

HOSPITAL MANAGEMENT SYSTEM DATABASE PROJECT

Final Project Report

CS5200 - Database Theory and Applications

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Project Overview

This project aims to develop a hospital management system that will allow doctors and hospital staff to efficiently manage patient information, treatment details, room allocation, and billing. The system will be designed to handle patient registration, diagnosis, treatment, and discharge. Each patient will have a unique patient ID that will be used to track their medical records and history.

The system will also provide the functionality to assign doctors to patients based on their specialization and availability. They can choose the specific doctor to treat them, each doctor will have a unique ID that will be used to track their patient assignment and treatment history.

Patients can be admitted to the hospital and assigned to a specific room, including operation theatres and ICU. The system will maintain room availability and allocation to ensure proper patient care.

The system will also include the functionality to track the nurses and ward boys responsible for patient care and hospital maintenance. And they can update the patient status whether they are admitted or discharged.

Finally, the system will generate a bill based on the number of days the patient stayed in the hospital and the treatment provided. This will help hospital staff to keep track of patient treatment expenses and generate bills for the patients and their families.

The hospital management database aims to address various problems faced by hospital data maintenance, such as manual and time-consuming processes, and inefficient coordination in the hospital.

Overall, the hospital management system will provide a comprehensive solution for managing patient information, treatment, and billing to improve the quality of patient care and streamline hospital operations.

Database Structure

The database consists of eight tables. The table names are Admit, Staff, Department, billing, Patient, doctor, room, and doc_appointment. All the tables will have their corresponding data of the system. Appendix B will show the entity relationship diagram.

Database Tables	Description
Admit	It will contain information about the patient after being admitted to the hospital like the patient id and room number, the doctor who is monitoring the patient and the patient's status.
Staff	Contains the staff information like name, id, Phone number, Password, address, and dob.
Department	This will contain the doctor's name and the department he is working on.
Billing	In the billing, we can see the room in advance, the appointment id room charges status, and the total amount.
Patient	In the patient database, u will see the patient id, status of the patient and the dob, blood group phone number staff who is appointed for the patient.
Doctor	In this database, u will see the information about the doctor's name, Id, available time, department id, and phone number.
Room	In the room database, u can see the room number and type of room and status and rent.
Doc_Appointment	In the appointment database date of the appointment, department, the doctor assigned, patient and symptom, and time of the appointment.

Functionality

The web application and the database will be used for managing the hospital to do the following functions:

- To admit the patient and view admitted patient details.
- To add the staff and to view the staff information.
- To see the doctors belonging to the department and add them.
- To add the patient information and view the details about them.
- Appointment details
- Room details
- Billing for the patient

This application is used to book appointments for patients and admit them to the hospital by allocating the room and checking the available rooms and the type of the rooms and then the cost for each room and then we can the patient status and the patient details and the current health update of the patient and the doctor's availability and doctors available for each department and the staff availability and doctors and staff details and the final billing statements at the time of discharge and we can check the patient consulted which doctor and the time of the appointment and for the admitted patient we can see the staff who is assigned for the patient.

Customers/ Audience

The main customers for the web application are the Hospital Staff, Nurses in various hospital departments. The Staff can manage all the details of the patients, appointments, and doctors. While the nurses can view the admitted patient details to check and verify if they are discharged appropriately or not.

Database Design Process

Our goal is to develop the Hospital Management System in MySQL and PHP. We began the project by doing some requirements analysis and planning, design, and review. We started the planning phase where we jotted down the required things to build a database from scratch like an ER diagram conceptually. Later we moved to the design phase where we plotted things on how to develop the database logically like the relationship sets and the table constraints. We also reviewed the indexes we would need for faster processing on the web application we develop.

We developed eight tables for the complete project with required participation constraints, primary keys, super keys, and indexes. Finally, we came up with a fully functional ER diagram with which we were able to move forward with the front-end coding and development in PHP. We worked on the PHP code to integrate these eight tables and their relationships to come up with the logical flow in the front end like booking an appointment, admitting patients to the rooms available and keeping track of the billing information while discharging the patients.

We learned several important lessons during this process:

1. Designing the tables is the most important and is the first step in any web application development.
2. How different phases in the database design help us in getting things done quickly without any major pitfalls in the project!
3. How a lot of understanding about the business processes is necessary before meeting the client's requirements!

