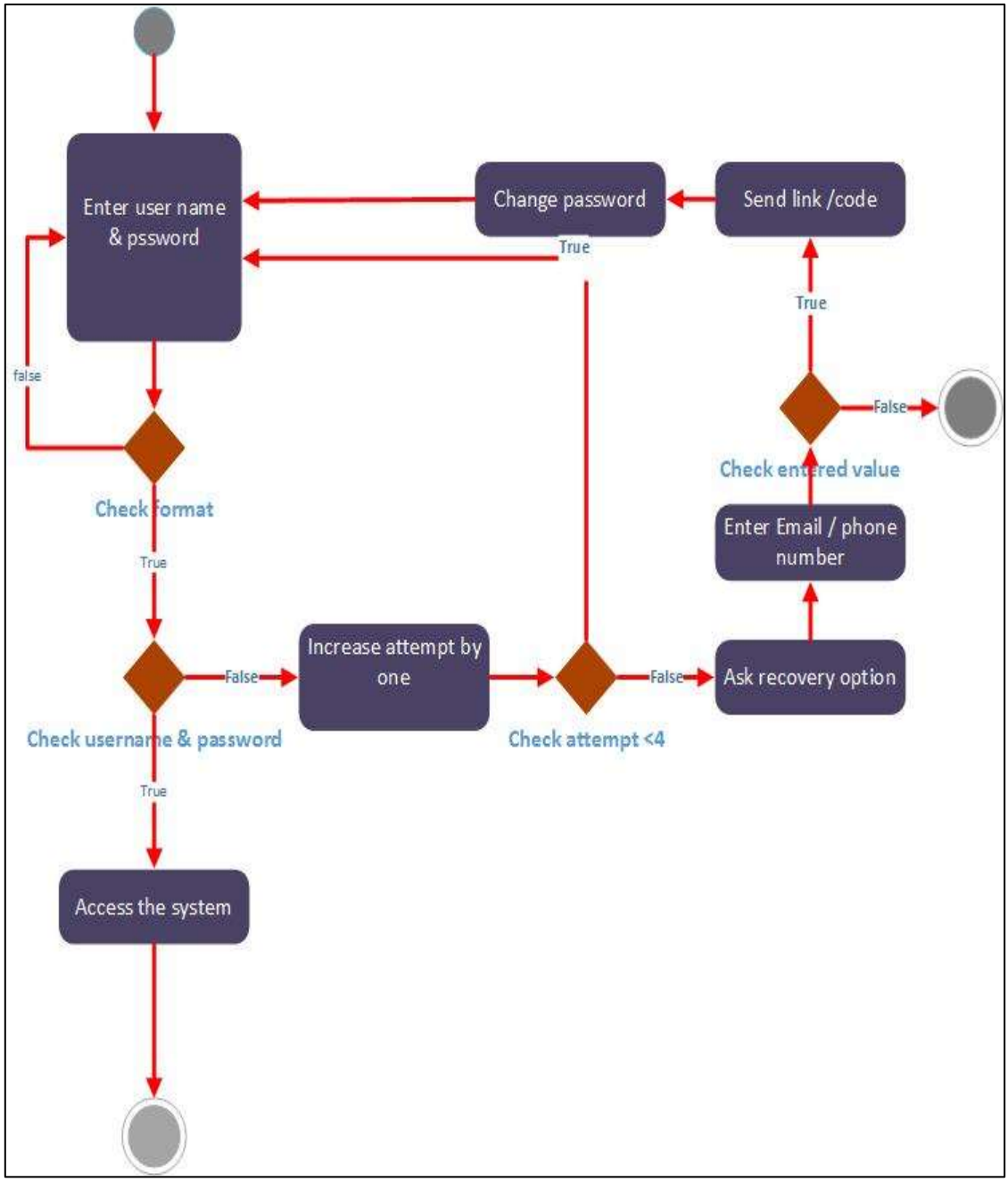


Figure 3.6 Activity diagram for this system

3.4.3 USER INTERFACE DESIGN

Index page of system

The following Figure 3.7 is show the index page of this system. In index page there are some tabs such as Login, Contact Us, About Us, and Read News.

Figure 3.7 Index page of the system

Login Interface of System

The Figure 3.8 is show the login page of this system, from login page user can login with their username and password. If only username and password are correct system will be allowed to access the system.

Figure 3.8 Login page

When user login with wrong username and password, system will not allowed to access the system furthermore if user fails to login more than three attempts system will redirect to forget page.

Staff View of this system

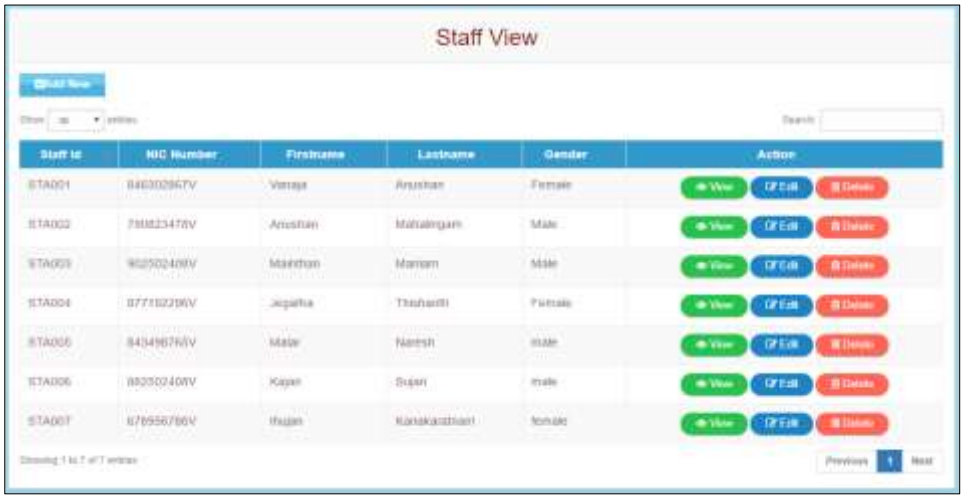


Figure 3.9 Staff View

The Figure 3.9 show the staff view, in this view details of staffs are shown. In Normal view staffid, NIC number, first name, last name and gender are displayed.

Staff – Add New

When click add button in staff view the staff new page will be view as shown in the following Figure 3.10

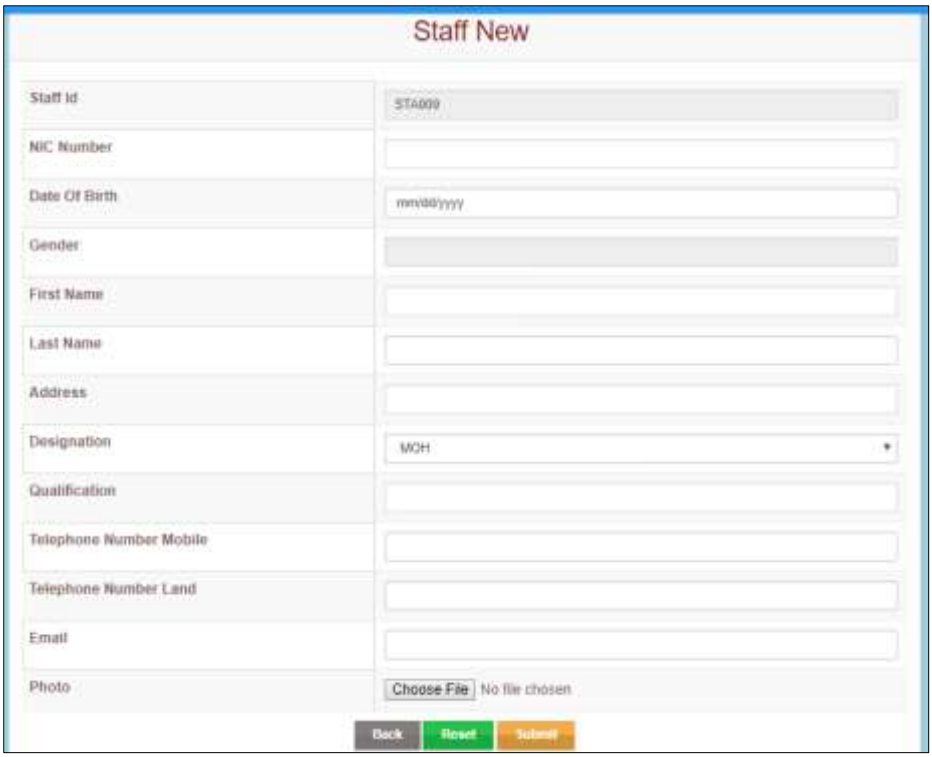


Figure 3.10 Add New Staff

This form is used to enter the new staff details. After the filling all fields then have to click on the submit button. If those details send to the database correctly the alert will be displayed.

Staff Full View

When click in the view button of the particular staff system will show the full details of that particular staff. The full view is shown in the following Figure 3.11.

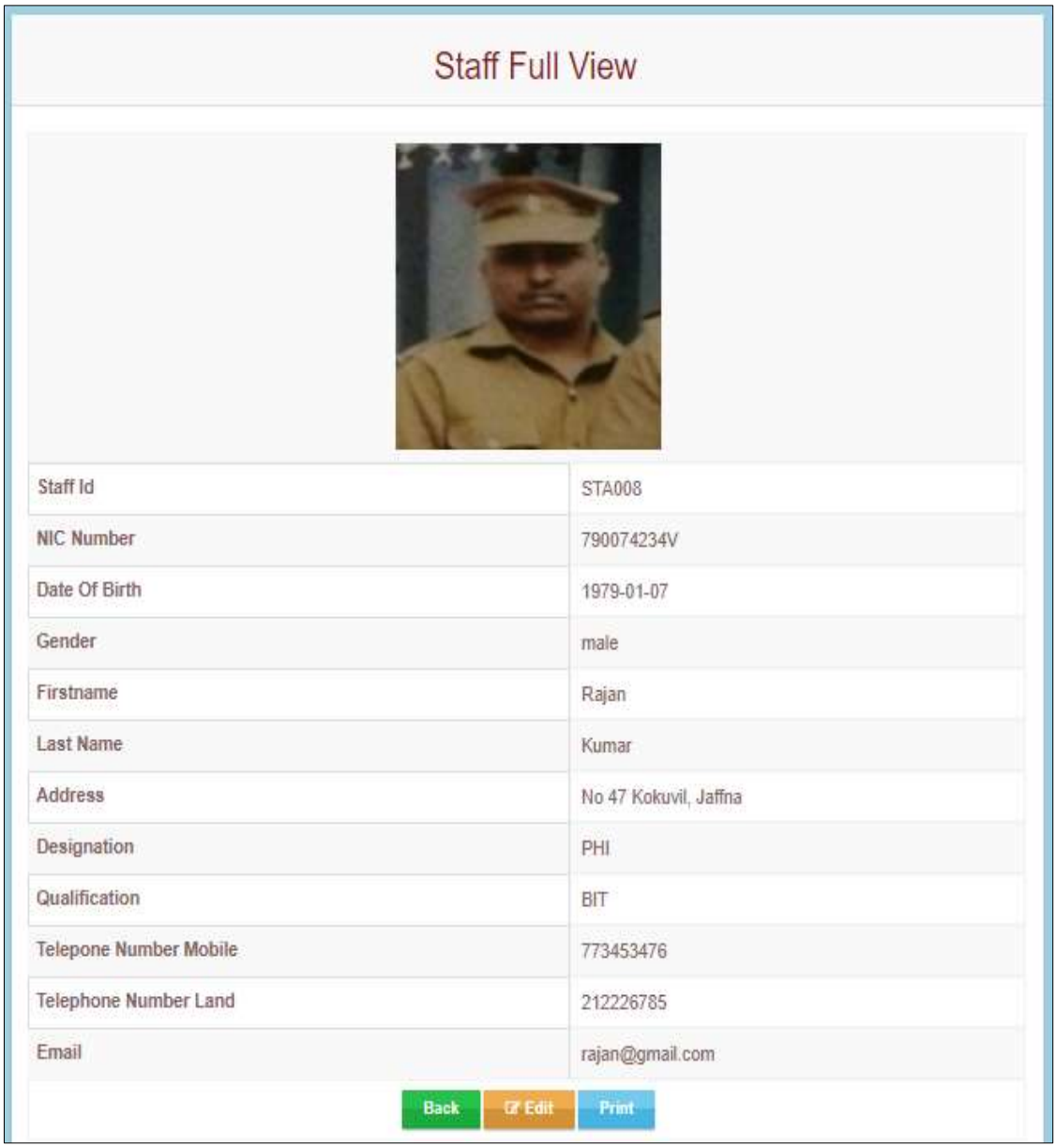


Figure 3.11 Staff full view

Staff Edit

When click edit button of staff then its enable to edit their details, the Figure 3.12 is show the staff edit page:

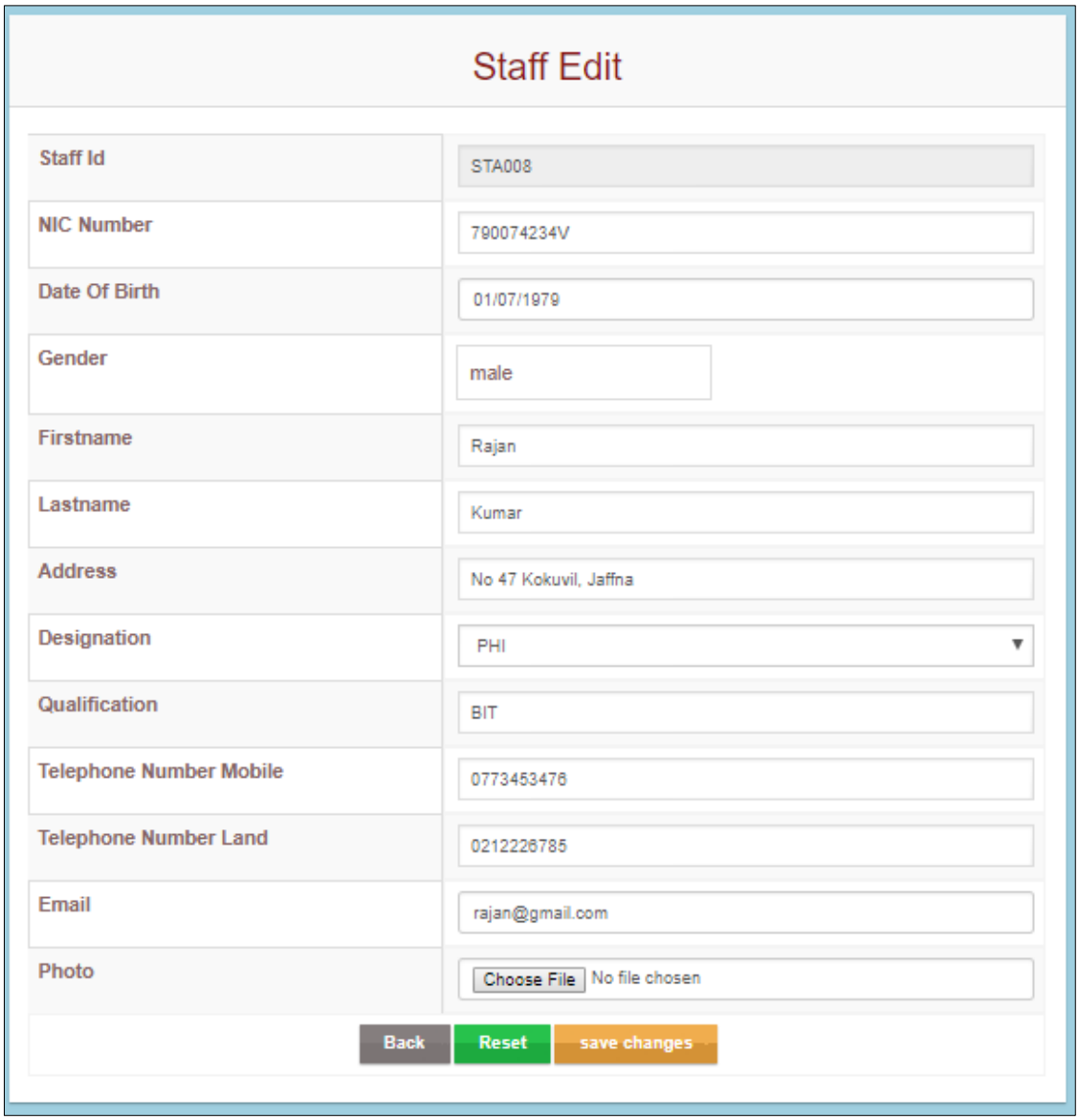


Figure 3.12 Staff Edit

Staff full details report – View

When click the print button of staff system will print their full details, the Figure 3.13 is show that print details:

Figure 3.13 Staff full details Report View

Users can print or save those details, the Figure 3.14 is show print option.

