Medical Ward Management System

Najnin Begum

Student Id: 012131042

A Project

in

The Department

of

Computer Science and Engineering

Presented in Partial Fulfillment of the Requirements

For the Degree of Master of Science in Computer Science and Engineering

United International University

Dhaka, Bangladesh

©January, 2018

Approval Certificate

This project titled "**Medical Ward Management System**" submitted by **Najnin Begum**, Student ID: [**012131042**], has been accepted for the degree of Master of Science in Computer Science and Engineering on 10 March 2018.

Board of Examiners

1.

_____   Supervisor

Dr. Mohammad Nurul Huda

Professor and MSCSE Coordinator

Department of Computer Science and Engineering

United International University, Dhaka, Bangladesh

2.

_____   Examiner

SumanAhmmed

Assistant Professor, CSE

Department of Computer Science and Engineering

United International University, Dhaka, Bangladesh

3.

_____   Ex-Officio

Dr. Mohammad Nurul Huda

Professor and MSCSE Coordinator

Department of Computer Science and Engineering

United International University, Dhaka, Bangladesh

Declaration

The entitled "**Medical Ward Management System**"is the outcome of the research carried out by me under the supervision of Dr. Mohammad Nurul Huda, Professor and MSCSE Coordinator.

Name: Najnin Begum

Student Id: 012131042

Department: Computer Science and Engineering

As the candidate's project supervisor, to the best of my knowledge I certify that the above statements are true.

_____

Dr. Mohammad Nurul Huda

Professor and MSCSE Coordinator

Department of Computer Science and Engineering

United International University, Dhaka, Bangladesh

Abstract

The purpose of the "Medical Ward Management System" is to digitalize the Front Office Management of Hospital to develop application which is simple, user friendly, fast, cost – effective and secure. The system deals with the collection of patient's information, diagnosis as details. Traditionally, it was done manually. The key function of the system is patient register, store and recover trifles when needed and also meaningfully change those details. The system input contains patient and diagnosis details, while the system output is to get those as details on to the screen. The Medical Ward Management System can be entered using a username and password. It is accessible either by an administrator or receptionist. Only they can add data into the database. The data can be retrieved easily. The data are well protected for personal use and makes the data processing very fast.

One of the most important purposes of the "Medical Ward Management System" is to digitalize the front office management of Hospital to develop application. The application is simple, user friendly, fast, cost- effective and secure. The system is mainly collection of patient's information, diagnosis as details including billing system. The key system is to patient register, store and recover trifles when needed. The system is secured by the password and user name. The system is access.

Acknowledgement

Any accomplishment requires the effort of many people and there are no exceptions. Thanks Allah for the report being submitted today is a result of collective effort. I would like to extend my sincere thanks to all of them. The report has been solely prepared by me with the purpose of fulfilling *the Degree of M.Sc. in Computer Science and Engineering*. There are innumerous helping hands behind it who have guided me.

A special gratitude I give to my project supervisor, Dr. Mohammad Nurul Huda, whose contribution in stimulating suggestions and encouragement, helped us to coordinate my project.

I would also like to thank all the faculty members of UIU for their critical advice and guidance without which this project would not have been possible.

I have to praise the guidance given by other supervisor as well as the panels especially in my project presentation that has elevated my presentation skills thanks to their comment and advices.

Last but not the least I place a deep sense of gratitude to my family members and my friends who have been constant source of inspiration during the preparation of this project work.

.

With sincere regards,

Najnin Begum

Table of Contents

Chapter1: Introduction

1.1 Introduction to Medical Ward Management System

The name of project title is "Medical Ward Management System". This system is developed to ensure proper treatment and care of patient inside the medical college. The process is easy to use & it would be a great opportunity for those who want a tension free about treatment. Online Medical Management System is rising day by day in our country as well as all over the world. This management system is able to record data of patients during admission into the medical.

1.2 Project Overview

The System (Medical Ward Management System) is digitalizing way storing the patient's details into the database with automated billing. The facility of the system has to give a unique id for every patient and keep the particulars of each patient automatically with a ability to know the current position of room. User has facility to access the details of a patient using the patient id.

1.3 Opportunities of This Project

This project gives a lot of opportunities. It makes our deals very easy and secured at the same time. Admin can control the dealing from everywhere. The doctor also doesn't need to meet admin by themselves to the service. They can choose online and order. In summary it can be said that the opportunities of our project is:

> ➢ User friendly
> ➢ Time saver for both admin , doctor and patient
> ➢ Responsive
> ➢ Secured

1.4 Objectives of the Project

This System focuses on the following objectives:
> ➢ To monitor orders more efficiently and competently.
> ➢ To enable admin to access the website from wherever.
> ➢ To search for service easily of patient's demand

- ➢ To process data in possibly slightest amount of time.
- ➢ To secure the information and impede the access of illegal persons.
- ➢ To avail the information at once in demand.
- ➢ To evaluate the data for as long as analytical decisions

1.5 Facilities

The core functions provided by any website are to allow users to browse or look for within a database of items or services,

- ➢ User friendly to patient and doctor.
- ➢ This website is keep time and cost.

1.6 Advantage of proposed system

Advantages of this Medical Ward Management System are

- ➢ Instant services, the system is less time consuming.
- ➢ The new users easily understand the system and maintain it easily.
- ➢ The system will provide information in a short amount of time.
- ➢ The system enables us to precisely describe the information that we seek.
- ➢ The proposed system reduces the problem of sophistication and scam of the present system..

Chapter 2: Background

2.1 Technology Used and Review

We know that modern age is an age of information and technology. Everyone wants to do everything in a small amount of time. Internet has changed our life.We can do everything throw internet. We can gather any information by using technology. In all sector in life like education, medical, traveling, online shopping etc we are using technology. All type of information are presented here within a single moment with the help of one click of mouse. The online services have significantly enhanced and develop our life manner. There are various cyber agent to supply all kinds of internet services. Internet can be choose or connect from anywhere in the world. We order to the cyber agent for internet connectivity.

2.2 Future Scope of The system

This system can be easily implemented and manageable in different situations. New features can be easily added, changeable when required. Reusability is possible in different situation.

Software Scope:

 ➢ Extensibility: This software is extendable and different types of facilities can be addedusing the present modules of this system.

 ➢ Reusability: In this application data or information is reusable. When a user wants to search any   information he or she can find easily. The next version of the system can be created by enhancing its facilities. Reusable design of the system will help in this respect. This will reduce the cost, time, and error of the modification

 ➢ Understandability: If developer wants to change any module or add any features after a long duration he or she will able to do this in a good system. If the system is handover to other people to enhance or change or modify this system, the developer will understand easily the source coding.

➤ User Friendly: The design of the system is kept very user friendly. It provides the facility to the user to interact with the system in a easy manner.

➤ Normalization: For avoiding the redundancy in the stored data the tables for storing data in the system is kept in Third normal form. Different data (about member or books) of the system are kept in different table in a way that each modification (insertion, deletion, update) of new record have less effect on the other records. This will be clearer by observing the E-R and Relational diagram of the system.

2.3 Clients-Side Design Issues

As this system is web based, so I have used web technologies for the development of both front end and back end.

2.3.1 Front End Design

The front end comprised with

a) **HTML**:HTML or Hypertext Markup Language Hypertext Markup Language is a language. This is the set of markup signs or codes.HTML is used to design World Wide Webpage. Tag is used in every building block of this language

b) CSS: A cascading style sheet (CSS) is a language that used in HTML page to style any element of the page. This is written in HTML coding.

c) JQuery (JavaScript Framework): JQuery is a JavaScript library is used into HTML codingto add extra functionality to their websites. It is open source and provided for free under the MIT license.

d) **Bootstrap:**Bootstrap is responsive, mobile-first, prevailing, and front-end framework, which is developed along with HTML, CSS, and JavaScript,. Bootstrap has many benefits from scratch for every web development project, and one such reason is the huge number of resources accessible for Bootstrap

2.3.2 Back End Design

On the other hand, in the back end there is a server which is designed and manipulated by

a. PHP.