Future of the Database

The future of the hospital management system database is highly dependent on the evolving needs of the healthcare industry and advancements in technology. However, some potential future developments of the database may include:

1. Integration with Electronic Health Records (EHR): The system may be integrated with EHR to provide doctors with complete access to a patient's medical history and provide more personalized treatment.

2. AI and Machine Learning: The integration of AI and machine learning can help automate repetitive tasks, such as appointment scheduling, and assist doctors in making more informed decisions.

Overall, the hospital management system database's future will focus on enhancing patient care, improving operational efficiency, and leveraging technology to provide better healthcare services.

Summary

The project is for computerizing the working in a hospital. It is a great improvement over a manual system which helps speed up the process. This web application can provide an easy and effective way of storing the records of patients, doctors, rooms, and staff and managing the appointments, admitted patients, their billing information etc.,

Appendices

Appendix A: Current Structure of Hospital Management System

Appendix B: Hospital Management System Database Table Structure

Appendix C: List of Source Code

Appendix D: Home page - Screenshot and Code

Appendix E: Add Staff Page - Screenshot and Code

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Appendix I: Add Patient Page - Screenshot and Code

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Appendix L: Doctor Appointment Page - Screenshot and Code

Appendix M: View the Patients Page - Screenshot and Code

Appendix N: View Doctors Page - Screenshot and Code

Appendix O: View Room - Screenshot and Code

Appendix P: View Staff Page - Screenshot and Code

Appendix Q: View the Appointment Page - Screenshot and Code

Appendix R: View Admitted Page - Screenshot and Code

Appendix S: Create Admit Page – Screenshot and Code

Appendix T: Create File

Appendix U: SQL Table Descriptions

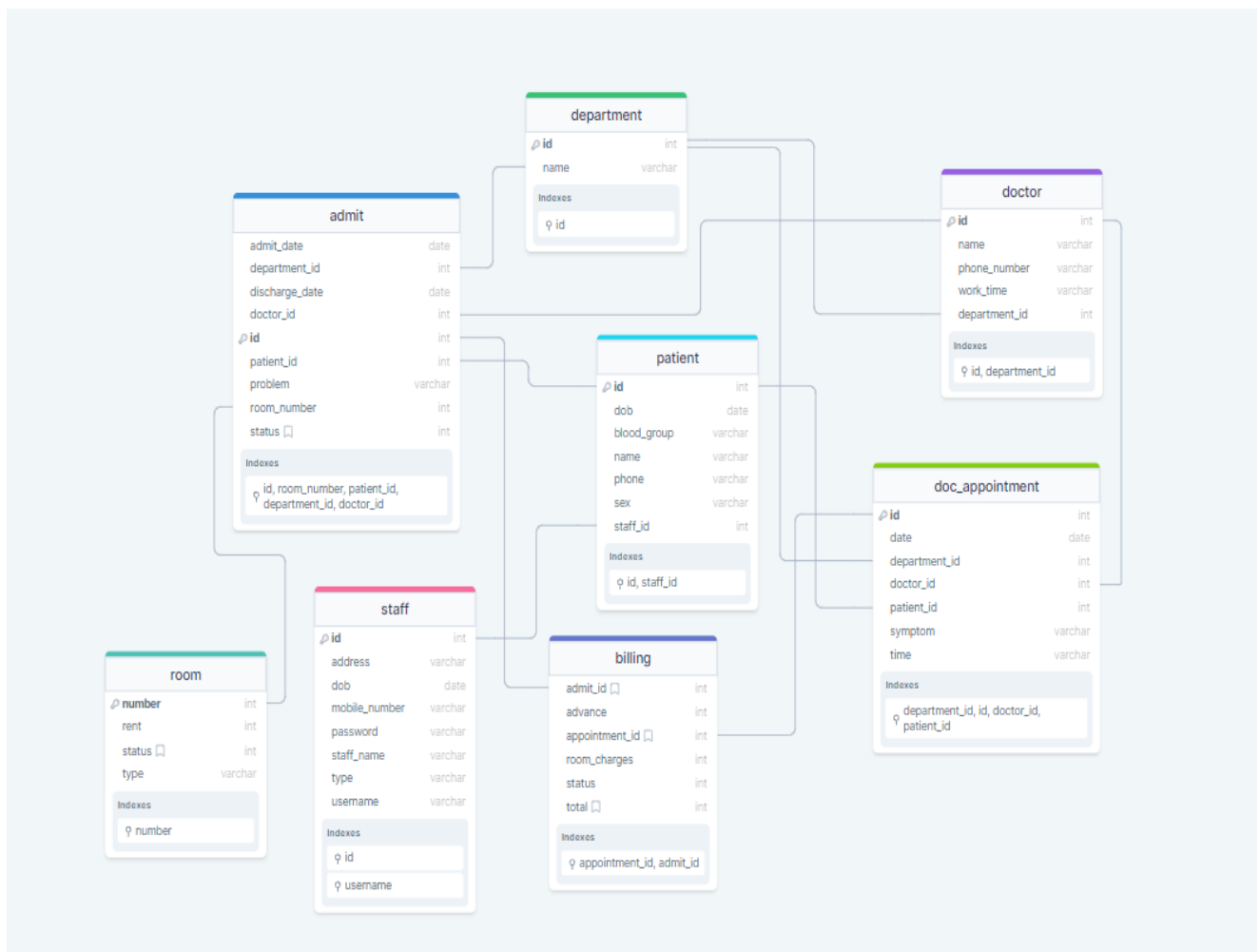
Appendix V: Other Source Code

Appendix A: Current Structure of Hospital Management System

Please see the attached ER diagram in Appendix B.

Appendix B: Hospital Management System Database Table Structure

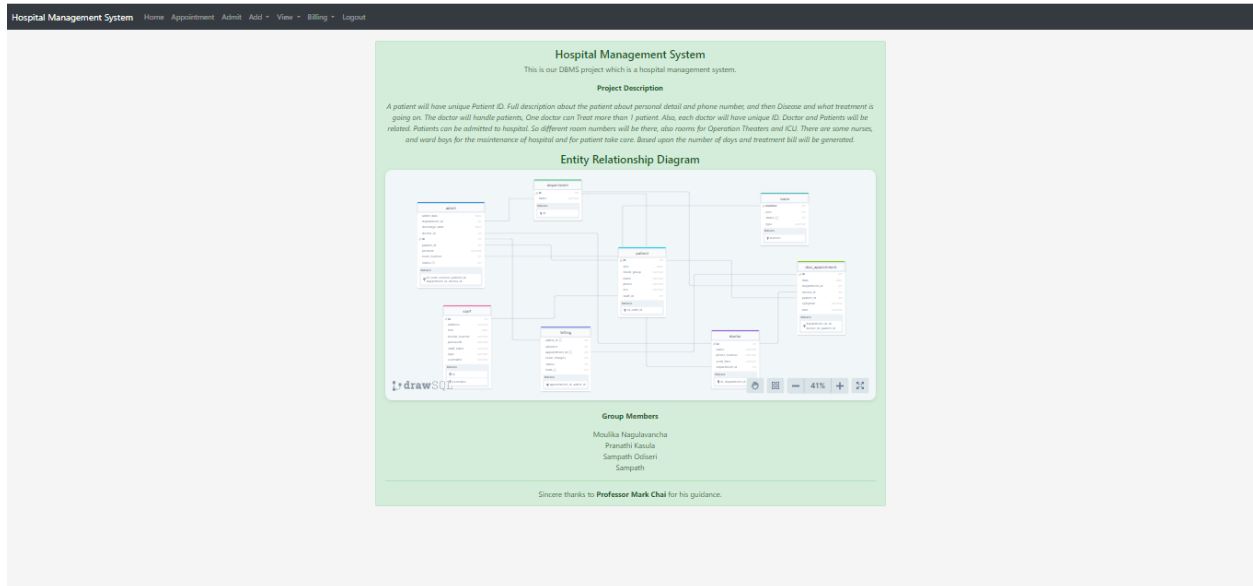
<https://drawsql.app/teams/team-6-8/diagrams/hospitalmanagementsystem/embed>