Figure 3.14 Staff full details Report Print

Report – Print with select start date and end date

User can also generate the report of school details between two dates. The school health problems is shown in the following Figure 3.15.

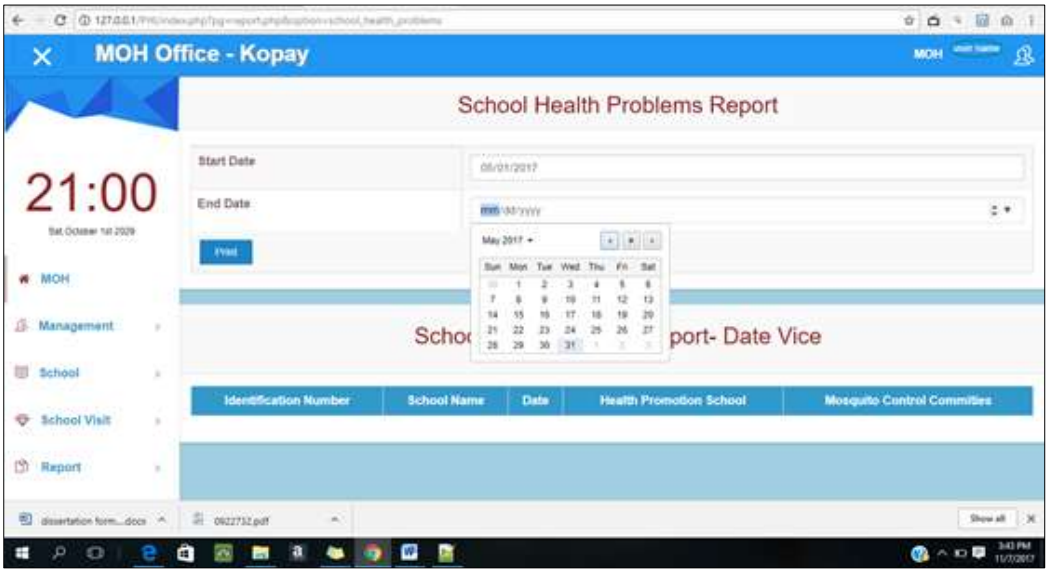


Figure 3.15 School health problems report

The following Figure 3.16 is shows about the report view of school health problems.

after the selection of start date and end date report will be generated school details of health problems between two dates.

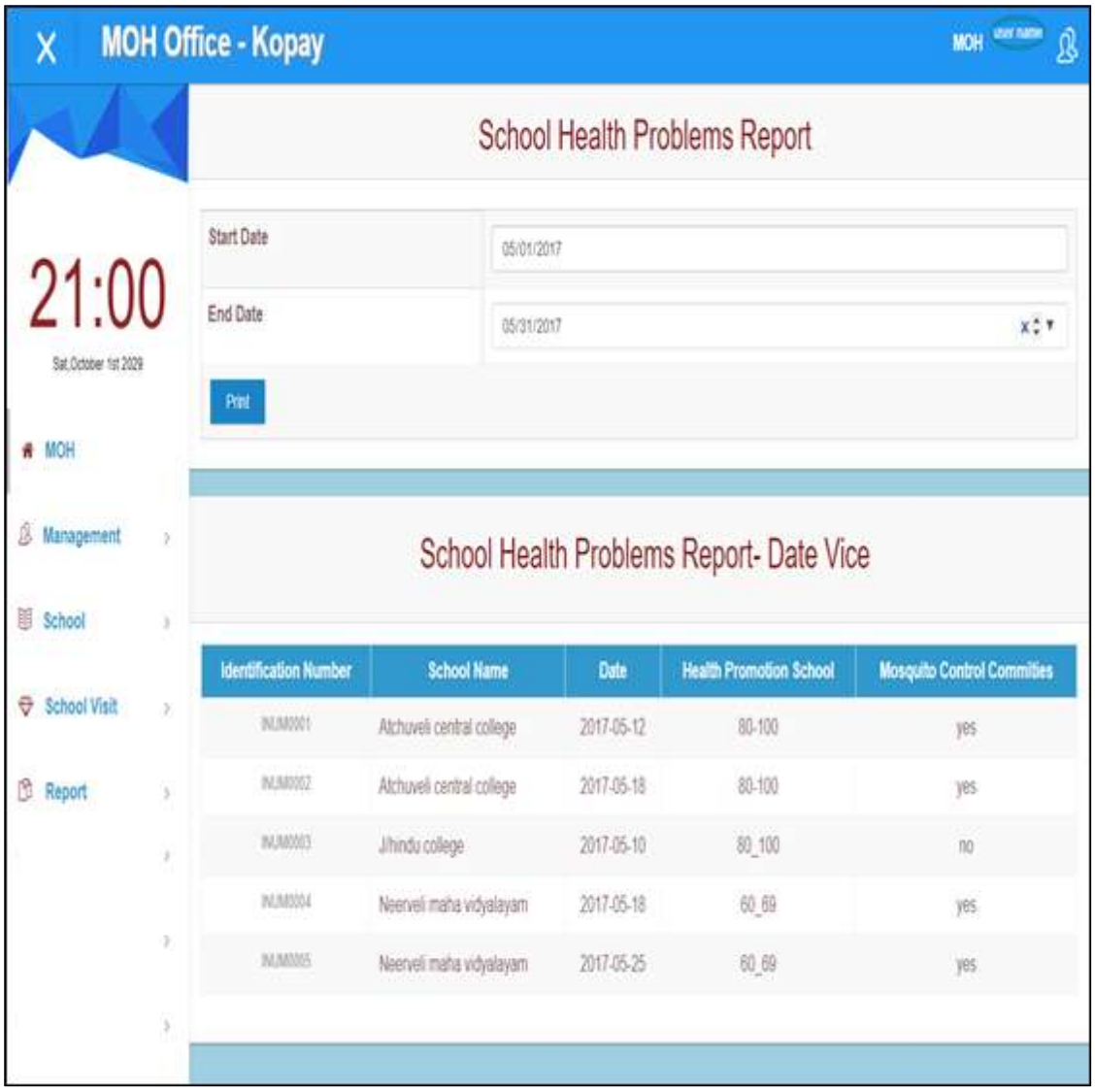


Figure 3.16 school health problems report view.

The following figure 3.17 is shows about the report print view of school health problems.

after the click button on print report this view will be displayed

Figure 3.17 report print view of school health problems.

CHAPTER 04: IMPLEMENTATION

An implementation is a realization of a technical specification or algorithm as a program, software component, or other computer system through computer programming and deployment. Many implementations may exist for a given specification or standard.

PHP and MySQL are chosen in the development and coding. Some tools are also used to develop the system effectively. Dreamweaver, Notepad ++, Bootstraps are some examples of tools used in development. All coding were written in an understandable format along with comments. This will help to produce the system with more functionality in the future.

4.1 IMPLEMENTATION ENVIRONMENT

4.1.1 HARDWARE REQUIRMENTS

- Pentium 4 computer or more.
- Basic Printer for report printing.

4.1.2 SOFTWARE REQUIRMENTS

1. For implementation purpose:
    - Operating system
    - Browsers
2. For development purpose:
    - Windows operating system
    - WampServer Version 2.4 (Apache Web Server Version 2.4.4, PHP Version 5.4.16, MySQL Database Version 5.6.12)
    - MySQL Workbench 6.0.8 CE
    - Microsoft Visio 2013
    - Adobe Dreamweaver Version 13.0
    - Notepad ++
    - Adobe Photoshop Version 14.0
    - Internet Explore/Google Chrome/Mozilla Firefox
    - Edraw Max 7.6

4.1.3 OTHER REQUAIRMENTS

- Internet connection

4.2 CODE AND MODULE STRUCTURE

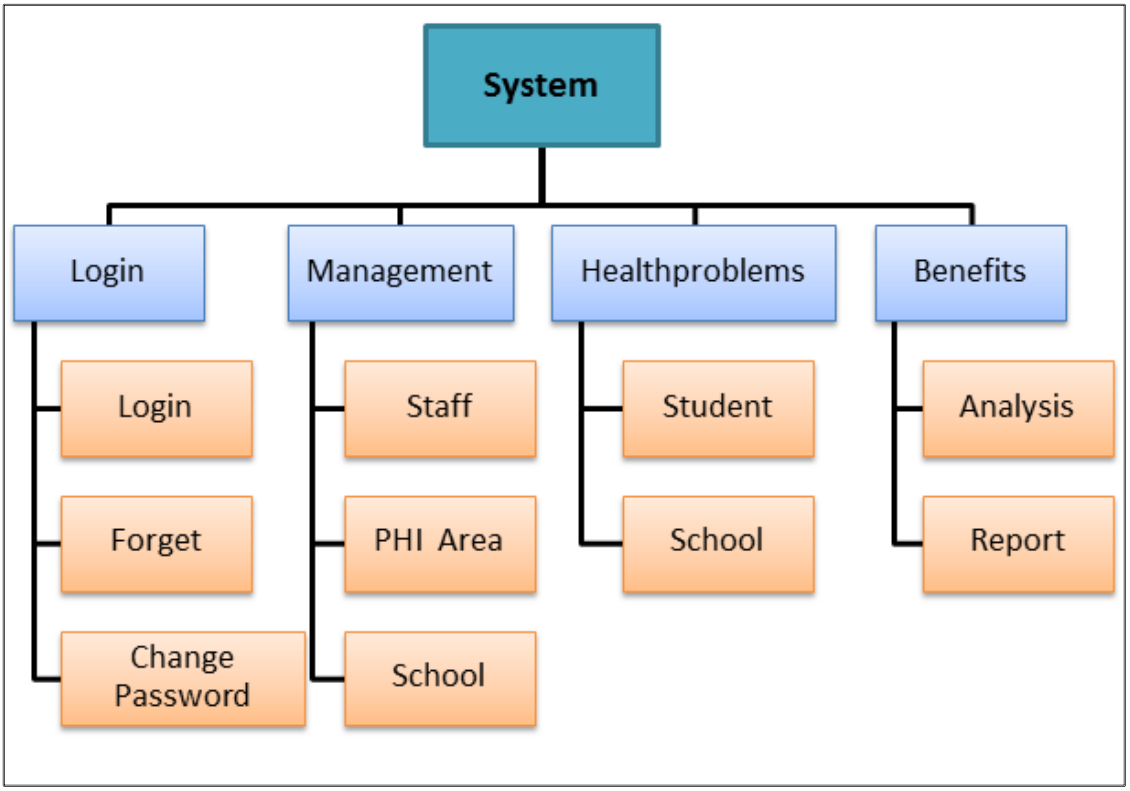


Figure 4.1 Modules of the system

This system module structure is shown in the above Figure 4.1, and it's divided as four modules. Those modules are

1. Login
2. Management
3. Health Problems
4. Benefits

Login – Login, Forget password, Change password are handling by the login modules. When user login the system he/she has to enter username and password. If that username and password are correct then only system will allow to them to access the system. If they forget their password, system will allowed recovering their password through mobile number; system will verify their mobile number and send password to

that mobile number. From change password option users can change their password as they prefer.

Management – Staff, PHI Area, Schools are handling by management module. All the staff details, All the PHI area details and all schools details are considering through this modules.

Health problems – Students health details and school health details are handling through the health problems modules.

Benefits – Analysis details and Report details are handling through the benefits module.

4.3 REUSE EXISTING CODE

The Minimum Admin Theme [11] is a free template and can download from web for free of charge. This free template was only used to design the form, table, button and interface of this system. The CSS and JavaScript of this template were reused for only of this system design.

4.4 LIST OF CODING

In this section, list down the main coding of the web based school health survey and medical inspection management system and describe about the coding. In the code listing the system has utilized PHP and JavaScript coding

1. Database connection coding

When develop the system first have to connect the system with server; used the mysql_connect code to connect the server. After successful of the connection of server have to connect the database; used the mysql_select_db code for connect the databases.

```
<?php
$con=mysql_connect("localhost","root","");
if(!$con)
{
   die ("server connection error");
}
$db=mysql_select_db("moh_office");
```

```
if(!$db)
{
   die ("database error");
}
?>
```

2. Login coding

This login has to used authenticate the users. When enter username and password correctly system displays their user interface. If enter username or password wrong the system will provide a message box with meaningful error message. If enter wrong username or password more than three time then systems automatically redirect to forget password page.

```
if(!isset($_SESSION))
{
   session_start();
}
date_default_timezone_set("Asia/Colombo");
include("connection.php");
if(isset($_POST["btnsubmit"]))
{
   $enterusername=$_POST["txtusername"];
   $enterpassword=$_POST["txtpassword"];
   $sqlusername="SELECT * FROM login WHERE user_id='$enterusername'";
   $resultusername=mysql_query($sqlusername)or die("sql error in sqlusername".mysql_error());
   if(mysql_num_rows($resultusername)>0)
   {
      $sqlpassword="SELECT * FROM login WHERE user_id='$enterusername' AND password='$enterpassword'";
      $resultpassword=mysql_query($sqlpassword)or die("sql error in sqlpassword".mysql_error());
      $rowusername= mysql_fetch_assoc($resultusername);
```

```
        if(mysql_num_rows($resultpassword)>0)
        {
        $_SESSION["username"]=$enterusername;
        $_SESSION["user_type"]=$rowusername["user_type"];
        $sqlupdate="UPDATE login SET attempt=0
            WHERE user_id ='$enterusername'";
            $resultupdate=mysql_query($sqlupdate)or die("sql error in sqlupdate".mysql_error());
                        $sqlloginhistoryid="SELECT loginhistory_id FROM login_history ORDER BY loginhistory_id DESC";
            $resultloginhistoryid= mysql_query($sqlloginhistoryid) or die("sql error in sqlloginhistoryid ".mysql_error());
            if(mysql_num_rows($resultloginhistoryid)>0)
            {
               $rowloginhistoryid=mysql_fetch_assoc($resultloginhistoryid);
               $loginhistoryid=++$rowloginhistoryid["loginhistory_id"];
            }
            else
            {
               $loginhistoryid="LHID0001";
            }
            $sqlinsertloginhistory="Insert into login_history(loginhistory_id,user_id,login_date,login_time)
            values('".$loginhistoryid."','".$enterusername."','".date("y-m-d")."','".date("H:i:s")."')";
            $resultinsertloginhistory= mysql_query($sqlinsertloginhistory) or die("sql error in sqlinsertloginhistory ".mysql_error());
                        header('location:index.php');
        }
        else if($rowusername["attempt"]<3)
        {
            echo'<script> alert("your password is wrong");</script>';
            $sqlupdate="UPDATE login SET attempt=attempt+1
            WHERE user_id ='$enterusername'";
```

```
            $resultupdate=mysql_query($sqlupdate)or die("sql error in sqlupdate".mysql_error());
        }
        else
        {
            echo '<script> alert("you attempt more tha three times please goto recover option to reset");
window.location.href="index.php?pg=forget.php&forgetusername='.$enterusername."';
</script>';
        }
}
   else
   {
      echo'<script>alert("your username is invalid");</script>';
   }
}
```