b. MySQL

2.4 Hardware Requirements for Present Project:
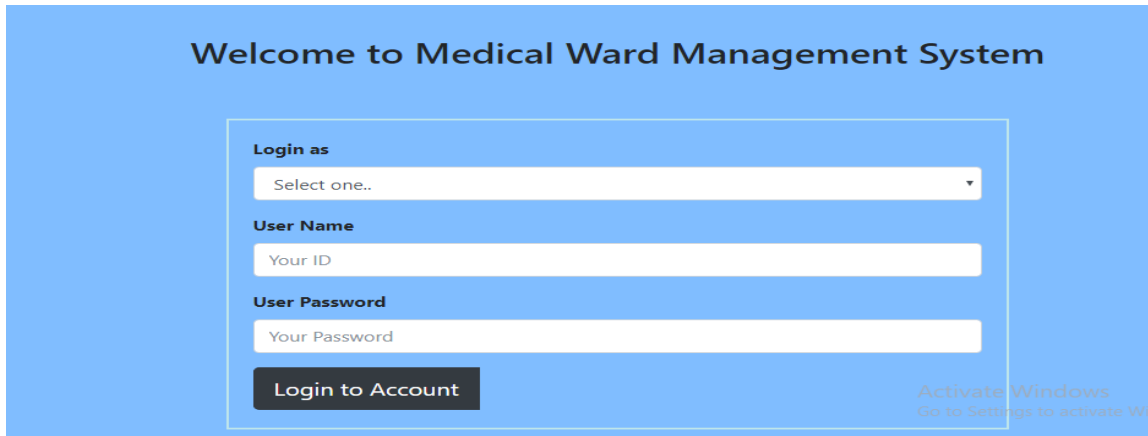
PROCESSOR   :   Intel dual Core ,i3

RAM   :   2 GB

HARD DISK Space   :   40 GB
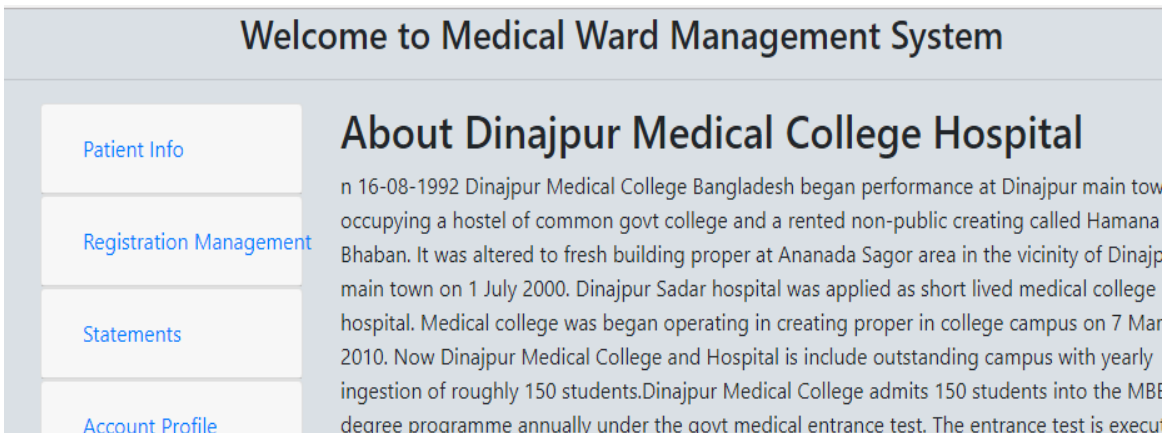
Chapter 3: System Analysis

The home page of the Medical Ward Management System is shown below- where different user can login by choose the type of user, user name and credential.

When a user(admin/doctor/service desk) want to login in the system show here,
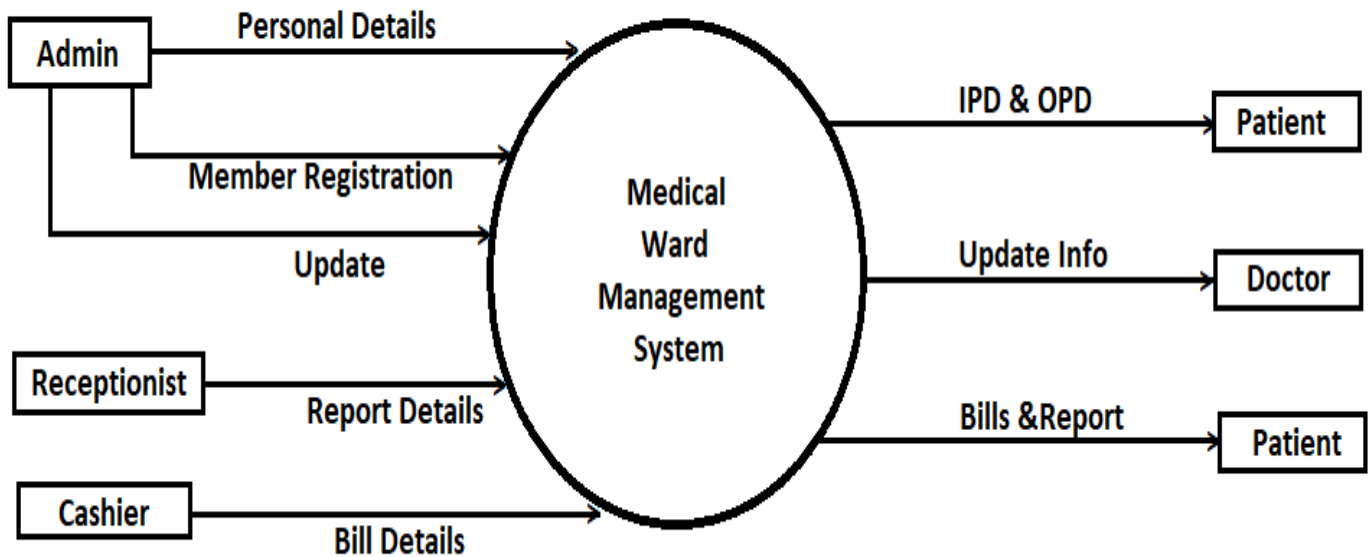

After login a menu for user

3.1 Proposed System Diagram:

The dataflow diagram is shown below in figure 3.1

Figure 3.1: Data Flow Diagram

Here is the data flow diagram. How users access the database and how the user's information stored in the database shown in the figure. In the data flow diagram which information and how data is flowing is described. Users admin,receptionist, chashier, patient doctor and patient how access the database and data flow of the system is shown in figure 3.1.

The use case diagram of the system is shown below (figure 3.2).
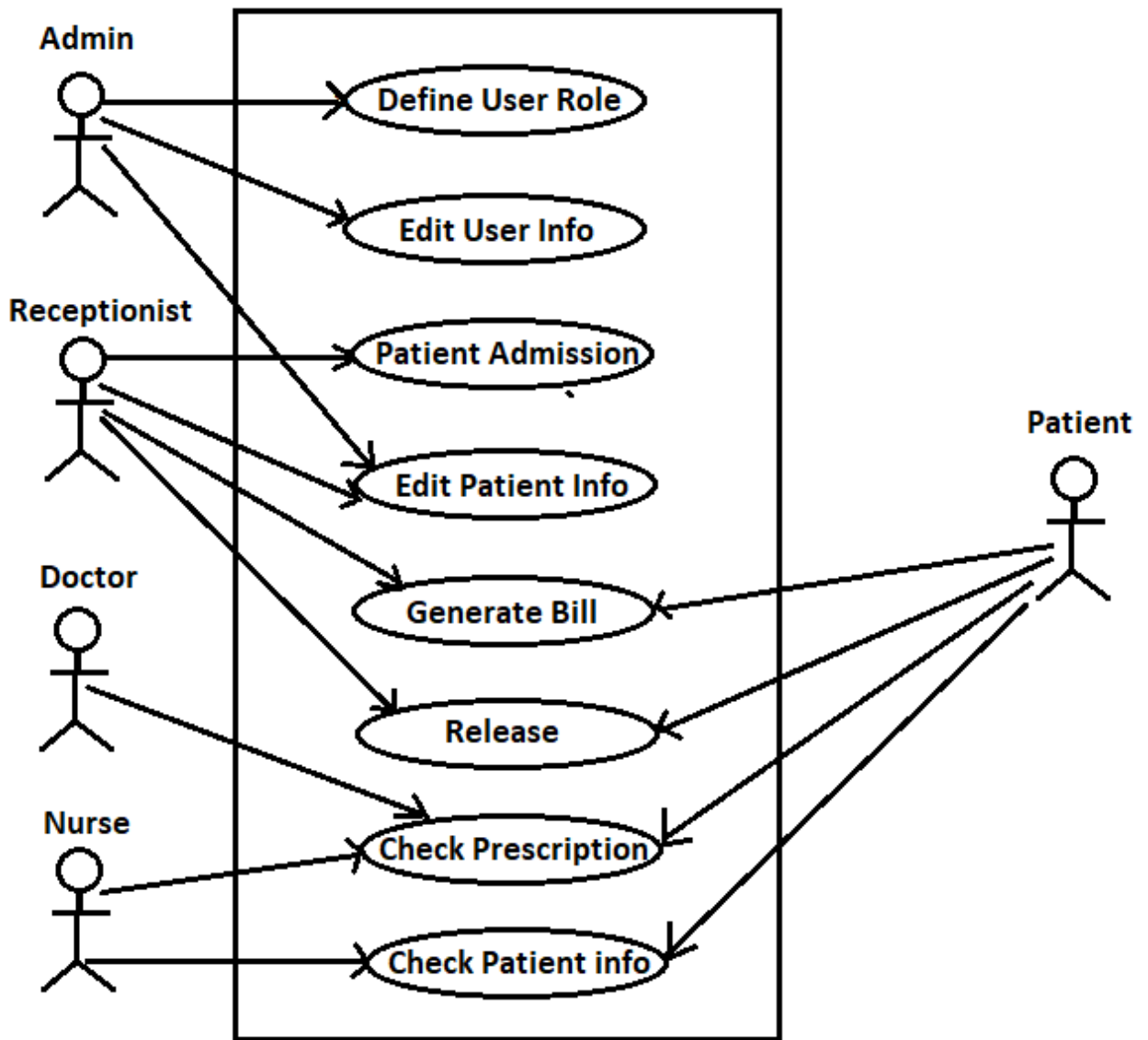
Figure 3.2: Use Case Diagram