Appendix C: List of Source Code

- **index.php** - starting page which will redirect to the login page.
- **login.php** - Doctors and staff login page.
- **logout.php** - we can log out from the application.
- **Dashboard.php** - We can view the project description and the ER Diagram.
- **add-patient.php** - where we can add the patient by giving the patient information.
- **add-doctor.php** - where hospital management can add doctors to the hospital.
- **add-department.php** - when we can add the department.
- **add-room.php** - we can add the newly available room.
- **add-staff.php** - where we can add the available staff.
- **view-patients.php** - where we can view all the patient details who consulted the hospital.
- **view-doctors.php** - we can see all the doctor details who are working for the hospital.
- **view-staff.php** - we can see all the staff details who are working for the hospital.
- **view-room.php** - we can see the availability and the status of the rooms.
- **view-appointments.php** - where we can view all the booked appointments.
- **view-admitted.php** - where we can view all the patients who are admitted to the hospital.
- **admit-billing.php** - where we can manage the billing details of the admitted patients.
- **appointment-billing.php** – we can manage the billing details of the patients who have booked the appointment.
- **admit.php** - where we can admit to the specific room and the doctor.
- **appointment.php** - where we can assign the specific doctor while booking an appointment.

Appendix D: Home page - Screenshot and Code



```
<?php
session_start();
include_once("helpers/db.php");
$page_title = "Dashboard";
include("inc/header.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<br>
<div class="container">
<div class="alert alert-success" role="alert">
    <h4 class="alert-heading">Hospital Management System</h4>
    <p>This is our DBMS project which is a hospital management system.</p>
    <p><b>Project Description</b></p>
    <p style="font-style: italic;">
```

A patient will have unique Patient ID. Full description about the patient about personal detail and phone number, and then Disease and what treatment is going on. The doctor will handle patients, One doctor can Treat more than 1 patient. Also, each doctor will have unique ID. Doctor and Patients will be related. Patients can be admitted to hospital. So different room numbers will be there, also rooms for Operation Theaters and ICU. There are some nurses, and ward boys for the maintenance of hospital and for patient take care. Based upon the number of days and treatment bill will be generated.

```
</p>
<p>
<h4 class="alert-heading">Entity Relationship Diagram</h4>
<iframe width="100%" height="500px"
style="box-shadow: 0 2px 8px 0 rgba(63,69,81,0.16); border-radius:15px;"
allowtransparency="true" allowfullscreen="true" scrolling="no"
title="Embedded DrawSQL IFrame" frameborder="0"
src="https://drawsql.app/teams/team-6-
8/diagrams/hospitalmanagementsystem/embed"></iframe>
</p>
<p><b>Group Members</b></p>
<p>Moulika Nagulavancha <br> Pranathi Kasula <br> Sampath Reddy Hanmanthu
<br> Sampath Reddy Odesari</p>
<hr>
<p class="mb-0">Sincere thanks to <b>Professor Mark Chai</b> for his
guidance.</p>
</div></div>

<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>
```

Appendix E: Add Staff Page - Screenshot and Code

localhost:8000/add-staff.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Add staff

Fullname
Sampath

Username
test

Password
....

Type
Admin

Date of birth
06/08/1996

Address
6709 W 141st Ter

Phone Number
1234567891

Submit

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "Add staff";
include("inc/header.php");

if(isset($_POST['submit'])){
    $name = $_POST['fullname'];
    $type = $_POST['type'];
    $dob = $_POST['dob'];
    $address = $_POST['address'];
    $phone = $_POST['phone'];
    $username = $_POST['username'];
    $password = $_POST['password'];

    $query = "INSERT INTO `staff` (`id`, `staff_name`, `username`, `password`,
`mobile_number`, `address`, `type`, `dob`) VALUES (NULL, '$name', '$username',
'$password', '$phone', '$address', '$type', '$dob')";

    if(mysqli_query($con,$query)){
        $msg="Added successfully!";
    }else{
        $msg="Some error ocured!";
    }
}
```

```

    }
}
?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="form-signin" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <div class="form-control">
        <label for="fullname">Fullname</label>
        <input type="text" name="fullname" id="fullname" class="form-
control" required>
        <label for="username">Username</label>
        <input type="text" name="username" id="username" class="form-
control" required>
        <label for="password">Password</label>
        <input type="password" name="password" id="password" class="form-
control" required>
        <label for="type">Type</label>
        <select name="type" id="type" class="form-control p-2">
            <option value="admin">Admin</option>
            <option value="viewer">Viewer</option>
        </select>
        <label for="dob">Date of birth</label>
        <input type="date" name="dob" id="dob" class="form-control"
max="2000-01-01" required>
        <label for="address">Address</label>
        <input type="text" name="address" id="address" class="form-
control" required>
        <label for="phone">Phone Number</label>
        <input type="text" name="phone" id="phone" class="form-control"
required maxLength="10" pattern="[1-9]{1}[0-9]{9}"><br>
        <input type="submit" class="btn btn-primary" name="submit">
    </div>

```