3. Forget password coding

```
<?php
if(!isset($_SESSION))
   {
      session_start();
   }
include("connection.php");
if(isset($_POST["btnsubmitforget"]))
{
   $enterusername=$_POST["txtusername"];
   $entermobilenumber=$_POST["txtmobilenumber"];
   $sqlusername="SELECT * FROM login WHERE user_id='$enterusername'";
   $resultusername=mysql_query($sqlusername)or die("sql error in sqlusername".mysql_error());
   if(mysql_num_rows($resultusername)>0)
```

```
  {
        $rowusername= mysql_fetch_assoc($resultusername);
    if($rowusername["user_type"]=="school_admin")
    {
      $sqlschool="SELECT tp_num FROM school WHERE school_id='$enterusername'";
      $resultschool=mysql_query($sqlschool)or die("sql error in sqlschool".mysql_error());
      $rowschool= mysql_fetch_assoc($resultschool);
      $tp=$rowschool["tp_num"];
    }
    else
    {
      $sqlstaff="SELECT tp_mobile FROM staff WHERE staff_id='$enterusername'";
      $resultstaff=mysql_query($sqlstaff)or die("sql error in sqlstaff".mysql_error());
      $rowstaff= mysql_fetch_assoc($resultstaff);
      $tp=$rowstaff["tp_mobile"];
    }
    if($tp==$entermobilenumber)
    {
      $user = "94769669804";
      $password = "3100";
      $text = urlencode("MOH Kopay, This your Password :".$rowusername["password"]);
      $to = "94".$tp;      $baseurl ="http://www.textit.biz/sendmsg";
      $url = "$baseurl/?id=$user&pw=$password&to=$to&text=$text";
      $ret = file($url);
$res= explode(":",$ret[0]);
      if (trim($res[0])=="OK")
      {
        echo '<script > alert("Please check your mobile!!!");
        window.location.href="login.php";</script>';
      }
```

```
        else
        {
            echo '<script > alert("Please check your internet connection!!!");</script>';
        }
    }
    else
    {
        echo '<script > alert("your mobile number is wrong");</script>';
    }
  }
  else
  {
    echo'<script>alert("your username is invalid");</script>';
  }
}
if(isset($_GET["forgetusername"]))
{
  $forgetusername=$_GET["forgetusername"];
}
else
{
  $forgetusername="";
}
?>
```

4. Insert coding

Insert coding is used to insert the new data to the database.

```
if(isset($_POST["btnsubmitnew"]))
{
```

```
$sqlinsert="INSERTINTO
staff(staff_id,nic_number,dob,gender,firstname,lastname,address,designation,qualification,tp_
mobile,tp_land,email)

VALUES('".mysql_real_escape_string($_POST["txtstaffid"])."',

'".mysql_real_escape_string($_POST["txtnic"])."',

'".mysql_real_escape_string($_POST["txtdob"])."',

'".mysql_real_escape_string($_POST["txtgender"])."',

'".mysql_real_escape_string($_POST["txtfirstname"])."',

'".mysql_real_escape_string($_POST["txtlastname"])."',

'".mysql_real_escape_string($_POST["txtaddress"])."',

'".mysql_real_escape_string($_POST["txtdesignation"])."',

'".mysql_real_escape_string($_POST["txtqualification"])."',

'".mysql_real_escape_string($_POST["txttelephonenumbermobile"])."',

'".mysql_real_escape_string($_POST["txttelephonenumberland"])."',

'".mysql_real_escape_string($_POST["txtemail"])."')";

$resultinsert=mysql_query($sqlinsert) or die("sql error in sqlinsert".mysql_error());

$sqlinsertlogin="INSERT                                    INTO
login(user_id,password,user_type,attempt,verification_code)

VALUES('".mysql_real_escape_string($_POST["txtstaffid"])."',

'".mysql_real_escape_string($_POST["txtnic"])."',

'".mysql_real_escape_string($_POST["txtdesignation"])."',

'".mysql_real_escape_string(0)."',

'".mysql_real_escape_string(0)."')";

$resultinsertlogin=mysql_query($sqlinsertlogin)    or    die("sql
error in sqlinsertlogin".mysql_error());

if($resultinsert)

{echo '<script>alert("Successfully insert");</script>';

}}
```

5. Validation coding

The NIC number validation coding is listed below:

```
function nicnumber()
```

```
{
   var nic=document.getElementById("txtnic").value;
   if(nic.length==10)
   {
      var nicformat1=/^[0-9]{9}[a-zA-Z0-9]{1}$/;
      if(nic.match(nicformat1))
      {
         var nicformat2=/^[0-9]{9}[vVxX]{1}$/;
         if(nic.match(nicformat2))
         {
            calculatedob(nic);
         }
         else
         {
            alert("last character must be V/v/X/x");
            document.getElementById("txtnic").value="";
            document.getElementById("txtnic").focus();
            if(page=="customer" || page=="register")
            {
               document.getElementById("txtdateofbirth").value="";
            }
            else
            {
               document.getElementById("txtdate").value="";
            }
         }
      }
      else
      {
         alert("First 9 characters must be numbers");
         document.getElementById("txtnic").value="";
```

```
        document.getElementById("txtnic").focus();
        if(page=="customer" || page=="register")
          {
            document.getElementById("txtdateofbirth").value="";
          }
          else
          {
            document.getElementById("txtdate").value="";
          }
    }
  }
  else if(nic.length==12)
  {
        var nicformat3=/^[0-9]{12}$/;
    if(nic.match(nicformat3))
        {
          calculatedob(nic);
        }
        else
        {
          alert("All 12 characters must be number");
          document.getElementById("txtnic").value="";
          document.getElementById("txtnic").focus();
          if(page=="customer" || page=="register")
          {
            document.getElementById("txtdateofbirth").value="";
          }
          else
          {
            document.getElementById("txtdate").value="";
          }
```

```
        }
    }
    else if(nic.length==0)
    {
    }
    else
    {
        alert("NIC No must be 10 or 12 Characters");
        document.getElementById("txtnic").value="";
        document.getElementById("txtnic").focus();
        if(page=="customer" || page=="register")
            {
                document.getElementById("txtdateofbirth").value="";
            }
            else
            {
                document.getElementById("txtdate").value="";
            }
    }
}
```

6. Report generate function

```
//school health problems report start
function generate_school_health_problems()
{
    var startdate=document.getElementById("txtstartdate").value;
    var enddate=document.getElementById("txtenddate").value;
      var xmlhttp = new XMLHttpRequest();
    xmlhttp.onreadystatechange = function()
    {
      if (xmlhttp.readyState == 4 && xmlhttp.status == 200)
```

```
    {
        document.getElementById("school_health_problems_load").innerHTML = xmlhttp.responseText;
        document.getElementById("print_school_health_problems").disabled=false;
    }
  };
  xmlhttp.open("GET", "reportajax.php?option=school_health_problems&startdate="+startdate+"&enddate="+enddate, true);
  xmlhttp.send();
}
function print_school_health_problems()
{
  var startdate=document.getElementById("txtstartdate").value;
  var enddate=document.getElementById("txtenddate").value;
  var url="print.php?pr=report.php&option=school_health_problems&startdate="+startdate+"&enddate="+enddate;
  window.open(url, "_blank");
}
//school health problems report end
```

7. Report generate SQL coding

```
$startdate=$_GET["startdate"];
$enddate=$_GET["enddate"];
$waterpipie=$_GET["waterpipie"];
$protectedwell=$_GET["protectedwell"]; $unprotectedwell=$_GET["unprotectedwell"];
if($waterpipie=="All")
  {
    $sqlwaterpipie="";
  }
 else
  {
```

```
        $sqlwaterpipie=" AND water_pipe='$waterpipie'";
    }
          if($protectedwell=="All")
    {
        $sqlprotectedwell="";
    }
   else
    {
        $sqlprotectedwell=" AND protected_well='$protectedwell'";
    }
           if($unprotectedwell=="All")
    {
        $sqlunprotectedwell="";
    }
   else
    {
        $sqlunprotectedwell=" AND   unprotected_well='$unprotectedwell'";
    }
$sqlschool_water_details="SELECT * FROM school_water_details WHERE date>='$startdate' AND date<='$enddate'".$sqlwaterpipie.$sqlprotectedwell.$sqlunprotectedwell;
          $resultschool_water_details=mysql_query($sqlschool_water_details) or die("sql error in sqlschool_water_details".mysql_error());
```

4.5 SECURITY

In this system every user has a unique username and password. If user wants to use the system he/she has to enter the correct username and password. If it corrects username and password then system will allow to them access the system; otherwise they can't access.

System will allow the user only three times to enter the username and password, if he/she enter the username and password wrongly the system will redirect forget page. User has to enter his/her phone number then verify the mobile and if correct only system will be sent password to that phone number. This system has user privilege and

system will allowed authorized user to access the page and have user privilege based on their management levels.

CHAPTER: 05 EVALUATION

5.1 TEST PLAN

Software testing is the process of evaluation a software item to detect differences between given input and expected output. Also to assess the feature of A software item. Testing assesses the quality of the product. Software testing is a process that should be done during the development process. In other words software testing is a verification and validation process.

5.1.1 UNIT TESTING

Unit testing is the testing of an individual unit or group of related units. It falls under the class of white box testing. It is often done by the programmer to test that the unit he/she has implemented is producing expected output against given input.

5.1.2 INTEGRATION TESTING

Integration testing is testing in which a group of components are combined to produce output. Also, the interaction between software and hardware is tested in integration testing if software and hardware components have any relation. It may fall under both white box testing and black box testing.

5.1.3 SYSTEM TESTING

System testing is the testing to ensure that by putting the software in different environments (e.g., Operating Systems) it still works. System testing is done with full system implementation and environment. It falls under the class of black box testing.

5.1.4 ACCEPTENCE TESTING

Acceptance testing is often done by the customer to ensure that the delivered product meets the requirements and works as the customer expected. It falls under the class of black box testing.

5.2 TEST RESULTS

This system has four major modules. They are

1. Login (Table 5.1)

2. Management (Table 5.2)

3. Health problems (Table 5.3)

4. Benefits (Table 5.4)

5.2.1 LOGIN MODULE

No	Test	Expected Results	Actual Results	Test Case
01.	Un authorized access	System will not allow users to access the system.	System also didn't allow unauthorized access.	Test Case Pass.
02.	Enter the wrong password	System will show the error message	Error message had been shown by the system(your password is wrong)	Test Case Pass
03.	Enter the wrong username	System will show the error message	Error message had been shown by the system(your user name is invalid)	Test Case Pass
04	Enter the correct username and password	System will allow the user.	System also allowed the user.	Test Case Pass
05	Enter the current password as wrong	System will show the error message	Error message had been shown by the system(your current password is wrong)	Test Case Pass
06	Enter the confirm password as wrong	System will show the error message	Error message had been shown by the system (your new password and confirm new password are mismatched!!!)	Test Case Pass

Table 5.1 Login Module

5.2.2 MANAGEMENT MODULE

No	Test	Expected Results	Actual Results	Test Case
01.	Add the new staff	System will save the staff details to the database	System also saved the details to the database.	Test case Pass
02.	Enter the NIC Number of the staff	System will automatically calculate the date of birth and gender after enter NIC number	System also automatically calculated DOB and gender after enter the NIC number field.	Test case Pass
03.	Enter the NIC number as wrong	System will show the error message	Error message also showed by the system(NIC No must be 10 or 12 Characters)	Test case Pass
04.	Enter the Numbers in the first name and last name fields	System will not allow entering the numbers.	System also did nt allow to enter the numbers in first name and last name fields.	Test case Pass
05.	Enter the texts in the telephone number mobile and telephone number land	System will not allow entering the text in those field ds.	System also did nt allow to enter the texts in the telephone number mobile and telephone number land.	Test case Pass
06.	Click the view button in the all the form	System will show the full view of data when click the view button.	System also showed the full view of data when click the view button.	Test Case Pass
07.	Click the edit button	System will allow to delete the some	System also allowed to delete the data.	Test Case Pass

		data		
08.	Click on the staffed field to edit.	System will not allow to change data	System also didn't allow changing data.	Test Case Pass
09.	Click on the save changes button	System will save the all changes to data base which are done by the user.	System saved the all changes to data base which are done by the user.	Test Case Pass
10.	Click on the delete button in form view	System will ask the confirmation of deletion	System asked confirmation of deletion.	Test Case Pass
11.	Click on the ok button in confirmation of deletion.	System will send the message like successfully deleted.	System sent the message successfully deleted.	Test Case Pass
12.	Click on the PHI Area Id field to edit	System will not allow to edit.	System also did not allow editing PHI Area field.	Test Case Pass
13.	Enter the Numbers to the PHI Area field.	System will not allow entering the numbers in this field.	System also did not allow entering numbers to PHI Area field.	Test Case Pass
14.	Click on the MOH Area Id	System will save the one MOH area name from the drop down list to the database	System also saved MOH area name to the database.	Test Case Pass
15.	Changed profile details and click on save changes button	System will update the correct data to the database.	System updated data correctly	Test case pass

Table 5.2 Management Module

5.2.3 HEALTH PROBLEMS MODULE

No	Test	Expected Results	Actual Results	Test Case
01.	Click on the grade id of health problems table.	System will show the name of students who are in that grade now.	System showed name of the students who are in selected grade.	Test Case Pass
02.	After complete the fields Height and Weight in health problems table.	System will calculate the BMI of the students automatically.	System also calculated BMI of the students automatically.	Test Case Pass
03.	Click on the schoolid in school toilet facilities table	System will show the form for enter the toilet details of the school.	System also showed the form to enter the details of toilets.	Test Case Pass
04.	Click on the school id in sanitary facility table.	System will show the form for fill number of required toilets and required urinals and number of students and teachers.	System also allowed filling the number of required toilets and required urinals and number of students and teachers.	Test Case Pass

Table 5.3 Health problems Module

5.2.4 BENEFITS MODULE

No	Test	Expected Results	Actual Results	Test Case
01.	Analyze the school visit details by date vice.	When user enters the date data will display all the school details which are visited in that particular date.	All the school details are displayed by date vice.	Test Case Pass
02.	Generate the reports about students health	System will generate the report of students who have the health defects.	System also generated the reports of the students who have the health defects.	Test Case Pass
03.	Generate the reports about school health	System will generate the report of school which has defect in school health.	System also generate the report of school which has defect in school health.	Test Case Pass

Table 5.4 Benefits Module

5.3 USER EVALUATION

The user evaluation chart is shown in the following Figure 5.1 and user acceptance testing shown in the following Figure 5.2:

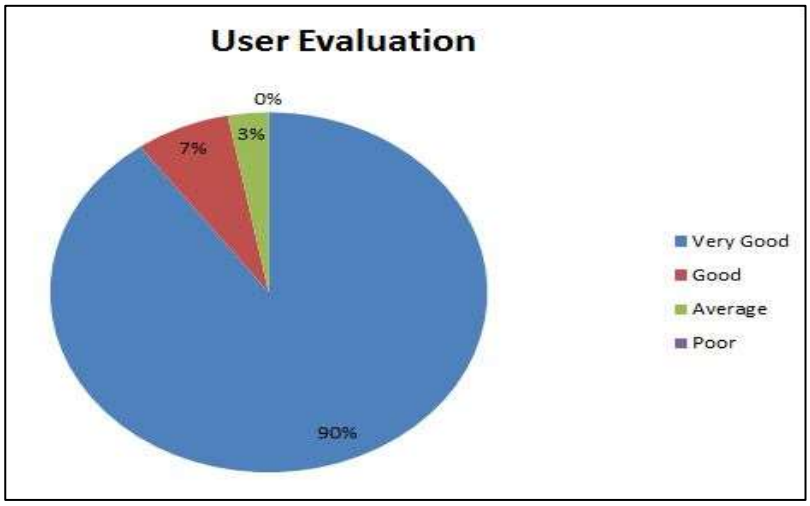
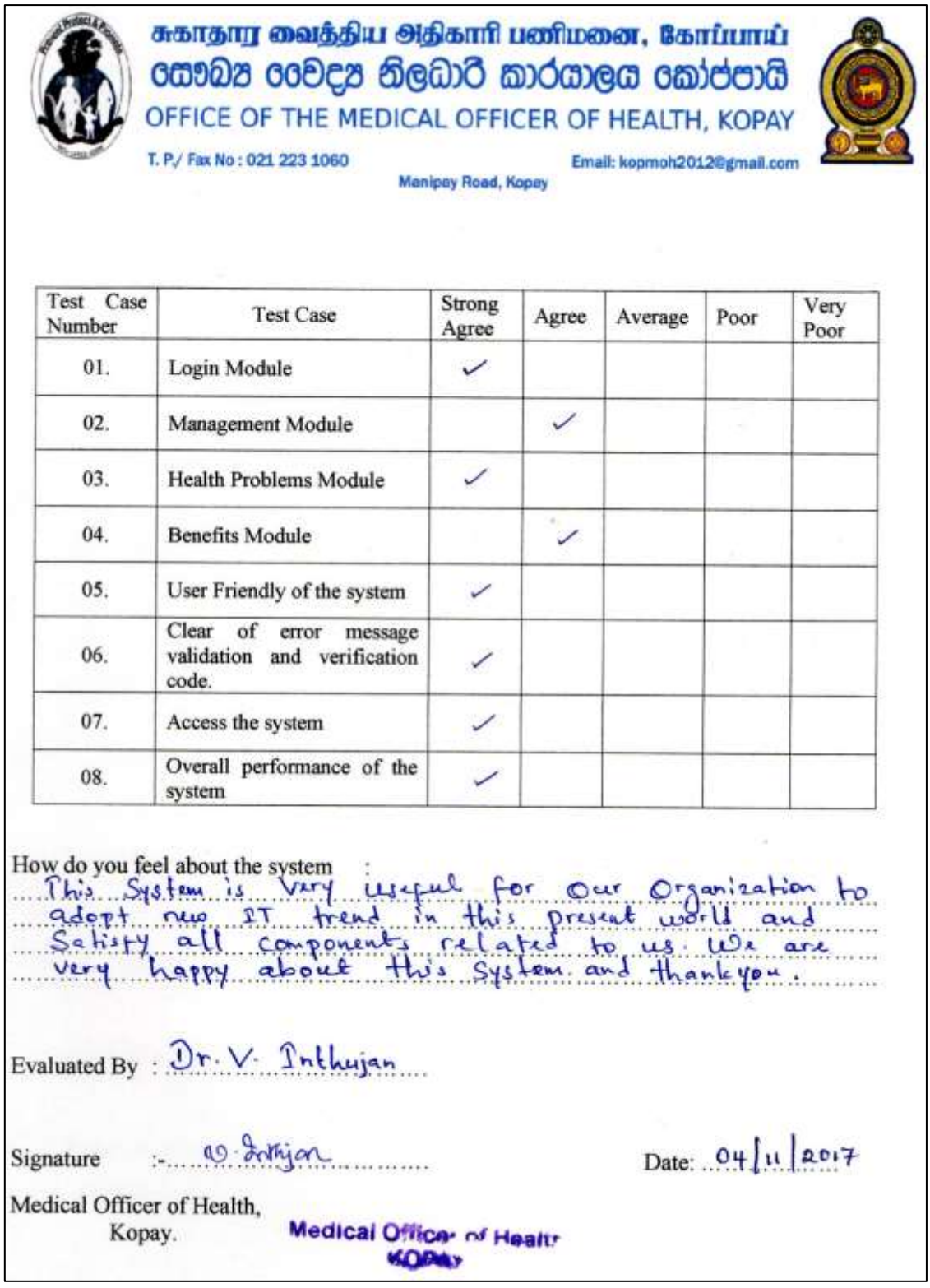


Figure 5.1 User Evaluation



சுகாதார வைத்திய அதிகாரி பணிமனை, கோப்பாய்
සෞඛ්‍ය වෛද්‍ය නිලධාරී කාර්යාලය කෝප්පායි
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Manipay Road, Kopay

Test Case Number	Test Case	Strong Agree	Agree	Average	Poor	Very Poor
01.	Login Module	✓				
02.	Management Module		✓			
03.	Health Problems Module	✓				
04.	Benefits Module		✓			
05.	User Friendly of the system	✓				
06.	Clear of error message validation and verification code.	✓				
07.	Access the system	✓				
08.	Overall performance of the system	✓				

How do you feel about the system :
This System is Very useful for Our Organization to adopt new IT trend in this present world and Satisfy all components related to us. We are very happy about this System. and thankyou.

Evaluated By : Dr. V. Inthujan

Signature :- V. Inthujan Date: 04/11/2017

Medical Officer of Health,
Kopay.

Medical Officer of Health
KOPAY

Figure 5.2 User Acceptance

CHAPTER: 06 CONCLUSION

6.1 CONCLUSION

The knowledge gain throughout the project is really valuable. It is give me an opportunity to of being involved in the whole SDLC.

This project gave me a chance to practice and implement the theories which I have learnt throughout the BIT degree program. It also helps me to find out and get a clear knowledge in growing technologies like jQuery, PHP, and MySQL. And also get clear knowledge in frameworks and designing tools like Twitter Bootstrap. I could feel that practicing IT on real environment is better than learning theories.

Furthermore developing this project helped me to improve my technical, intellectual and communication skills collaborating with many people in different categories of fields.

6.2 CRITICAL ASSIGNMENT OF PROJECT

Through this proposed system PHI can able to manage all students' health details. This system should keep students records like height, weight, BMI, nutritional problems, health defect. Maintain record of students who have health problems this system should have all the students' details who have health defects and actions which are taken for identified defects. Find out monthly statement of school health activities through this system should get the details of school health activities during month, health promotion and educational programs, summary of no of student s details, summary of defect students details, details about immunization, provided treatments and follow-up, information on health promoting school. Manage the records about school health survey. This system should have details about no of students, no of teachers, physical environment of school, health promoting unit, dental clinic, toilet facilities, water supply, waste management, school premises, school canteen, preparation of mid-day meals, school kitchen, hostel facilities and health promotions. Retrieve school health survey detail summary. This system should provide details of school health survey in all school as a summary. Generate relevant reports This system should provide the daily and monthly reports on every activity which are doing in schools. SPHI can able to generate area wise reports and can find yearly reports which

convey the details about school activities to MOH. observe the works of PHIs.School community can able to health condition of their school and students health conditions.

6.3 FUTURE WORK

According to the customer acceptance testing conceded in the evaluation phase the resulting customer feedback was satisfied. Though the functional requirements and nonfunctional requirements requested by the customer were fulfilled. It is essential to do some future improvements that should be done to make this as a fully qualified system.

The followings are the future improvement identified to implement Web based school health survey and medical inspection management system.

- Improve the security by using cryptographic methods while storing the passwords.
- This software can be extended throughout the all MOHs in Jaffna district.

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APPENDIX

APPENDIX A: SYSTEM DOCUMENTATION

Introduction

We give instruction how to install our system and database, and it is help to client to installation and maintenance.

Step 1: Double click on download file WampServer 2.4 and just follow the instruction. Everything is automatic.

Figure A.1 Setup wizard

Step 2: After click next, accept the agreement and click next.

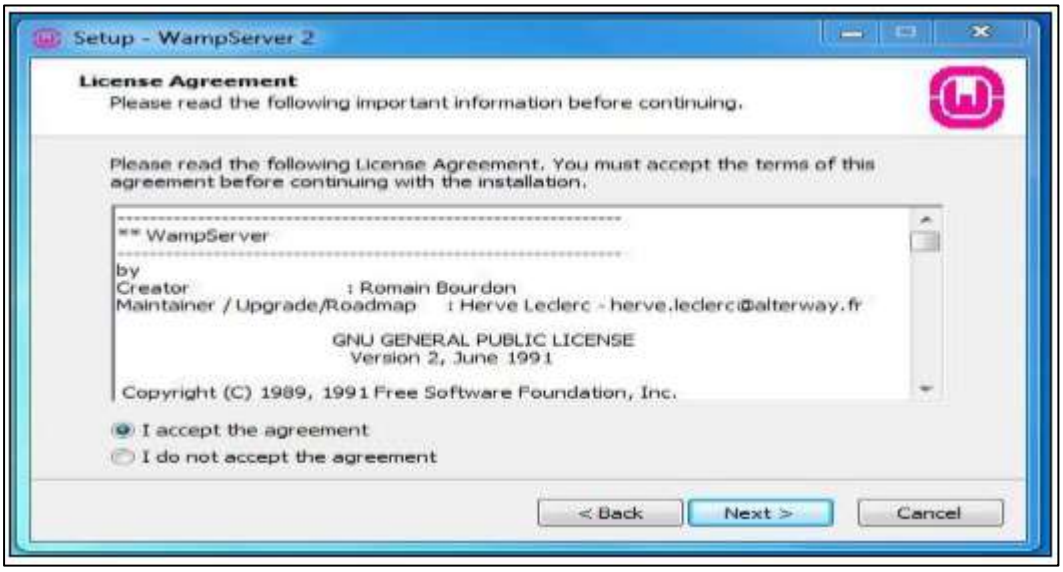


Figure A.2 Accept the agreement

Step 3: Select the installation location of WampServer.

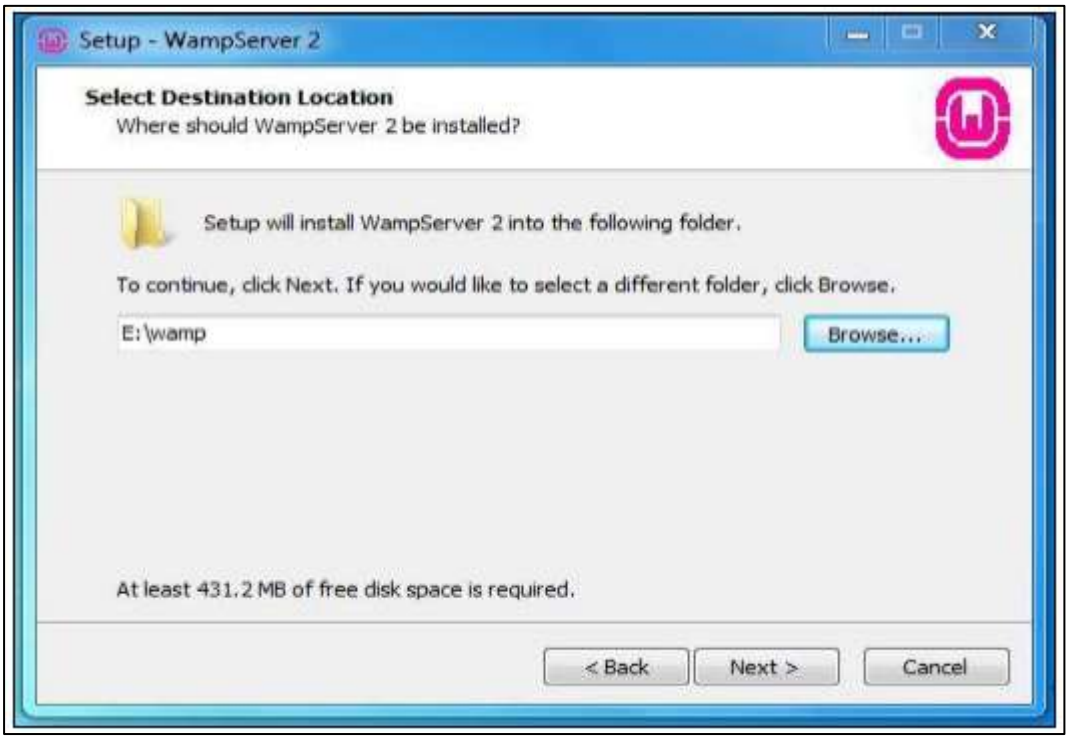


Figure A.3 Folder Location

Step 4: Click Install and It finish automatically.

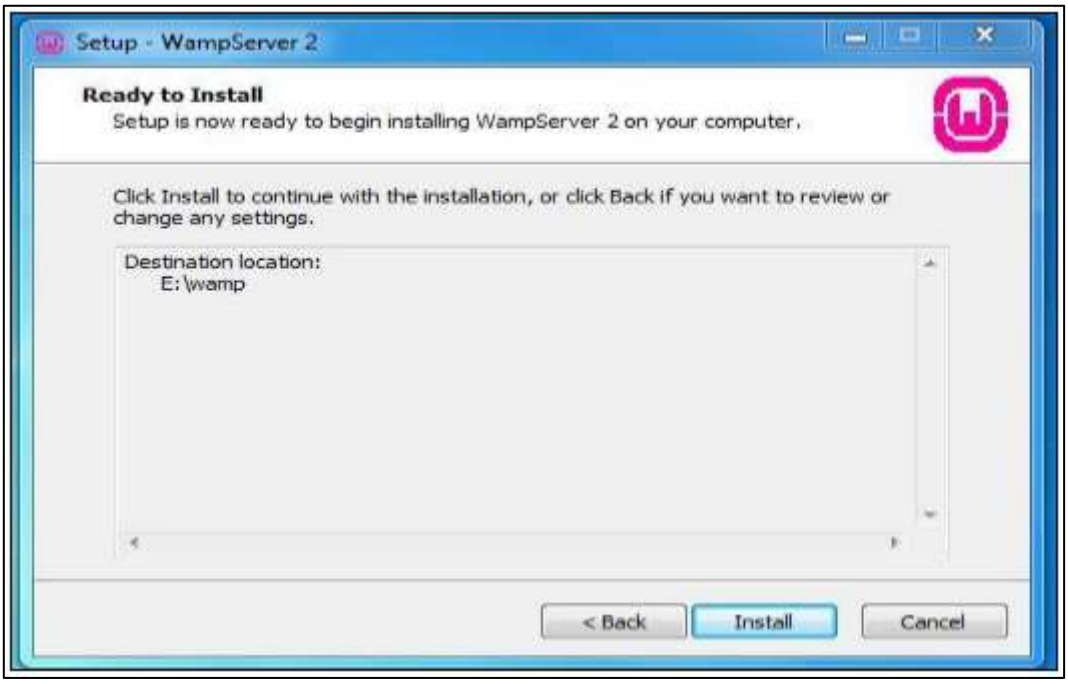


Figure A.4 Install

Step 5: After Install, start the WampSever in taskbar WampServer visible in green color. After green color, go and type in browser‟s address bar “localhost or 127.0.0.1”.