This is the systems Use Case diagram in figure 3.2. In this diagram how user access the system is shown. The users functionalities are mainly described by the use case diagram. Admin user's functionalities are defines user role, edit user information and edit patient information. Receptionist's functionalities are admission patient, edit patient information, generate bill and release patient.Doctor and nurse can see the patients present condition and check prescription.
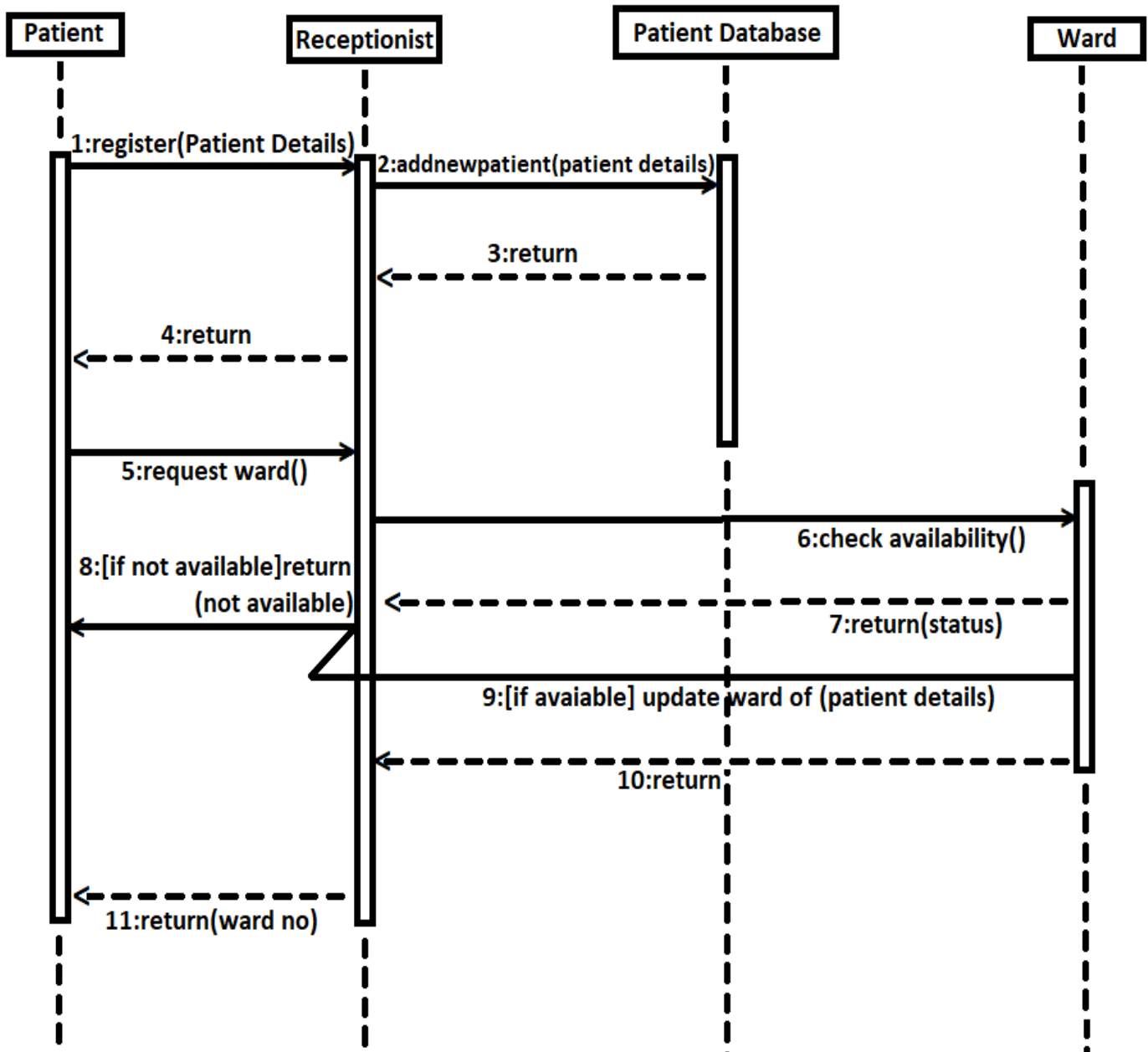
The class diagram of the system is shown below (figure 3.3):
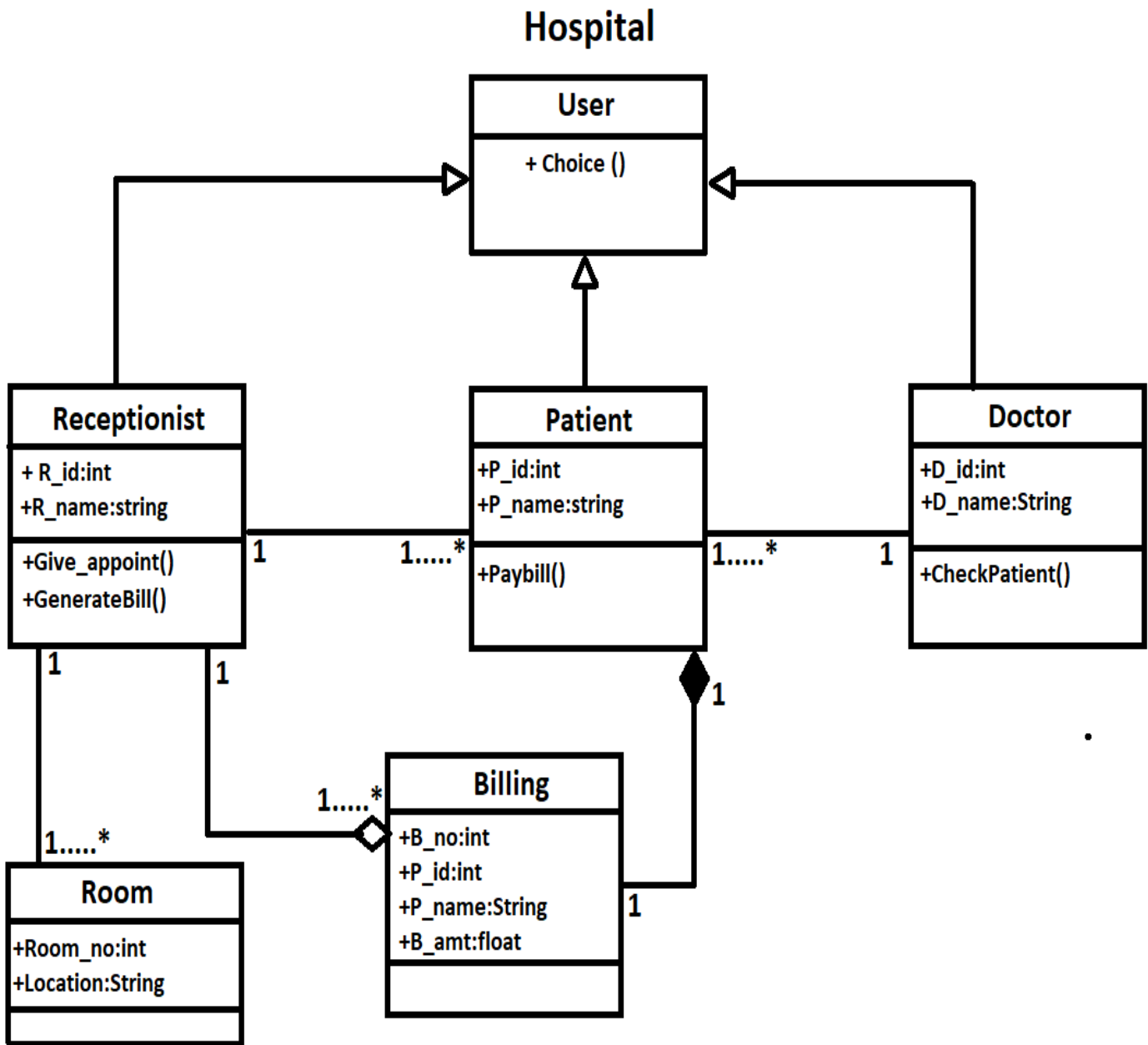
Figure 3.3: Class Diagram