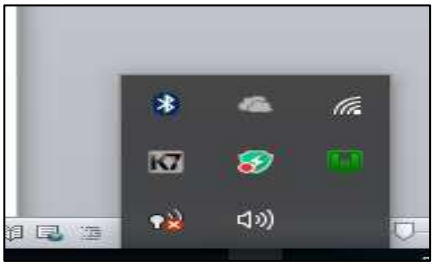


Figure A.5 In Task bar

Step 6: In browser, there is phpmyadmin under Tools heading, click that link and type username as “root” and password is blank. And click go button.

Figure A.6 In dex page of WAMP Server

Figure A.7 Welcome page

Step 7: After login click Import tab, in that tab click browse and select the database file moh_office.sql file from CD and click go button.

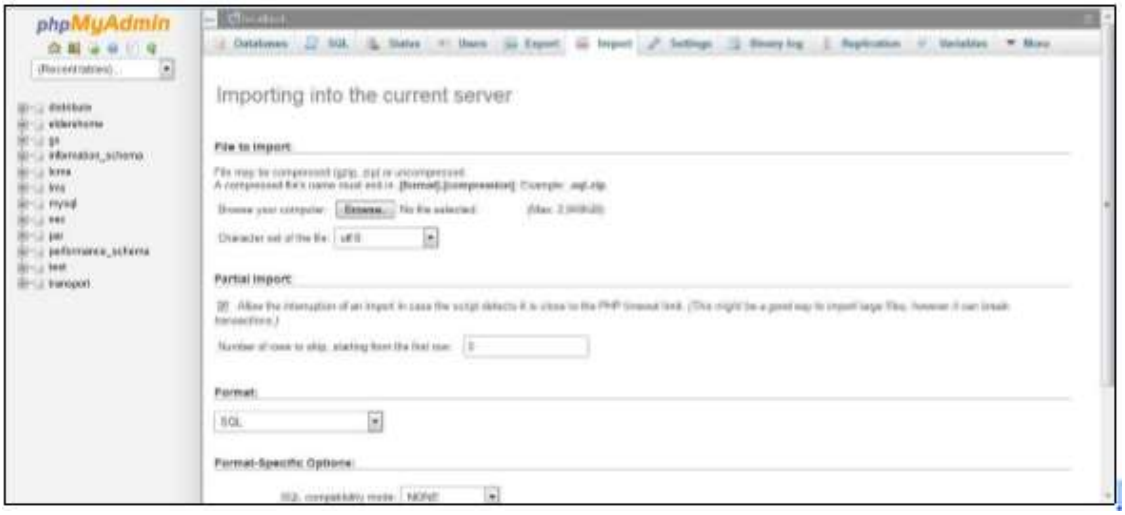


Figure A.8 Database Upload

Step 8: You now successfully upload database,

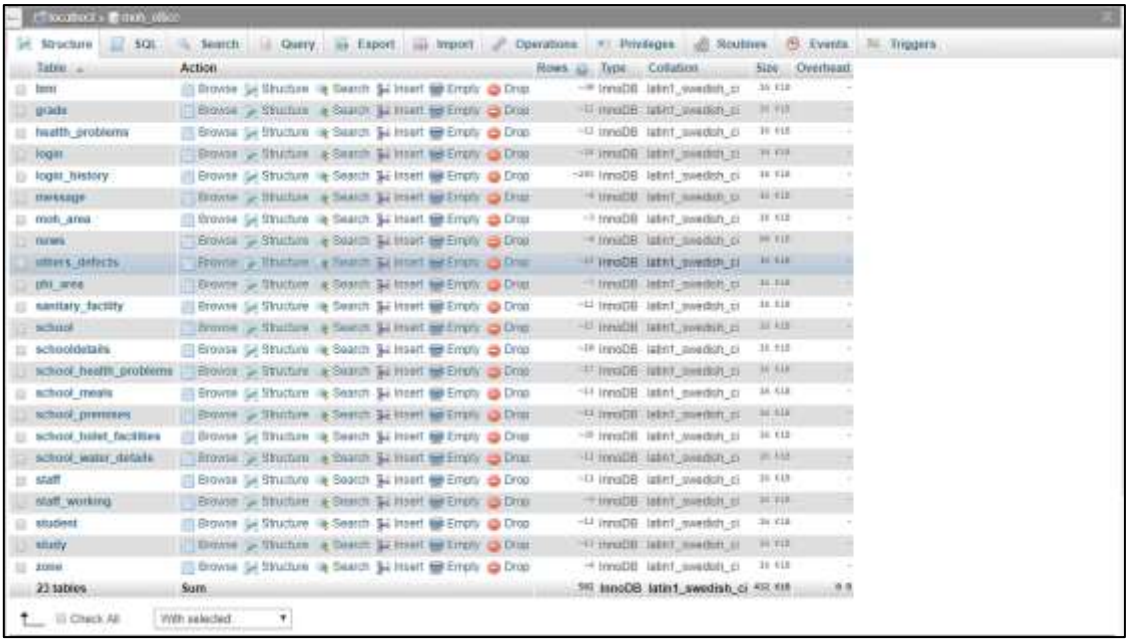


Figure A.9 Table View

Step 9: The “www” directory will be automatically created. According the Step 3, our www folder is under E:\wamp. In www folder we create a subdirectory and put our PHP files.

APPENDIX B: DESIGN DOCUMENTATION

The additional diagram such as activity diagram and sequence diagram of this system include in this section.

Activity diagram

Activity diagram for school visit is shown by following Figure B.1

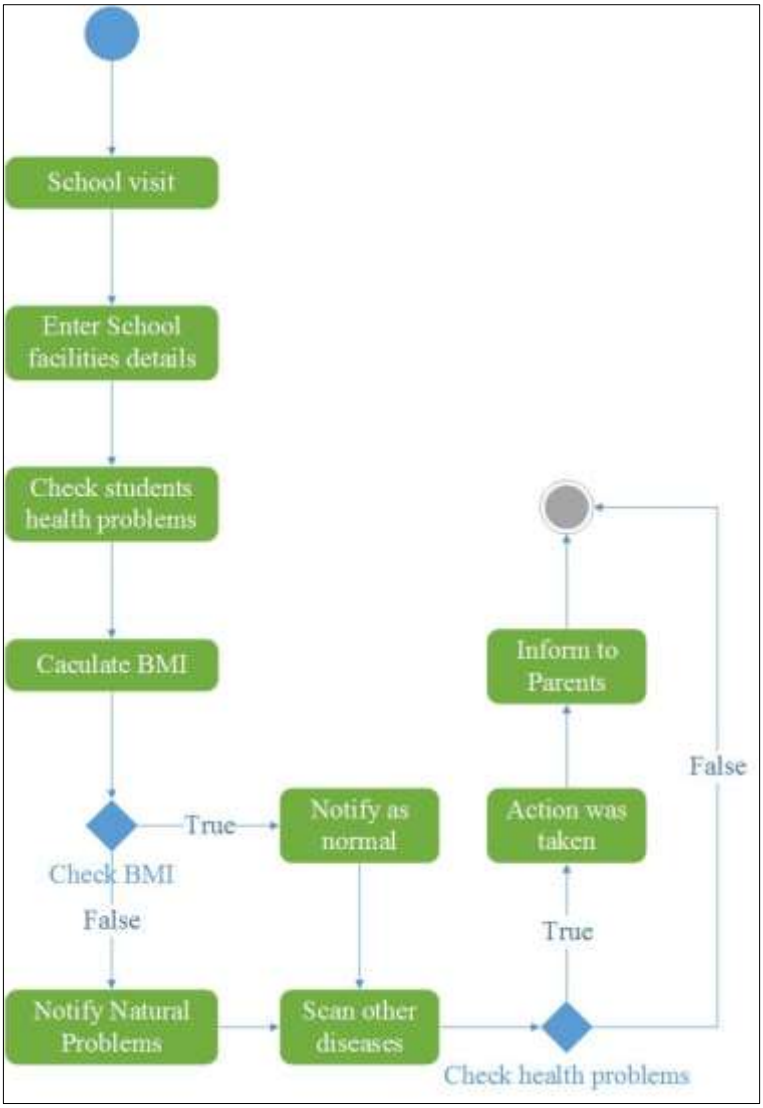


Figure B.1 Avtivity diagram for school visit

Activity diagram for report is shown by following Figure B.2

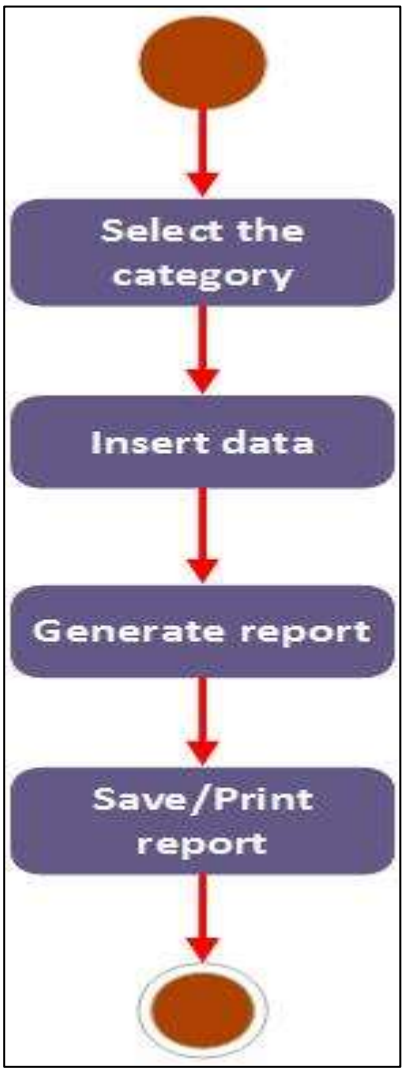


Figure B.2 Activity diagram for Report

Sequence diagram

Sequence diagram for school visit is shown by following Figure B.3

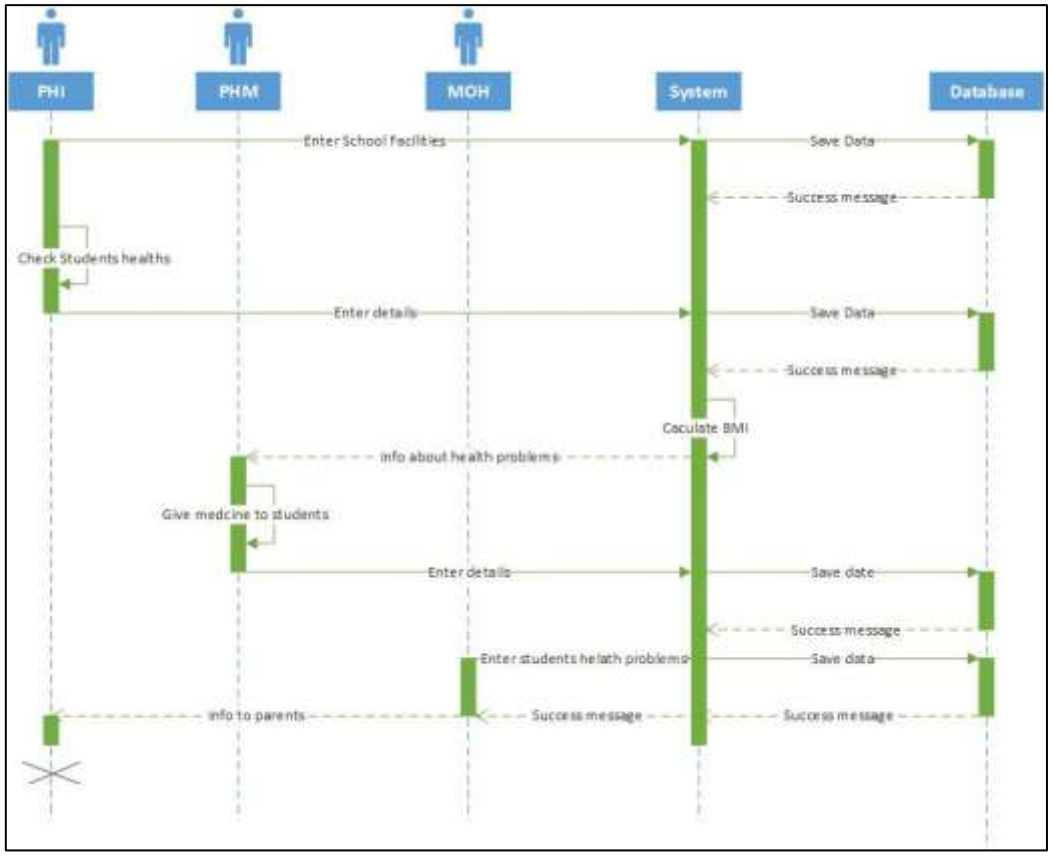


Figure B.3 Sequence diagram for school visit

APPENDIX C: USER DOCUMENTATION

User documentation refers to the documentation for a product or service provided to the end users. The user documentation is designed to assist end users to use the product or service. In that case this documentation is explained about how to use this system and how to handle by end users. The development of the user documentation is left until after the testing phase is completed. If it is created beforehand, parts of the system could change as a result of faults being discovered. User documentation is provided to the user which gives an overview of how to use the system. Six different types of users are connected with this system. They are MOH,SPHI,PHI,PHM,School Admin,Guest. Since the Administrator has the full privilege to operate all the modules and others have restricted Accessing privilege according their user type.

Index Page

Index page of system is shown by the the following Figure C.1

Figure C.1 Index Page

In index page there are some common tabs. All can view the details and get the information from those tabs.

Login.

User login is shown by the following Figure C.2 .

Figure C.2 User Login

User have to enter correct username and password. If user enter correct username password system will allow them to access.

login error is shown by the following Figure C.3

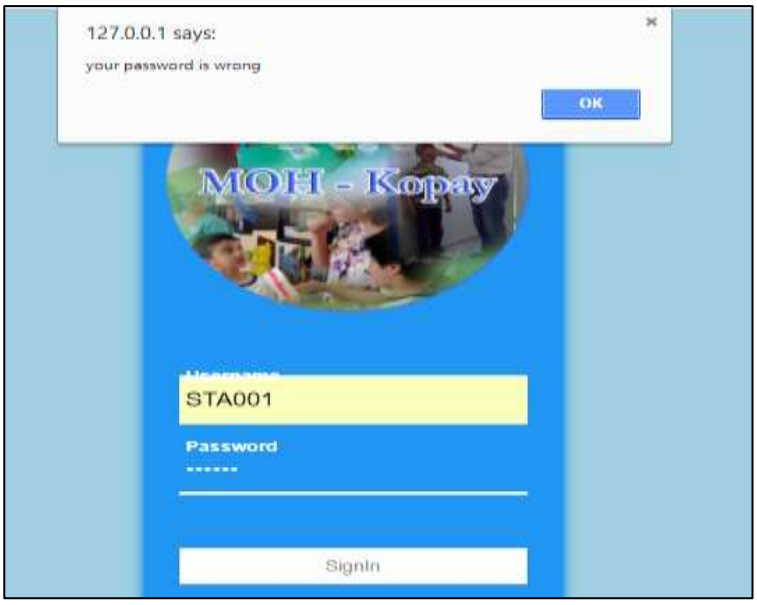


Figure C.3 Login Error

If user enter wrong user name and password system will show the error message.

login error after three attempt is shown by the following Figure C.4

If registered user attempt more than three times login this system, system provide a message and redirect to forget password form.