The class diagram of the system is shown above. In a object oriented program how class are defined, and relation of this classes are shown. There are 6 classes User, receptionist, patient, doctor, room and billing.Functions and datatype of classes are shown in figure 3.3

Figure 3.4: Admission Sequence Diagram

This is the patient admissions sequence diagram (figure 3.4). Firstly in admission procedure patient give his/her information to the receptionist. Receptionist entry the information in the system. Information is saved in patient database and return feedback. Patient requests for ward or cabin. Then the receptionist checks the availability of ward or cabin. The system check and return result whether the cabin or ward is available or not. If there are free ward or cabin the

system return message with the number of ward or cabin and update patient information. Otherwise return message that there is no free ward or cabin.
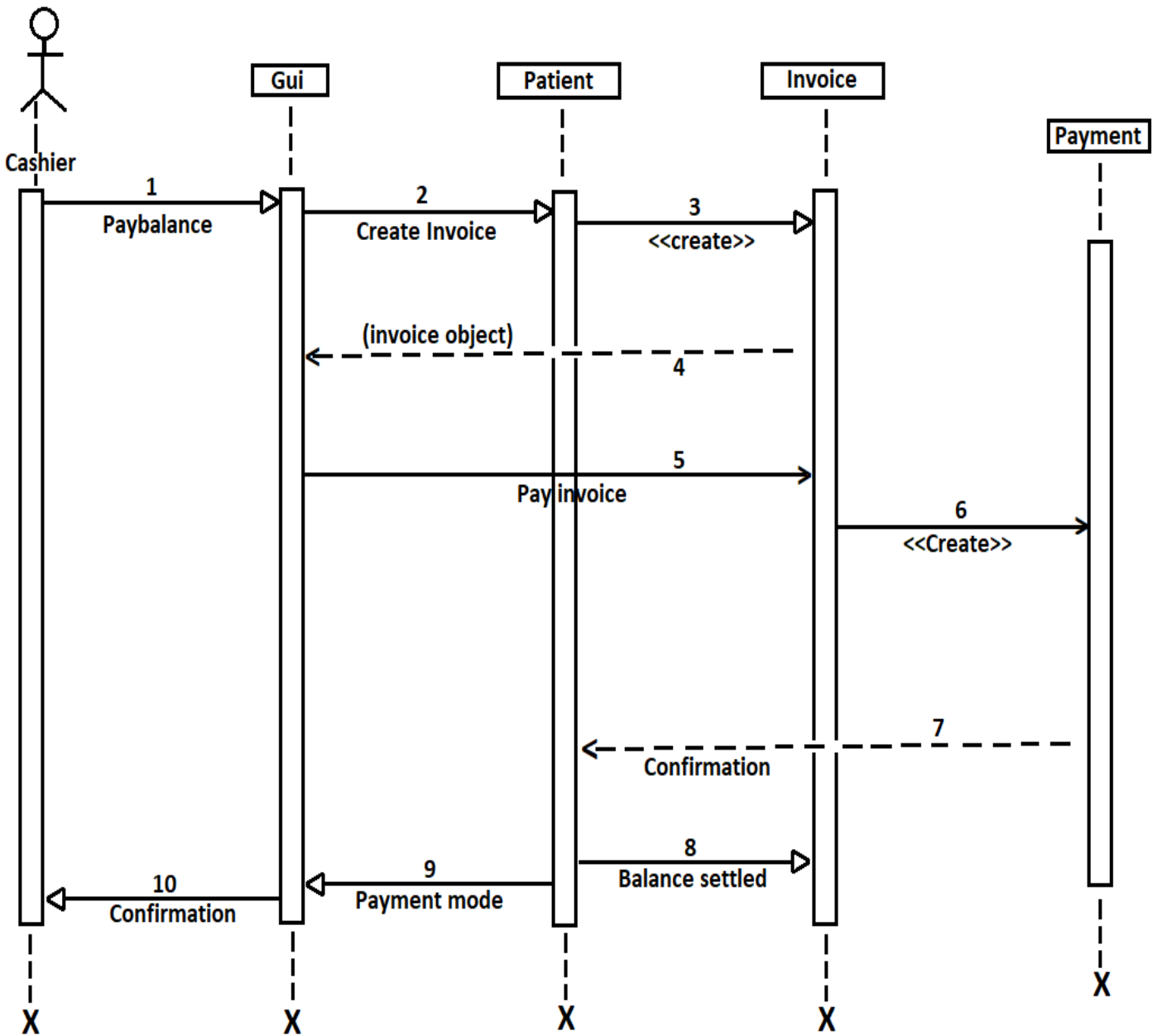
Figure 3.5: Payment Sequence Diagram

Here is the diagram(figure 3.5) for payment process from patient to cashier. This is the way to stop the manual payment and ensure the accountability. Chashier check the paybalance and create invoice. The patient access the invoice and pay to the chashier. The cashier check and entry to the database and database info changed to payment mode. And pay confirmation report.

11

The E-R Diagram of the system is given below.
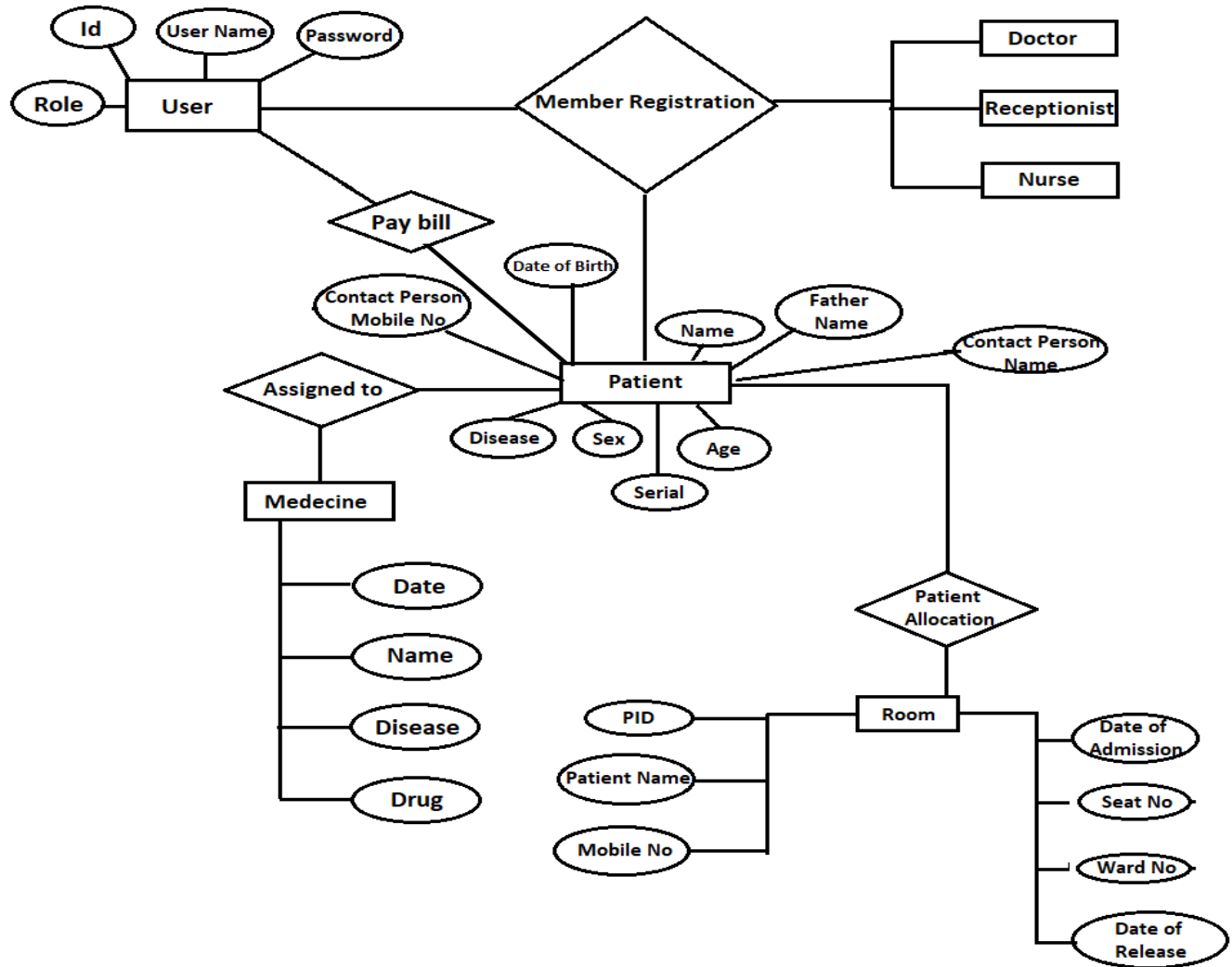
Figure 3.6: ER Diagram

In this diagram there are four entities user, patient, medicine, room. In user the attributes are id, user name password and role. Patient's attributes are patients name, fathers name, age, serial_no, sex, disease, Date of Birth, contact person name and contact person mobile no. Same as medicine has attributes date, name, disease and drug. And room has attributes, Ward no, seat no, PID, patient name, Date of admission and Date of release. User can register member like doctor, receptionist, Nurse or patient. User also can assign patient and pay or generate bill for patient. Medicine is assign to patient when, which drug is given to specific patient in the ER diagram shown. And patient's room allocation is also shown in the figure.

Chapter 4: Methodology

4.1 Developing the crucial functionalities

If we keep the system simple than we can see there is two crucial functionalities existing in the system among Patient and Admin functionalities diagram.

4.2 Use of method

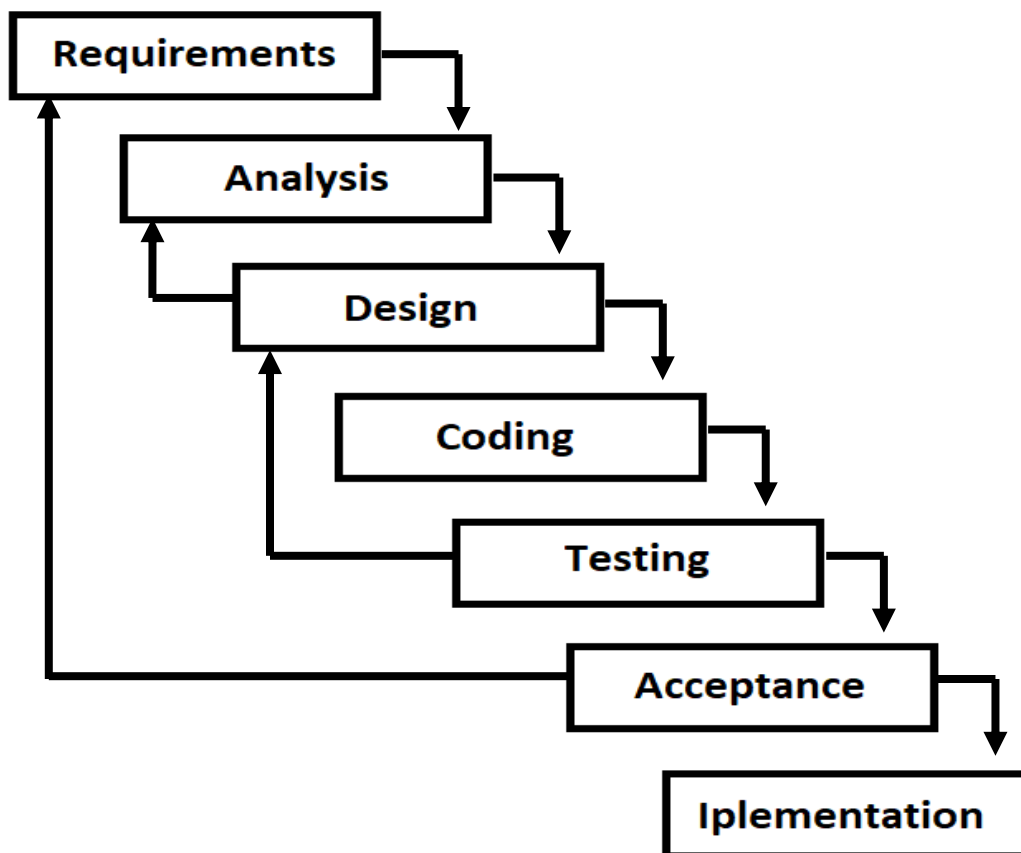In figure 4.1 the phase of waterfall method shown below.

Figure 4.1 : Waterfall Method

Waterfall method is one of the OTBMS methods that is used in developing the system life cycle. Users proceed to next phase if the requirement of current phase is fulfilled. current phase is complete. Authority cannot allow to go to previous phases if they do any mistake. So the model is called waterfall model.

Generally in waterfall model there are seven phases used everywhere.

Which are

I. Requirement specification: In requirement specification phase developer or programer analyse the user requiremetns. Check the previous data.

II. Design: In design phase the system developer design the system. He or she designsthe system according to diagrams

III. Construction: Programmer devide the system by small modules. Then Programmer code or implement these each modules. And connect with database and test the each modules work properly or not.

IV. Integration: In integration phase the developer combine each module into one system.

V. Testing: After intigration then the system is tested again whether the system work properly or not.

VI. Debugging: In debugging phase developer count the system run time, and compilation time. If the system is more time consuming then the sofware should check for which step it takes more time.

VII. Installation and Maintenance: In this phase the system installed and maintenanced according to users acceptance.

Chapter 5: Implementation

5.1 Introduction to System Implementation:

In implementation stage software is implemented when all initial phase are completed. After requirement analysis, planning the design analysis implementation phase is started. After theoretical design this phase is continued before coding and software installation is completed in a system. It is most critical part of a system. Implementation is the stage to retrieve a successful goal to the user. After this stage a new system is produce for user. The implementation stage depends on good planning, investigation of previous system. This method is more effective to change existing system. If analysis, planning, designing, requirement analysis are not properly completed, then implementation stage will fail to reach the goal.