Figure C.4 Login error

Error in mobile number is shown by the following Figure C.5

In forget password form, Enter the user ID and registered telephone number. If any wrong input, the system will provide error message. In telephone field can only insert telephone number other than cant type no any text.

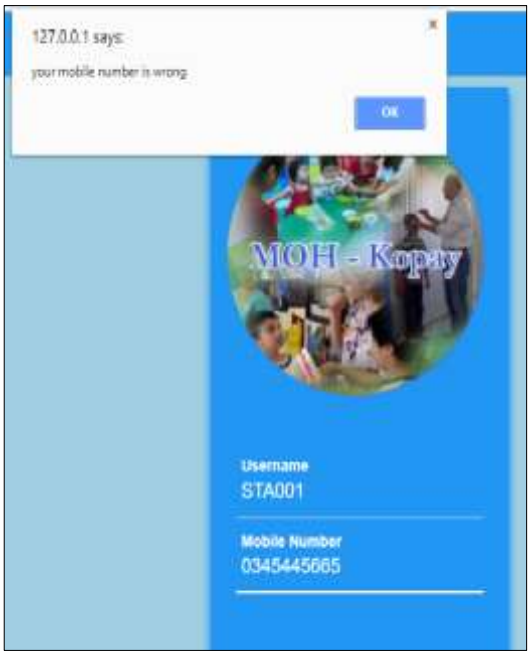


Figure C.5 Error in mobile number.

Error message in login without enter the username is shown by the following Figure C.6

Figure C.6 Showing the message in login without enter the user name

Contact Us

Through the contact us tab user can get the contact details of MOH Office ,Kopay contact us details are shown by the following Figure C.7

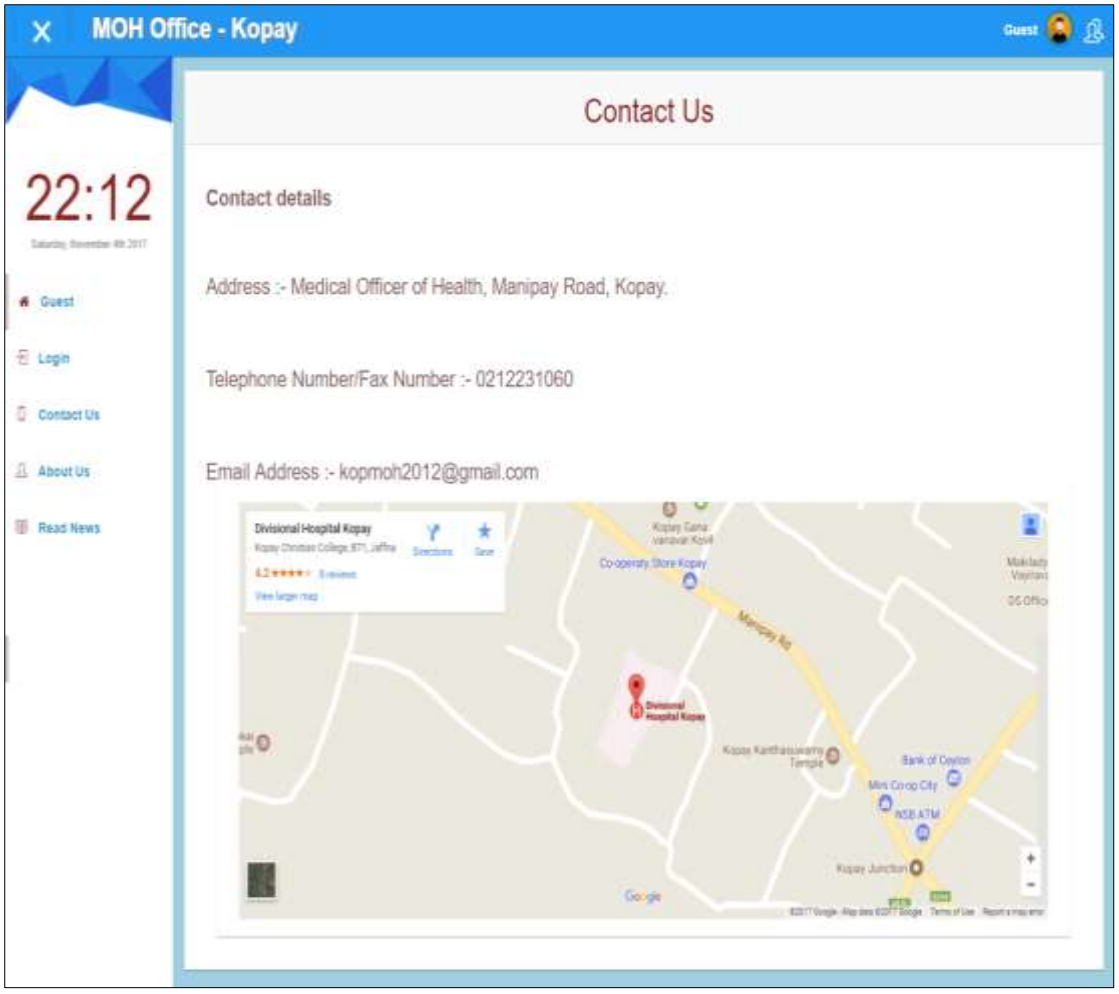


Figure C.7 Contact Us

About Us

When user click on the about us tab user can get the details about MOH Office and their objectives, vision ,mission and galleries.

about us details are shown by the following Figure C.8

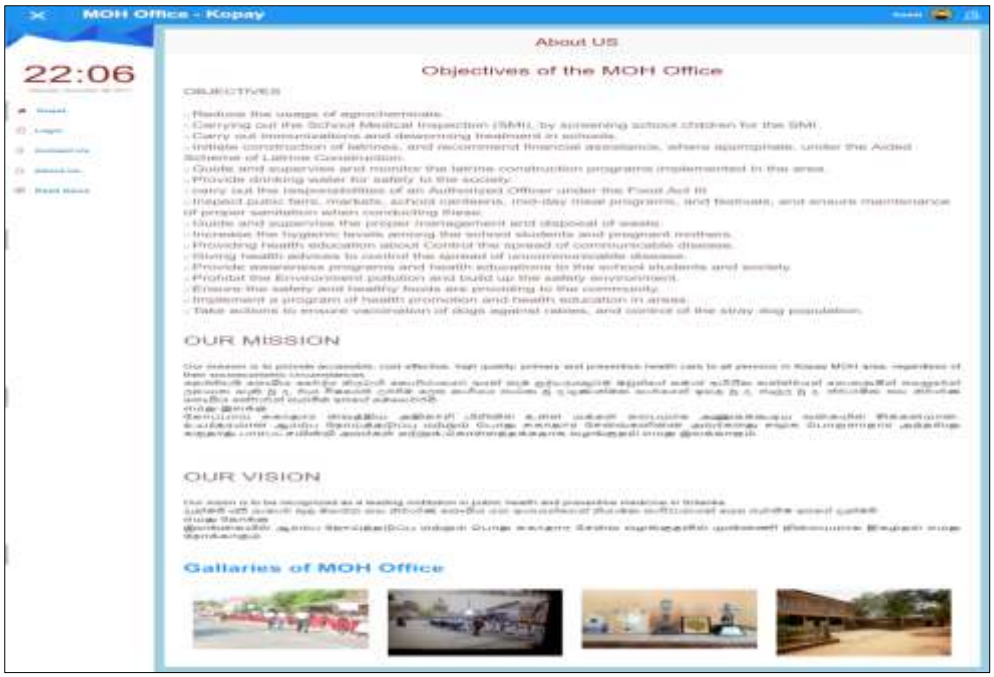


Figure C.8 About Us.

Read News

When user click on the read news tab user can know the latest news of MOH Office and any important health news.

News details are shown by the following Figure C.9

Figure C.9 Read News

Administrator Interface

Admin page of this system is shown by the following Figure C.10 .

Figure C.10 Admin page

Administrator interface shows the admin page of our system. In this page, there are some tabs Management, School,School Visit, Report, Profile and News. The Login tab is used to login the correct authorized user. When admin enter the correct username and password system will allow him/her to access the page otherwise will send the error message or redirect the forget page. Management tab explains about login history details, Staff details, PHI area details, MOH area details, Zone details and staff working details. In School tab, list downs the details about school, school details, school student, student, study and grade. School visit tab describes about sanitary facility, school meals, school premises, school health problems, school toilet facilities, school water details, and health problems of students. In Report tabs all the generated reports are describing. In Profile tab all the details of staff and change password details and message details are showing. If user want to logout from this system click on logout tab.

Management Tab

Management tab is shown by the following Figure C.11

.

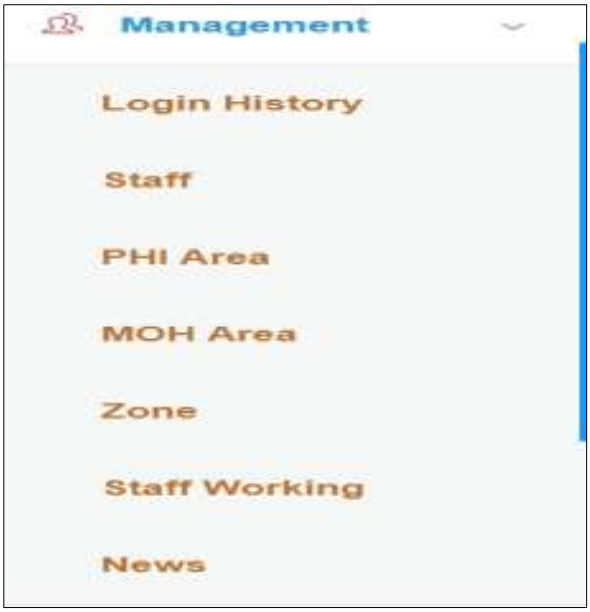


Figure C.11 Management Tab

Admin has full user privilege to access these details. through this tab admin can view the login history details, add, view, edit and delete staff details, PHI Area details, MOH area details, Zone details, staff's working details and latest news.

School Tab

School tab is shown by the following Figure C.12

Figure C.12 School Tab

Through this tab all schools details , Grade details, School health details, total students details, students personal details , students grade details are shown. These data can be added, viewed, edited, deleted by the admin.

School Visit Tab.

School Visit tab is shown by the following Figure C.13

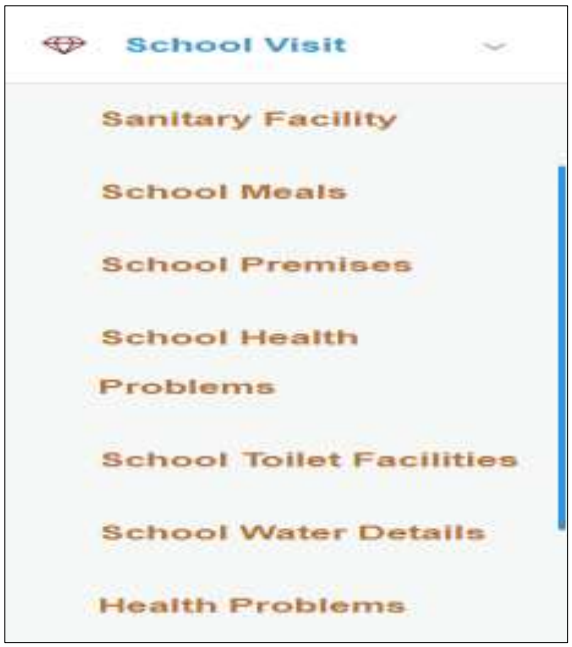


Figure C.13 School Visit Tab

Through this tab all the details about school health and students' health are shown. They can add, view, edit, delete about sanitary facility details, School meals details, School premises details, school health problems, School toilet facilities, School water details and students health problems.

Report Tab

Report tab is shown by the following Figure C.14

Figure C.14 Report

In this tab all the generated reports are shown.

Profile Tab.

Profile tab is shown by the following Figure C.15

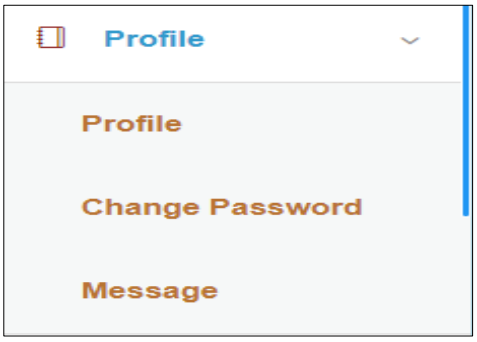


Figure C.15 Profile

Through this profile tab user can view and edit their personal details and save. In change password link they can change their password if they want. and message link they can sent messages and receive messages from the other workers.

Logout Tab

Logout tab is shown by the following Figure C.16

Figure C.16 Logout Tab

If user want to leave from system they have to click on logout tab.

Login history details are showed login history id, User id, Login date, Login Time and logout time.

Login history details of this system is shown by the following Figure C17.

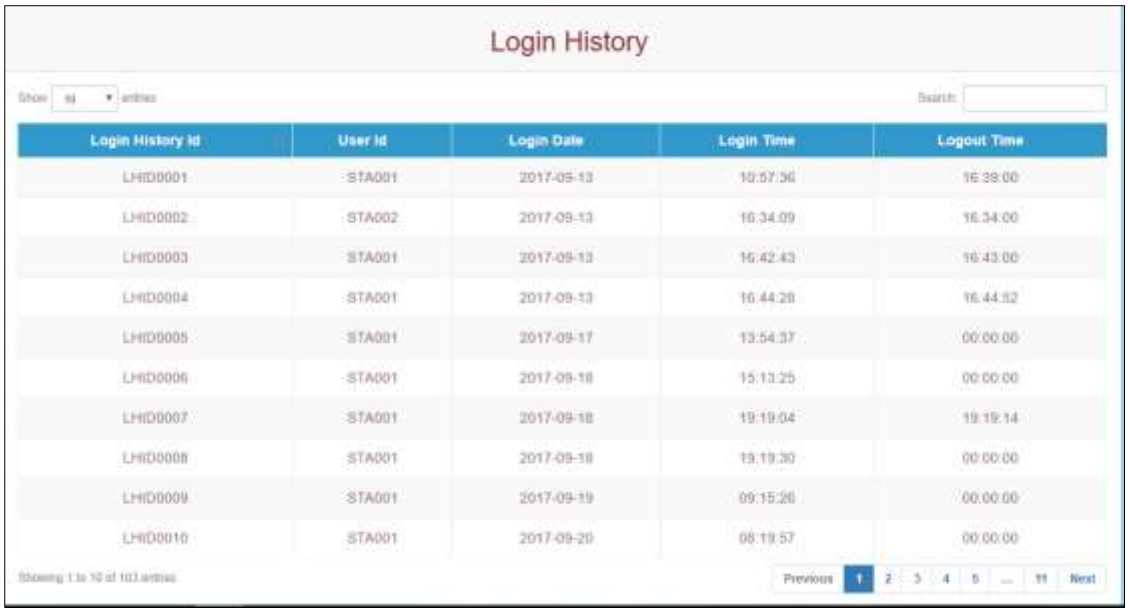


Figure C.17 Login history

SPHI Interface

SPHI Interface of this system is shown by the following Figure C.18..

Figure C.18 SPHI Interface of this system

In SPHI interface There are some tabs such as Management, School, School Visit, Report, Profile and News. The Login tab is used to login the correct authorized user. When SPHI enter the correct username and password system will allow him/her to access the page otherwise will send the error message or redirect the forget page. Management tab explains about Staff details, PHI area details, staff working details and News. In School tab, list downs the details about school, school details, school student, student, study and grade. School visit tab describes about sanitary facility, school meals, school premises, school health problems, school toilet facilities, school water details, and health problems of students. In Report tabs all the generated reports are describing. In Profile tab all the details of staff and change password details and message details are showing. If user want to logout from this system click on logout tab.

PHI Interface

PHI Interface of this system is shown by the following Figure C.19 .

Figure C.19 PHI Interface of this system

In PHI interface There are some tabs such as School, School Visit, Report and Profile. The Login tab is used to login the correct authorized user. When PHI enter the correct username and password system will allow him/her to access the page otherwise will send the error message or redirect the forget page. In School tab, list downs the details about school, school details, school student, student, study and grade. School visit tab describes about sanitary facility, school meals, school premises, school health problems, school toilet facilities, school water details, and health problems of students. In Report tabs all the generated reports are describing. In Profile tab all the details of staff and change password details and message details are showing. If user want to logout from this system click on logout tab.

PHM Interface

PHM Interface of this system is shown by the following Figure C.20 .

Figure C.20 PHM Interface of this system.

In PHM interface there are some tabs such as School, School Visit, Report and Profile. The Login tab is used to login the correct authorized user. When PHM enter the correct username and password system will allow him/her to access the page otherwise will send the error message or redirect the forget page. In School tab, list downs the details about school, school details, school student, student, study and grade. School visit tab describes about sanitary facility, school meals, school premises, school health problems, school toilet facilities, school water details, and health problems of students. In Report tabs all the generated reports are describing. In Profile tab all the details of staff and change password details and message details are showing. If user want to logout from this system click on logout tab.

School admin interface

School Admin Interface of this system is shown by the following Figure C.21 .

Figure C.21 School Admin Interface of this system.

In school admin interface there are three tabs. School, Profile and Logout. In school tab some details are shown about school student, student, study and grade. In profile tab school admin details are shown. if there any changes they can change and save. They can change their password also. If they want to leave from this system they can click on logout tab.

Action buttons.

Action buttons are shown by the following Figure C.22

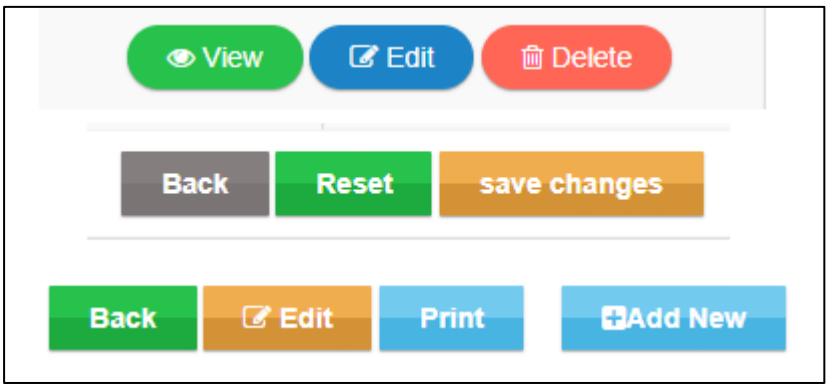


Figure C.22 Action buttons

- View button is used to view the data.
- Edit button is used to edit the data
- Delete button is used to delete the data
- Back button is used to go previous page
- Reset button is used to reset the value.
- Save changes button is used to save after the changes of data
- Add new button is used to add new data
- Print button is to take print data

Navigation Bar

Navigation Bar is shown by the following Figure C.23

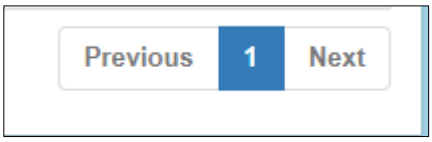


Figure C.23 Navigation Bar

Navigation bar is used to navigate the data from one to another.

Search bar

Search Bar is shown by the following Figure C.24

Figure C.24 Search bar

Search bar is used to search data with the some conditions.

APPENDIX D: MANAGEMENT REPORT

The system allows the MOH, SPHI, PHI to generate some reports with their appropriate data. They can generate these reports staff details, students details, health survey details date vice, health survey school vice and meals reports.

Report - Staff Details

Report of Staff details is shown by the following Figure D.1

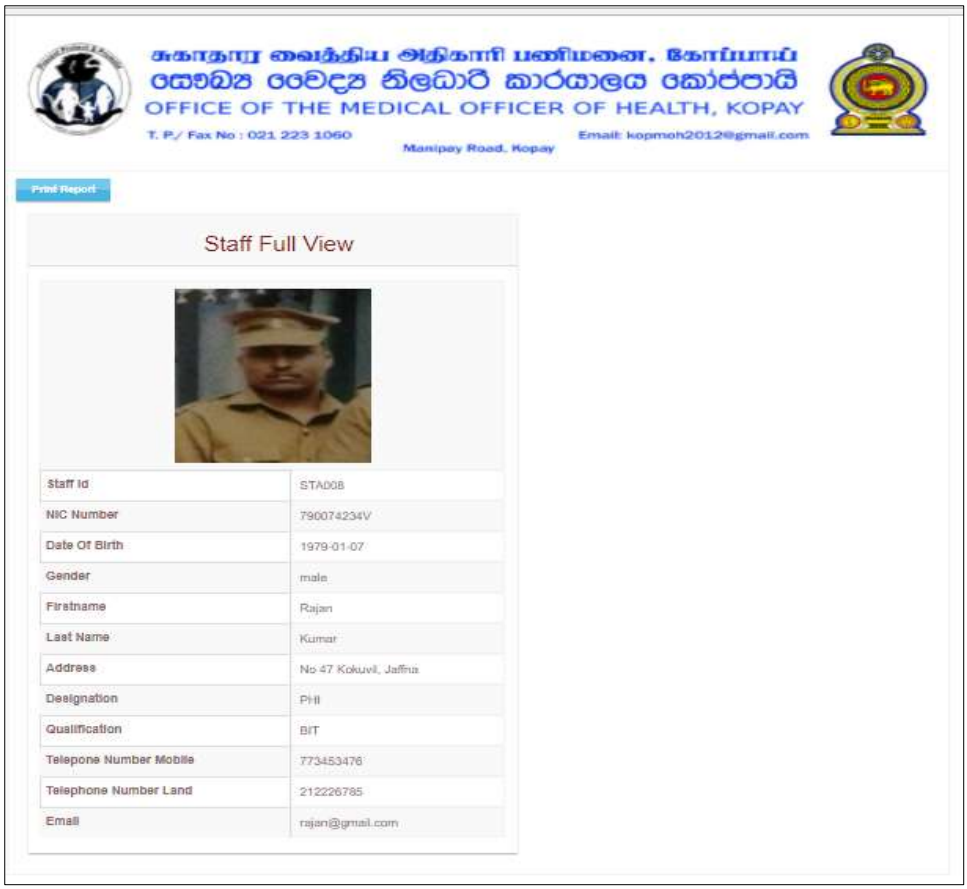


Figure D.1 Report of Staff Details

Through this report they can get the full details of every staff.

Report - Student Details

Report of Student details is shown by the following Figure D.2: Through this report they can get the full details of every student.

Figure D.2 Report of Student details

Report – Health survey details Date vice

Report of health survey details date vice is shown by the following Figure D.3: In this report there is start date and end date, when we change the date and generate the report all schools between the two dates.

Figure D.3 Report of health survey details date vice

Report – Health survey details School vice

Report of health survey details School vice is shown by the following Figure D.4

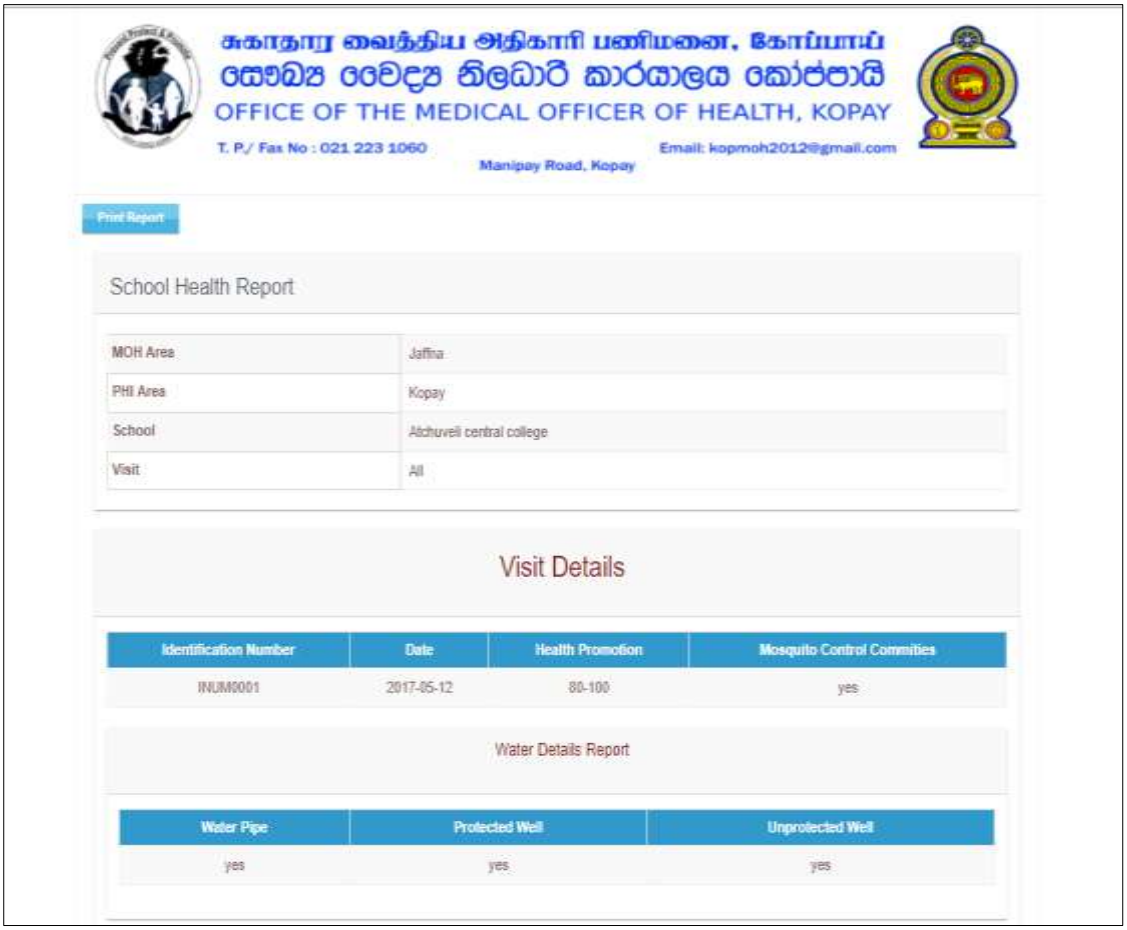


Figure D.4 Health survey details School vice

In this report they have to select some option such as MOH area, PHI Area, School and visit. after the selection of all fields report can generate all details about one school or visit of perticular date in that school.

Report – School Water Details date vice

Report of School water details date vice is shown by the following Figure D.5

Figure D.5 Report of School water details date vice

Through this report they can print about all schools's water details in between two dates.

Report – School Meals Details date vice

Report of School meals details date vice is shown by the following Figure D.6.

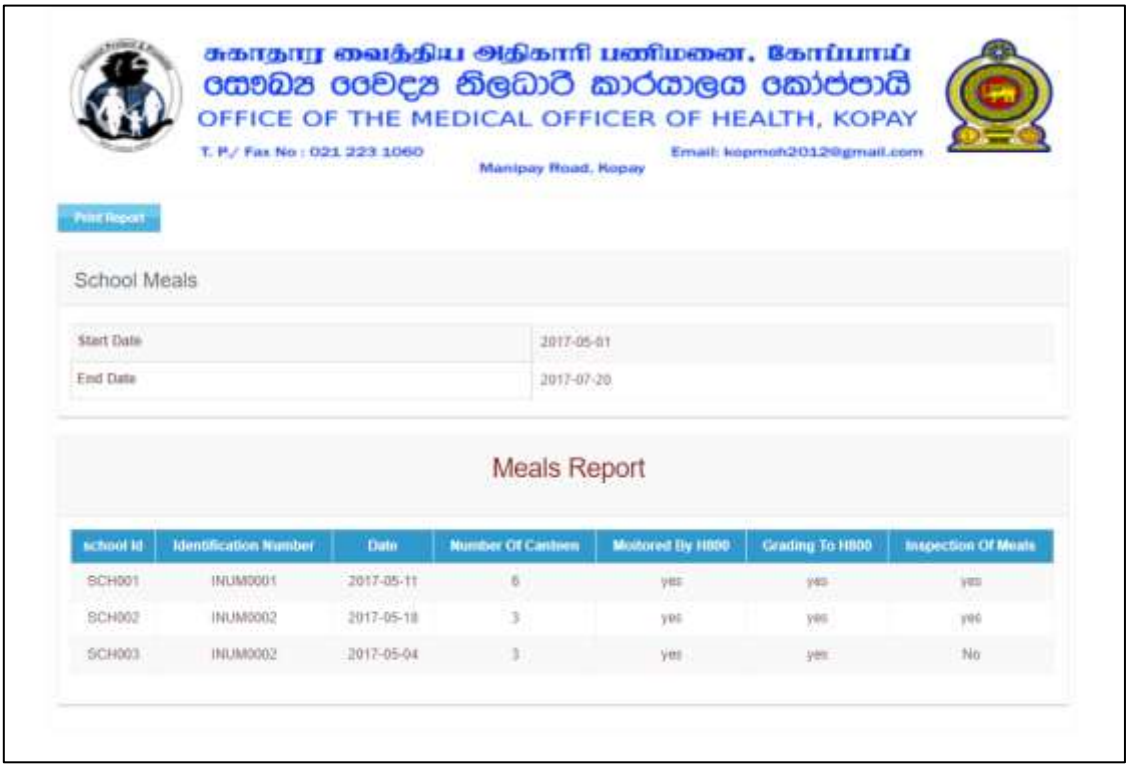


Figure D.6 Report of School meals details date vice

In this report they have to select tart date and end date then report will be generated about meals details in all schools.