5.2 Sample code:

Index.php:

```php
<?php

session_start();

$_SESSION['user_id'] = NULL;

$_SESSION['role'] = NULL;

?><!doctype html>

<html lang="en">

<head>

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
```

```html
<!-- Bootstrap CSS -->

<link rel="stylesheet" type="text/css" href="css/bootstrap.min.css">

<title>Hospital Management Software</title>

<style>

body{

        /*background-image:  url("images/background/hospital.jpge");*/

background-color: #80bdff;

background-repeat: no-repeat;

background-size: 100% auto;

    }

    #btn-action{

margin-top: 100px;

margin-left: 30%;

    }

    #projectBy{

position: relative;

bottom: -150px;

    }

</style>

</head>

<body>
```

```html
<h1 class="text-center" style="margin-top: 80px; font-size:3em;">Welcome to Medical Ward
Management System</h1>

<br /><br />

<div class="container">

<div class="row">

<div class="col-2"> </div>

<div class="col-8" style="border: 2px solid #bee5eb; padding: 20px">

<div>

<form method="post" action="controller/index_c.php"  enctype="multipart/form-data">

<div class="form-group">

<label for="submitbtn"><b>Login as</b></label>

<select name="submitbtn" id="submitbtn"class="form-control">

<option value="">Select one..</option>

<option value="admin">Administrator</option>

<option value="sdesk">Service Desk</option>

<option value="docto">Doctor</option>

</select>

</div>

<div class="form-group">

<label for="userid"><b>User Name</b></label>

<input type="text" class="form-control" name="userid" id="userid" placeholder="Your ID">
```

```html
</div>

<div class="form-group">

<label for="password"><b>User Password</b></label>

<input type="password" class="form-control" name="password" id="password"
placeholder="Your Password">

</div>

<div class = "btn-group btn-group-lg">

<a href="#" id="btn_admin" name="submitbtn" value="admin" class = "btnbtn-dark">Login to
Account</a>

<span style="margin-left: 20px;" id="loginStatus"></span>

</div>

</form>

</div>

</div>

<div class="col-2"> </div>

</div>

</div>

<div id="projectBy" class="container">

<div class="row">

<div class="col-12">

<p class="text-center"><em> A Project By Najnin Begum | Contact: +8801675326607 | email:
najninb@gmail.com  </em></p>
```

```
</div>

</div>

</div>

<!-- Optional JavaScript -->

<!--jQuery first, then Popper.js, then Bootstrap JS -->

<scriptsrc="js/jquery-3.2.1.min.js"></script>

<scriptsrc="js/popper.min.js"></script>

<scriptsrc="js/bootstrap.min.js"></script>

<script>

        $(document).ready(function () {

            $("#btn_admin").click(function () {

fdata = $("form").serializeArray();

                $.post(

                    "controller/index_c.php",

fdata,

function (data, status) {

if (data == 'redirectocontrolpannel')

                    {

                        //alert (data);

window.location.href = "controllpanel/controllpanel.php";

                    } else {
```

```
                    $("#loginStatus").html("Invalid login info. Try again.");

              }

          });

      });

</script>

</body>

</html>
```

Addpatient.PHP

```php
<?php
session_start();

if (!isset($_SESSION['user_id']) && !isset($_SESSION['role'])) {

exit("Un authorized access.");

}
?><div class="container">

<div class="row">
```

```html
<div class="col-md-12">

<div class="navbarnavbar-light bg-light">

<div class="col-12">

<h1>Register a Patient</h1><hr />

</div>

<div class="col-12" id="patient_info">


</div>

<form class="col-12">

<div class="form-group">

<label for="p_name">Patient Name</label>

<input type="text" class="form-control" id="p_name" name="p_name"  placeholder="Patient Name">

</div>

<div class="form-group">

<label for="p_mobile">Patient's Mobile Phone No</label>

<input type="text" class="form-control" name='p_mobile' id="p_mobile" placeholder="Patient's Mobile Phone no">

</div>

<div class="form-group">

<label for="p_mobile">Patient's Mobile Phone No</label>
```

```html
<input type="text" class="form-control" name='p_mobile' id="p_mobile" placeholder="Patient's
Mobile Phone no">

</div>

<div class="form-group">

<label for="c_name">Contact person name</label>

<input type="text" name="c_name" class="form-control" id="c_name" placeholder="Contact
person name">

</div>

<div class="form-group">

<label for="c_p_mob">Contact person's mobile</label>

<input type="text" name='c_p_mob' class="form-control" id="c_p_mob" placeholder="Contct
person's mobile no">

</div>

<div class="form-group">

<label for="address">Address</label>

<input type="text" name="address" class="form-control " id="address" placeholder="Address">

</div>

<input type="hidden" name="vbtn_sbmit" value="vbtn_sbmit">

<button type="button" id="btn_sbmit" value="btn_sbmit" class="btnbtn-
primary">Submit</button>

</form>

</div>
```

```
</div>

</div>

</div>

<script>

  $(document).ready(function () {

    $("#btn_sbmit").click(function () {

fdata = $("form").serializeArray();

      $.post(

          "../controller/controllpanel/addpatient_c.php",

fdata,

function (data, status) {

if (data == "Patient Info Saved.") {

                $("#patient_info").html('');

                $("#patient_info").html(data);

                $("#p_name").val("");

                $("#p_mobile").val("");

                $("#c_name").val("");

                $("#c_p_mob").val("");

                $("#address").val("");

              } else {

                $("#patient_info").html('');
```

```
                    $("#patient_info").html(data);

                }

            }

        );

    });

});
```

</script>

ControllPanel.php

```php
<?php

session_start();

if (isset($_SESSION['user_id']) &&isset($_SESSION['role'])) {

} else {

header("Location: ../index.php");

}

?>
```
<!doctype html>

<html lang="en">

<head>

<!-- Required meta tags -->

<meta charset="utf-8">

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

```html
<!-- Bootstrap CSS -->

<link rel="stylesheet" type="text/css" href="../css/bootstrap.min.css">

<title>Hospital Management Software</title>

<style>

body{

background-color: #dae0e5;

        }

</style>

</head>

<body>

<h1 class="text-center">Welcome to Hospital Management Software </h1>

<hr/>

<div class="container">

<div class="row">

<div  class="col-3">

<div id="accordion">

<div class="card">

<div class="card-header" id="headingOne">

<h5 class="mb-0">

<button class="btnbtn-link" data-toggle="collapse" data-target="#collapseOne" aria-
expanded="true" aria-controls="collapseOne">
```

<div style="text-align: center;">Patient Info</div>

\</button\>

\</h5\>

\</div\>

\<div id="collapseOne" class="collapse" aria-labelledby="headingOne" data-parent="#accordion"\>

\<div class="card-body"\>

\<a href="#" id="searchPatient"\>Search a Patient\</a\>

\</div\>

\</div\>

\</div\>

\<div class="card"\>

\<div class="card-header" id="headingTwo"\>

\<h5 class="mb-0"\>

\<button class="btnbtn-link collapsed" data-toggle="collapse" data-target="#collapseTwo" aria-expanded="false" aria-controls="collapseTwo"\>

<div style="text-align: center;">Registration Management</div>

\</button\>

\</h5\>

\</div\>

\<div id="collapseTwo" class="collapse" aria-labelledby="headingTwo" data-parent="#accordion"\>

```
<div class="card-body">

<ul>

<li><a href="#" id="add_patient">Add a Patient</a></li>

<li><a href="#" id="up_del">Update/Delete Info</a></li>

</ul>

</div>

</div>

</div>

<div class="card">

<div class="card-header" id="headingfour">

<h5 class="mb-0">

<button class="btnbtn-link collapsed" data-toggle="collapse" data-target="#collapseFour" aria-
expanded="false" aria-controls="collapseFour">

                    Statements

</button>

</h5>

</div>

<div id="collapseFour" class="collapse" aria-labelledby="headingfour" data-
parent="#accordion">

<div class="card-body">

<ul>

<li><a href="#" id="print_invoice">Invoice</a></li>
```

```
</ul>

</div>

</div>

</div>

<div class="card">

<div class="card-header" id="headingThree">

<h5 class="mb-0">

<button class="btnbtn-link collapsed" data-toggle="collapse" data-target="#collapseThree" aria-
expanded="false" aria-controls="collapseThree">

                        Account Profile

</button>

</h5>

</div>

<div id="collapseThree" class="collapse" aria-labelledby="headingThree" data-
parent="#accordion">

<div class="card-body">

<ul>

<li>Change Password</li>

<li><a href="#" id="logout">Logout</a></li>

</ul>

</div>
```

```html
</div>

</div>

</div>

</div>

<div class="col-9">

<div id="loadpage">

<h2>About Dinajpur Medical College Hospital</h2>

<p>Dinajpur Medical College Hospital </p>

</div>

            <div id="projectBy" class="container">

                <div class="row">

                    <div class="col-12">

                        <p class="text-center"><em> A Project By
ParthaPratim Bose | Contact: +8801717442966 | email: parthoru@gmail.com  </em></p>

                    </div>

                </div>

</div>

</div>

</div>

</div>

<!-- Optional JavaScript -->
```

```html
<!--jQuery first, then Popper.js, then Bootstrap JS -->

<script src="../js/jquery-3.2.1.min.js"></script>

<script src="../js/popper.min.js"></script>

<script src="../js/bootstrap.min.js"></script>

<script>

        $(document).ready(function () {

          $("#searchPatient").click(function () {

            $("#loadpage").html("");

            $("#loadpage").load("searchpatient.php");

          });

          $("#add_patient").click(function () {

            $("#loadpage").html("");

            $("#loadpage").load("addpatient.php");

          });

          $("#up_del").click(function () {

            $("#loadpage").html("");

            $("#loadpage").load("updatedelete.php");

          });

          $("#print_invoice").click(function () {

            $("#loadpage").html("");

            $("#loadpage").load("statement.php");
```

```
});

        $("#logout").click(function () {

            $.post(

                "../controller/controllpanel/logout_c.php", '',

function (data, status) {

window.location.href = "../index.php";

                }

            );

        });

        //logout

    });

</script>

</body>

</html>

SearchPatient.PHP

<?php

session_start();

if (!isset($_SESSION['user_id']) && !isset($_SESSION['role'])) {

exit("Un authorized access.");

}

?><div class="container">
```

```html
<div class="row">

<div class="col-12">

<div class="navbarnavbar-light bg-light">

<form id="searchPatientInfo" class="form-inline">

<div class="form-group mb-2">

<label for="filtertype">Search a patient by    </label>

<select id="filtertype" name="filtertype" class="form-control">

<option value="">Select one</option>

<option value='pid'>Patient ID</option>

<option value='pname'>Patient's Name</option>

<option value='pcmobile'>Contact Phone No</option>

</select>

</div>

<div class="form-group mx-sm-3 mb-2">

<input type="text" class="form-control" name="src_text" id="src_text" placeholder="Search value">

<input type="hidden" name="btn_srcpatient" value="btn_srcpatient">

</div>

<button type="button" id="btn_srcpatient" name="btn_srcpatient" value="btn_srcpatient" class="btnbtn-primary mb-2">Search patient</button>

</form>

</div>
```

```
</div>

</div>

</div>

<div class="container">

<div class="row">

<div class="col-12">

<div id="patient_info">

</div>

</div>

</div>

</div>

</div>

<script>

  $(document).ready(function () {

    $("#btn_srcpatient").click(function () {

fdata = $("#searchPatientInfo").serializeArray();

      $.post(

          "../controller/controllpanel/searchpatient_c.php",

fdata,

function (data, status) {

            $("#patient_info").html('');

            $("#patient_info").html(data);
```

```
              }

         );

      });

   });

</script>

Statement.PHP

<?php

session_start();

if (!isset($_SESSION['user_id']) && !isset($_SESSION['role'])) {

exit("Un authorized access.");

}

?>

<div class="container">

<div class="row">

<div class="navbarnavbar-light bg-light">

<div class="col-md-12">

<h1>Print Statement</h1><hr />

</div>

<div class="col-md-12">

<div class="form-row form-inline">

<div class="col-7">
```