The analysis report of school visit by MOH area wise is shown in the following Figure D.7:

சுகாதார வைத்திய அதிகாரி பணிமனை, கோப்பாய்
සෞඛ්‍ය වෛද්‍ය නිලධාරී කාර්යාලය කෝප්පායි
OFFICE OF THE MEDICAL OFFICER OF HEALTH, KOPAY
T. P./ Fax No : 021 223 1060
Email: kopmoh2012@gmail.com
Manipay Road, Kopay

Print Report

Students Health Problems Report

MOH Area	Kopay
PHI Area	All
School	All
Grade	All
Natural BMI	All
Natural Height	All
Year	2017

Details

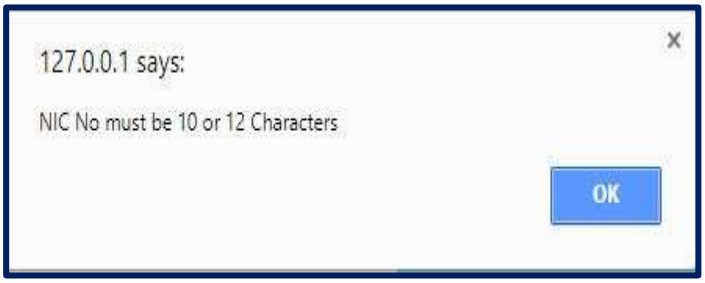
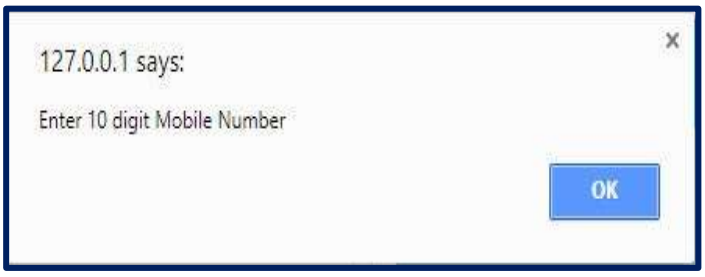
Identification Number	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12	Grade 13
HUM0001	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 0 Stunning : 0 Overheight : 0
HUM0002	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0	BMI None : 0 Wasting : 0 Overweight : 0 Obesity : 0 Height None : 1 Stunning : 0 Overheight : 0
HUM0003	BMI None : 0 Wasting : 0 Overweight :	BMI None : 7 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :	BMI None : 0 Wasting : 0 Overweight :

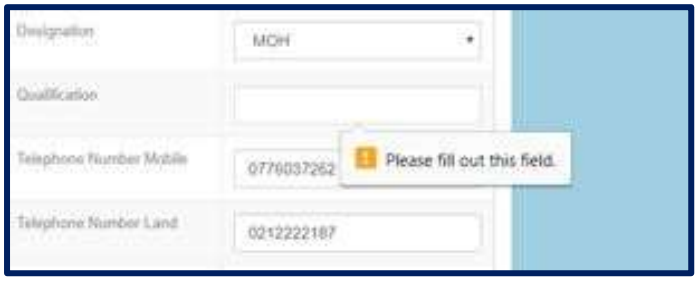
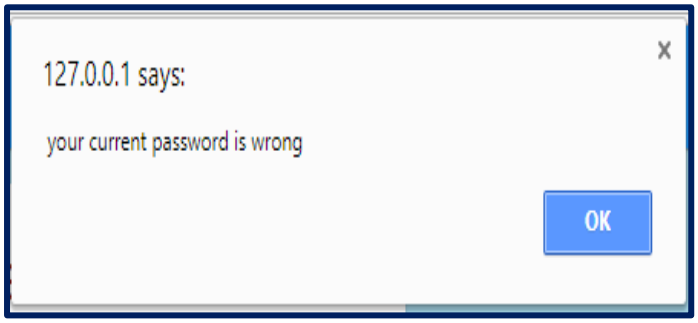
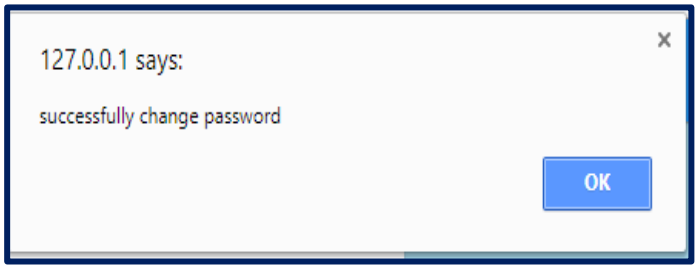
Figure D.7 MOH area wise school visit

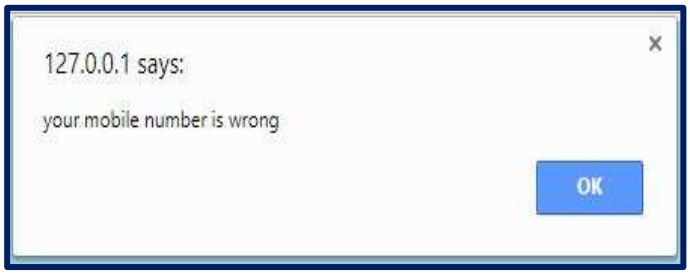
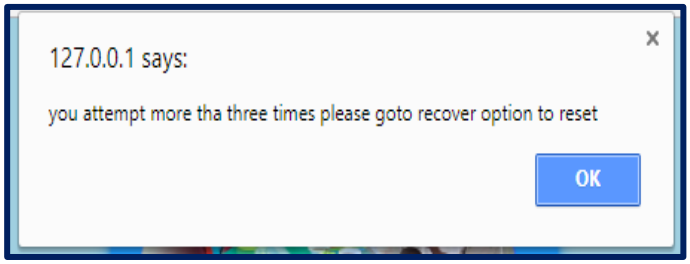
The analysis report of school visit by School wise is shown in the following Figure D.8:

Figure D.8 School wise school visit

APPENDIX E: TEST RESULTS

	Test Case	Testing Steps	Status
1.	NIC validation (Enter the wrong NIC number)		Pass
2.	NIC validation (Enter the same NIC number again)		Pass
3.	DOB Calculation		Pass
4.	Mobile number validation		Pass

5.	Email Validation		Pass
6.	Submit without entering value in mandatory field		Pass
7.	Staff number automatically shown on textbox and prevent changing		Pass
8.	Enter different password on password field		Pass
9.	Enter same password on password field		Pass

10.	Type the wrong password and check forgotten password		Pass
11.	Enter the wrong mobile number to recover password		Pass
12.	After send verification code to the mobile		Pass
13.	Type the incorrect password more than three time		Pass
14.	Changed the profile data and click on the save changes button.		Pass

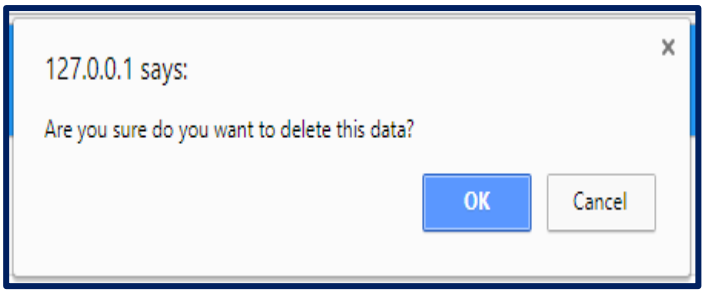
15.	Click on the delete button in form view		Pass
16.	Click on the ok button in confirmation of deletion message		Pass

Table E.1 Test Cases

APPENDIX F: CODE LISTING

Staff ID Generation

```
<?php
$sqlstaffid="SELECT staff_id FROM staff ORDER BY staff_id DESC LIMIT 1";
$resultstaffid=mysql_query($sqlstaffid) or die("sql error in staffid".mysql_error());
if(mysql_num_rows($resultstaffid)>0)
 {
$rowstaffid=mysql_fetch_assoc($resultstaffid);
        $staffid=++$rowstaffid["staff_id"];
 }
else
 {
        $staffid="STA001";
 }
?>
```

Student ID Generation

```
<tr><th><Font color = "856363" size="3">Student ID </font></th>

        <td><Font color = "856363" size="3">

        <?php

        $sqlstudentid="SELECT student_id FROM student ORDER BY student_id DESC LIMIT 1";

        $resultstudentid=mysql_query($sqlstudentid)or die ("sql error in sqlstudentid".mysql_error());

        if(mysql_num_rows($resultstudentid)>0)

          {

            $rowstudentid=mysql_fetch_assoc($resultstudentid);

            $studentid=++$rowstudentid["student_id"];



          }

        else

          {

            $studentid="STU00001";

          }
```

Mobile Number Validation

```
<tr><td>Telephone Number Mobile</td>

<td><input type="number" class="form-control" onblur="phonenumber()" onkeypress="return isNumberKey(event)" name="txttelephonenumbermobile" id="txttelephonenumbermobile" required> </td></tr>

<tr><td>Telephone Number Land</td>

<td><input type="number" class="form-control" onkeypress="return isNumberKey(event)" name="txttelephonenumberland" id="txttelephonenumberland" required> </td></tr>
```

```
function phonenumber() // Mobile No
{
var phoneno = /^\d{10}$/;
  if(document.getElementById("txttelephonenumbermobile").value=="")
  {
  }
  else
  {
    if( document.getElementById("txttelephonenumbermobile").value.match(phoneno))
    {
        //return true;
        hand();
    }
    else
    {
```

```
        alert("Enter 10 digit Mobile Number");
        document.getElementById("txttelephonenumbermobile").value="";
        document.getElementById("txttelephonenumbermobile").focus()=true;
        return false;
    }
  }
}
function hand()
{
  var str = document.getElementById("txttelephonenumbermobile").value;
  var res = str.substring(0, 2);
  if(res=="07")
  {
    return true;
  }
  else
  {
        alert("enter 10 digit of Mobile Number");
        document.getElementById("txttelephonenumbermobile").value="";
        document.getElementById("txttelephonenumbermobile").focus()=true;
        return false;
  }
  }
```

NIC Number Validation

```
<tr><td>NIC Number</td>

   <td><input type="text" class="form-control" onblur="nicnumber()" name="txtnic"
id="txtnic" required></td></tr>
```

```
function nicnumber()
{

  var nic=document.getElementById("txtnic").value;

  if(nic.length==10)

  {

    var nicformat1=/^[0-9]{9}[a-zA-Z0-9]{1}$/;

    var gender = nic.substring(2,5);

    if(nic.match(nicformat1))

    {

      var nicformat2=/^[0-9]{9}[vVxX]{1}$/;

      if(nic.match(nicformat2))

      {

        if( gender>500)

        {

          document.getElementById("txtgender").value="female";

        }

        else

        {

          document.getElementById("txtgender").value="male";

        }

        calculatedob(nic);
```

```
        }
        else
        {
            alert("last character must be V/v/X/x");
            document.getElementById("txtnic").value="";
            document.getElementById("txtnic").focus();
            document.getElementById("txtdob").value="";
        }
    }
    else
    {
        alert("First 9 characters must be numbers");
        document.getElementById("txtnic").value="";
        document.getElementById("txtnic").focus();
        document.getElementById("txtdob").value="";
    }
  }
  else if(nic.length==12)
  {
        var nicformat3=/^[0-9]{12}$/;
    var gender = nic.substring(4,7);
    if(nic.match(nicformat3))
        {
            if( gender>500)
```

```
            {
                document.getElementById("txtgender").value="female";
            }
            else
            {
                document.getElementById("txtgender").value="male";
            }
            calculatedob(nic);
        }
        else
        {
            alert("All 12 characters must be number");
            document.getElementById("txtnic").value="";
            document.getElementById("txtnic").focus();
            document.getElementById("txtdob").value="";
        }
    }
    else if(nic.length==0)
    {
            }
    else
    {
        alert("NIC No must be 10 or 12 Characters");
        document.getElementById("txtnic").value="";
```

```
        document.getElementById("txtnic").focus();
        document.getElementById("txtdob").value="";
    }
}
```

Date Of Birth Calculation

```
function calculatedob(nic)
{
    var xmlhttp = new XMLHttpRequest();
    xmlhttp.onreadystatechange = function()
    {
        if (xmlhttp.readyState == 4 && xmlhttp.status == 200)
        {
            document.getElementById("txtdob").value = xmlhttp.responseText;
            checkstaffnic(nic);
        }
    };
    xmlhttp.open("GET", "ajaxpage.php?frompage=dob&dobcal=" + nic, true);
    xmlhttp.send();
}
```

NIC Uniqueness Validation

```
function checkstaffnic(nic)
{
    var xmlhttp = new XMLHttpRequest();
    xmlhttp.onreadystatechange = function()
    {
```

```
    if (xmlhttp.readyState == 4 && xmlhttp.status == 200)
    {
        if(xmlhttp.responseText==1)
        {
            alert("This NIC is already entered!!!");
            document.getElementById("txtnic").value="";
            document.getElementById("txtdob").value="";
        }
    }
  };
  xmlhttp.open("GET", "ajaxpage.php?frompage=checknicstaff&dobcal=" + nic, true);
  xmlhttp.send();
}
```

Delete Data

```
function deletedata()
  {
    var x=confirm("Are you sure do you want to delete this data?");
    if(x)
    {
        return true;
    }
    else
    {
        return false;
```

```
    }
  }
```

Number Validation

```
function isNumberKey(evt) // only numbers to allow the input field
    {
        var charCode = (evt.which) ? evt.which : event.keyCode;
        if (charCode != 46 && charCode > 31 && (charCode < 48 || charCode > 57))
          return false;
        return true;
    }
```

Text Validation

```
function isTextKey(evt) // only text to allow the input field
    {
        var charCode = (evt.which) ? evt.which : event.keyCode;
        if (((charCode >64 && charCode < 91)||(charCode >96 && charCode < 123)||charCode
==08 || charCode ==127||charCode ==32||charCode
==46)&&(!(evt.ctrlKey&&(charCode==118||charCode==86))))
          return true;
                return false;
    }
```

APPENDIX G: CLIENT CERTIFICATE

சுகாதார வைத்திய அதிகாரி பணிமனை, கோப்பாய்
සෞඛ්‍ය වෛද්‍ය නිලධාරි කාර්යාලය කෝප්පායි
OFFICE OF THE MEDICAL OFFICER OF HEALTH, KOPAY

T. P./ Fax No : 021 223 1060 Email: kopmoh2012@gmail.com

Manipay Road, Kopay

BIT Coordinator,
University of Colombo School of Computing,
Colombo -7.

Dear Sir/Madam,

LETTER OF CERTIFICATION

This is to certify that Ms. Vanaja Vadivel (R092273) has successfully designed and developed a web based school health survey and medical inspection management system for office of the medical officer of health, Kopay. The project was undertaken by her partial fulfilment of a requirement for the Bachelor of Information Technology Degree Program. The system was fully satisfied with our requirements and this system, web based management system would be a solution for us. From this system all workers can do their works easily, and get all reports on time. I'm pleased to certify that the system developed by Ms.Vanaja Vadivel fulfills the requirements of the organization and could be used as our web based school health survey and medical inspection management system and hosted to public use.

Thankyou.

Yours Faithfully,

.....

Medical Officer of Health
Kopay

(Dr.V.Inthujan)
Medical Officer of Health,
Kopay.

GLOSSARY

Apache - is an open source web server. Mostly for UNIX, Linux and Solaris platforms.

CSS (Cascading Style Sheet) - is a style sheet language used to describe the presentation semantics (the look and formatting) of a document written in a mark-up language.

Database - is an organized collection of data for one or more purposes, usually in digital form.

Domain - is knowledge about the environment in which the target system operates.

Firewall - is a solution that is used to enforce security policies. This can be a Hardware or Software.

Graphical User Interface - is a type of user interface that allows users to interact with electronic devices with images rather than text commands.

Internet - is a global system of interconnected computer networks that use the standard Internet Protocol Suite (TCP/IP) to serve billions of users worldwide.

Iterative and Incremental Development - is a cyclic approach to software development in which activities are repeated in a structured manner and the software is developed in increments.

JavaScript - is a prototype-based, object-oriented client-side scripting language that is dynamic It is also considered as a functional programming language.

JQuery- is a cross-browser JavaScript library designed to simplify the client-side scripting of HTML.

Object Oriented Development - is a standard approach to software development based on objects and its instances.

PHP Hyper-text Pre-processor (PHP) - is a server-side programming language.

Rapid Application Development (RAD) - is a software development methodology that uses minimal planning in favor of rapid prototyping.

Structured Query Language - is a database computer declarative language designed for managing data in relational database management systems (RDBMS).

Unified Modeling Language (UML) - is a standardized general-purpose modeling language in the field of object-oriented engineering. This includes a set of graphic notation techniques to create visual models of object-oriented software-intensive systems.

Web Browser - is software which allows the user to access WWW.

WWW (World Wide Web) - is a system of interlinked hypertext documents accessed via the Internet.