Patient Registration ID

```html
<input type="text" class="form-control" id="txt_src" name="txt_src"  placeholder="Patient Serial">

</div>

<div class="col">

<button type="button" id="btn_search"  class="btnbtn-primary">Search</button>

<button type="button" id="btn_print"  class="btnbtn-info">Print</button>

</div>

</div>

<hr>

</div>

<hr>

<div id="patient_info">

</div>

</div>

</div>

</div>

<script>

  $(document).ready(function () {

    $("#btn_search").click(function () {

fdata = "txt_src=" + $("#txt_src").val() + "&btn_statement=btn_statement";
```

```javascript
        $.post(

                "../controller/controllpanel/searchpatient_c.php",

fdata,

function (data, status) {

                $("#patient_info").html('');

                $("#patient_info").html(data);

            }

        );

    });

    $("#btn_print").click(function () {

                    v1= $("#txt_src").val();

window.open("../controller/controllpanel/print_c.php?"+"&btn_print=btn_print&pid="+v1);

    });

  });
</script>
```

UpdateDelete.PHP

```php
<?php

session_start();


if (!isset($_SESSION['user_id']) && !isset($_SESSION['role'])) {

exit("Un authorized access.");
```

```
}
```

?><div class="container">

<div class="row">

<div class="col-md-12">

<div class="navbarnavbar-light bg-light">

<div class="col-12">

<h1>Update / Delete Patient Info</h1><hr />

</div>

<div class="col-md-12">

<div id="patient_info"></div>

</div>

<form class="col-12">

<div class="form-row form-inline">

<div class="col-7">

Patient Registration ID

<input type="text" class="form-control" id="txt_src" name="txt_src" placeholder="Patient Serial">

<input type="hidden" id="btn_searchPa" value="">

</div>

<div class="col">

<button type="button" id="btn_search" class="btnbtn-primary">Search</button>

```
</div>

</div>

<hr>

<div class="form-group">

<label for="p_name">Patient Name</label>

<input type="text" class="form-control" id="p_name" name="p_name"  placeholder="Patient
Name">

</div>

<div class="form-group">

<label for="p_mobile">Patient's Mobile Phone No</label>

<input type="text" class="form-control" name='p_mobile' id="p_mobile" placeholder="Patient's
Mobile Phone no">

</div>

<div class="form-group">

<label for="c_name">Contact person name</label>

<input type="text" name="c_name" class="form-control" id="c_name" placeholder="Contact
person name">

</div>

<div class="form-group">

<label for="c_p_mob">Contact person's mobile</label>

<input type="text" name='c_p_mob' class="form-control" id="c_p_mob" placeholder="Contct
person's mobile no">
```

```html
</div>

<div class="form-group">

<label for="address">Address</label>

<input type="text" name="address" class="form-control " id="address" placeholder="Address">

</div>

<input type="hidden" id="vbtn_sbmit" name="vbtn_sbmit" value="">

<button type="button" id="btn_sbmit_up"  class="btnbtn-primary">Update</button>

<button type="button" id="btn_sbmit_del" class="btnbtn-danger">Delete</button>

</form>

</div>

</div>

</div>


<script>

   $(document).ready(function () {

      $("#btn_search").click(function () {

         $("#btn_searchPa").val("btn_src");

srcVal = "txt_src=" + $("#txt_src").val() + "&btn_searchPa=" + $("#btn_searchPa").val();

         $.post(

               "../controller/controllpanel/updatedelete_c.php",
```

```
srcVal,

function (data, status) {

                //alert('asdf'+ data);

if (data == "Patient Info Saved.") {

                $("#patient_info").html('');

                $("#patient_info").html(data);

                $("#p_name").val("");

                $("#p_mobile").val("");

                $("#c_name").val("");

                $("#c_p_mob").val("");

                $("#address").val("");

            } else {

                $("#patient_info").html('');

                $("#patient_info").html(data);

            }

        }

    );

});

$("#btn_sbmit_up").click(function () {

    $("#vbtn_sbmit").val('btn_update');

fdata = $("form").serializeArray();
```

```javascript
$.post(

    "../controller/controllpanel/updatedelete_c.php",

fdata,

function (data, status) {

if (data == "Info updated") {

                $("#patient_info").html(');

                $("#patient_info").html(data);

                $("#p_name").val("");

                $("#p_mobile").val("");

                $("#c_name").val("");

                $("#c_p_mob").val("");

                $("#address").val("");

            } else {

                $("#patient_info").html(');

                $("#patient_info").html(data);

            }

        }

    );

});

// delete

$("#btn_sbmit_del").click(function () {
```

```javascript
        var1= $("#txt_src").val();

fdata = "serial="+var1+"&btn_sbmit_del=btn_del";

        $.post(

            "../controller/controllpanel/updatedelete_c.php",

fdata,

function (data, status) {

if (data == "Data deleted") {

                $("#patient_info").html('');

                $("#patient_info").html(data);

                $("#p_name").val("");

                $("#p_mobile").val("");

                $("#c_name").val("");

                $("#c_p_mob").val("");

                $("#address").val("");

            } else {

                $("#patient_info").html('');

                $("#patient_info").html(data);

            }

        }

    );

});
```

```
    });
```

```
</script>
```

5.3 Database Script:

```
/*!40101 SET NAMES utf8 */;

/*!40101 SET SQL_MODE="*/;

/*!40014 SET @OLD_UNIQUE_CHECKS=@@UNIQUE_CHECKS, UNIQUE_CHECKS=0
*/;

/*!40014 SET @OLD_FOREIGN_KEY_CHECKS=@@FOREIGN_KEY_CHECKS,
FOREIGN_KEY_CHECKS=0 */;

/*!40101 SET @OLD_SQL_MODE=@@SQL_MODE,
SQL_MODE='NO_AUTO_VALUE_ON_ZERO' */;

/*!40111 SET @OLD_SQL_NOTES=@@SQL_NOTES, SQL_NOTES=0 */;

CREATE DATABASE /*!32312 IF NOT EXISTS*/`medical` /*!40100 DEFAULT
CHARACTER SET latin1 */;

USE `medical`;

/*Table structure for table `medicine` */

DROP TABLE IF EXISTS `medicine`;

CREATE TABLE `medicine` (

 `nward` varchar(100) NOT NULL,

 `seat` varchar(100) NOT NULL,

 `pname` varchar(100) NOT NULL,

 `disease` varchar(100) NOT NULL,
```

```sql
 `drug` varchar(100) NOT NULL,

 `type` varchar(100) NOT NULL,

 `doctor` varchar(100) NOT NULL,

 `duty` varchar(100) NOT NULL,

 `dept` varchar(100) NOT NULL,

 `nurse` varchar(100) NOT NULL,

 `date` varchar(100) NOT NULL,

 `time` varchar(100) NOT NULL,

 PRIMARY KEY (`nward`,`seat`)

) ENGINE=MyISAM DEFAULT CHARSET=latin1;

/*Table structure for table `member_registration` */

DROP TABLE IF EXISTS `member_registration`;

CREATE TABLE `member_registration` (

 `id` int(11) NOT NULL AUTO_INCREMENT,

 `user_name` varchar(50) NOT NULL,

 `password` varchar(50) NOT NULL,

 `role` varchar(5) NOT NULL,

 PRIMARY KEY (`id`)

) ENGINE=MyISAM AUTO_INCREMENT=61 DEFAULT CHARSET=latin1;

/*Table structure for table `patient_reg` */

DROP TABLE IF EXISTS `patient_reg`;
```

```sql
CREATE TABLE `patient_reg` (

 `pid` int(15) NOT NULL AUTO_INCREMENT,

 `p_name` varchar(255) DEFAULT NULL,

 `mobile_no` varchar(50) DEFAULT NULL,

 `contact_person_name` varchar(255) DEFAULT NULL,

 `contact_person_mob` varbinary(50) DEFAULT NULL,

 `address` varchar(255) DEFAULT NULL,

 `dateofadmission` datetime DEFAULT NULL,

 `Admited_to` enum('Ward','Cabin') DEFAULT NULL,

 `dateofrelease` datetime DEFAULT NULL,

  PRIMARY KEY (`pid`)

) ENGINE=InnoDB AUTO_INCREMENT=18 DEFAULT CHARSET=latin1;

/*Table structure for table `patients` */

DROP TABLE IF EXISTS `patients`;

CREATE TABLE `patients` (

 `pname` varchar(256) NOT NULL,

 `serial` varchar(234) NOT NULL,

 `age` varchar(234) NOT NULL,

 `birth` varchar(256) NOT NULL,

 `disease` varchar(256) NOT NULL,

 `sex` varchar(8) NOT NULL,
```

```sql
  `fname` varchar(256) NOT NULL,

  `mname` varchar(256) NOT NULL,

  `village` varchar(256) NOT NULL,

  `post` varchar(256) NOT NULL,

  `upzilla` varchar(256) NOT NULL,

  `districts` varchar(256) NOT NULL,

  `ward` varchar(256) NOT NULL,

  `seat` varchar(256) NOT NULL,

  `admission` varchar(256) NOT NULL,

  PRIMARY KEY (`serial`)

) ENGINE=MyISAM DEFAULT CHARSET=latin1;

/*!40101 SET SQL_MODE=@OLD_SQL_MODE */;

/*!40014 SET FOREIGN_KEY_CHECKS=@OLD_FOREIGN_KEY_CHECKS */;

/*!40014 SET UNIQUE_CHECKS=@OLD_UNIQUE_CHECKS */;

/*!40111 SET SQL_NOTES=@OLD_SQL_NOTES */;
```

Chapter 6: Testing

6.1 Introduction to System Testing:

The main cause of testing is to find out the bugs. Testing is the process which is used to find out the error or unhandled mistake of a system. It makes a way to check the functionality of different modules, sub modules, integration and to complete the system requirements. The testing process is the processes which test the software can fulfill user requirement or not.It also check the system's minimum complexity. There are different kinds of testing methods. Every testing method addresses specific testing requirement.

6.2 Types of Testing:

Unit Testing:

The internal function testing is done by programmer or developer as a part of unit testing. In this stage internal function is checked properly in different sets of input. This test use as structural testing.Each and every system or module working properly or not as document specifications that can be ensure by this testing.Also ensure clear definition of inputs and expected outputs.

Integration Testing:

In this testing process is used to integrated modules or components testing whether the system runs as single on program or not. This testing system is used after the unit test of different module is individually successful. In this integration test execute for check the combination of components is accurate and reliable.

System Testing:

Fulfill the requirements of the whole integrated system ensure by system testing.This test is the configuration that ensure recognized and expected outcomes. This test case is one of the configuration oriented system integration test.

Acceptance Testing:

User Acceptance Testing is one of important fact of the system. It is considered for the end user. The user who has no clear idea about the system can use the system easily. This UAT also ensure that the functional requirements fulfill or not.

Test strategy and approach

All of the field testing will be execute manually and all functional test have to write down in detail.

Objectives of test:

1. All input sets must work perfectly.
2. All forms and reports that must activated from different link work properly.
3. All pages, entry screen, messages and reports must instant.
4. All type of connectivity and different operating system can access the system properly

Test Result

In all test phase this system worked properly and no error has encountered.

Chapter 7: Sample Screenshots

Login Page: This is the system login page. Here user (Admin/doctor/nurs/receptionist) type role, name and password to login the system.

Homepage:

Admin Panel: After login user can access login menu. One user can see the user information. Here also a short description of medical college in the home page. User can search a specific patient with patient id name or mobile no. By typing a short portion of name mobile no patient list is showed.

Register a patient to a bed or cabin: This is member registration form. User entry a patients information name, mobile no, contact person's name, contact person mobile no, address and other information

Type information and submit: Here in this screen how user entry information is shown. And submitted to save information.

Update/ Delete a patient information: This is the update/delete form. When a specific patient is search patient id then information is shown here and user can update any specific field or delete the entire patient information.

Search a patient to print billing report: To have billing information user click to invoice then search a specific patient.

Billing report: Here the patient information shown. To print money receipt click print button. Then the money receipt will come out

Money Receipt: Here is the money receipt from admission date to present date.

Money Recipt

Name	najnin		Mobile Phone no	01878430111
Contct person name	Mst. Shirine Akter		Contact person mobile	01714220800
Address	01714220800			

Description	Amount
Hospital Fee (200/per day) From Date: 22-01-2018 To Date : 23-01-2018 Total Days 1	200
	Total =200

Conclusion

After analysis at the stage of design and implementation of the Medical Ward Management System is concluded that the system is highly effective. It is tried to make most efficient and user-friendly for the fulfillment of the users requirement.

Future Plan

In the world nothing is free from error. So it is very usual that the system may contain error. For the limitations of time I am fail to make the system error free. In future I will try my best to make the system error free and more secure. In future, I will tried to provide more features to users and extend more opportunity. Features like

1. Doctor patient communication service

2. Mailing system

3. Online Patient Appointment System

4. Chatting system with doctor

5.Involved in medical college using android phone application

References

1.http://en.wikipedia.org/wiki/Web_search_engine

2.http://2011ieeeproject.blogspot.com/2011/12/problems-and-solutions-of-web-search.html

3.http://www.vbforums.com/showthread.php?655230-Metaphone-Calculator

4.http://theunderweb.com/doing-a-fuzzy-match-of-names-in-mysql-soundex-and-metaphone-algorithms.html .

5. PHP MySQL Website Programming: Problem - Design – Solution byChris

Lea, Mike Buzzard, DilipThomas ,Jessey White-Cinis

6. Beginning PHP5, Apache, and MySQL Web Development (Programmer to

Programmer) by Elizabeth Naramore

7. MySQL/PHP Database Applications, 2nd Edition by Brad Bulger

8. How to Do Everything with PHP and MySQL by VikramVaswani

9.Timothy C. Lethbridge& Robert Laganière.
Object-Oriented Software Engineering: Practical Software Development using UML and Java (Second Edition), McGraw-Hill, 2005.

10. M.R.V. Chaudron, J.F. Groote, K.M. van Hee, C. Hemerik, L.J.A.M. Somers and T. Verhoeff."Software Engineering Reference Framework". Technical Report CS-Report 04-039, *Computer Science Reports*, Department of Mathematics and Computer Science, Eindhoven University of Technology, Eindhoven, The Netherlands, 2004.

11.Jessica Keyes. *Software Engineering Handbook*.Auerbach Publications (CRC Press)2003.