```

        </form>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix F: Add Department page - Screenshot and Code

The screenshot displays the 'Add Department' page of a Hospital Management System. The page features a dark header with the system name and navigation options. The main content area contains a form titled 'Add Department' with a text input field labeled 'Department name' containing the text 'Rheumatology'. A blue 'Submit' button is positioned below the input field. The browser's address bar indicates the page is located at 'localhost:8000/add-department.php'.

```

<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "Add Department";
include("inc/header.php");

if(isset($_POST['submit'])){
    $dept = $_POST['dept'];

    $query = "INSERT INTO `department` (`id`, `name`) VALUES ('NULL',
'$dept')";

    if(mysqli_query($con,$query)){

```

```

        $msg="Added successfully!";
    }else{
        $msg="Some error occurred!";
    }
}
?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="form-signin" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <div class="form-control">
        <label for="dept">Department name</label>
        <input type="text" name="dept" id="dept" class="form-control"
required><br>
        <input type="submit" class="btn btn-primary" name="submit">
    </div>
</form>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix G: Appointment Billing Page - Screenshot and Code

localhost:8000/appointment-billing.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Unpaid View all

Patient's name	Problem	Total	Status
Devang Joshi	Flu	250	Paid
Anukrita Bharaktiya	Migraine	500	Paid
Raghu Raj	Ear problem	100	Unpaid Mark paid
Moulika	Bone problem	100	Unpaid Mark paid
Raghu Raj	Ear problem	100	Unpaid Mark paid
Anukrita Bharaktiya	Teeth problem	100	Unpaid Mark paid
Pranathi	Teeth Cavities	100	Unpaid Mark paid

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View Appointments";
include("inc/header.php");

if(isset($_GET['markPaid'])){
    $paid_id = $_GET['markPaid'];
    if(mysqli_query($con,"UPDATE billing SET status=1 where
appointment_id=$paid_id")){
        $msg = "Marked as paid";
    }else{
        $msg = "Error!";
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
```

```

<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br>
    <div class="btn-group" role="group">
        <a href="?viewunpaid=0" class="btn btn-primary">Unpaid</a>
        <a href="?viewunpaid=1" class="btn btn-primary">View all</a>
    </div><br><br>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <table class="table">
        <tr>
            <th>Patient's name</th>
            <th>Problem</th>
            <th>Total</th>
            <th>Status</th>
        </tr>
        <?php
            if(isset($_GET['viewunpaid']) and $_GET['viewunpaid']==0){
                $query = "SELECT * FROM billing where status=0 and
appointment_id is not NULL"; //0 is unpaid, 1 is paid
            } else{
                $query = "SELECT * FROM billing where appointment_id is not
NULL";
            }
            $query_run=mysqli_query($con,$query);
            while($data = mysqli_fetch_array($query_run)){
                $app_id = $data['appointment_id'];
                $patient = mysqli_fetch_array(mysqli_query($con,"SELECT
patient_id,symptom FROM doc_appointment where id=$app_id"));
                $patient_id = $patient['patient_id'];
                $total = $data['total'];
                $problem = $patient['symptom'];
                $status = $data['status'];
                $pquery = mysqli_query($con,"select name from patient where
id=$patient_id");
                $patient_data = mysqli_fetch_array($pquery);
                ?>
                <tr>
                    <td><?php echo $patient_data['name'];?></td>
                    <td><?php echo $problem; ?></td>

```

```

                <td><?php echo $total;?></td>
                <td><?php if($status==0){ echo "<span class='text-
danger'><b>Unpaid</b></span> <a href='appointment-billing.php?markPaid=$app_id'
class='btn btn-success btn-sm'>Mark paid</a>"; }else{ echo "<span class='text-
success'><b>Paid</b></span>";} ?> </td>
            </tr>
        <?php
    }
    ?>
</table>
</div>

<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix H: Admitted Billing Page - Screenshot and Code

← → ↻ localhost:8000/admit-billing.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Unpaid View all

Patient's name	Room charges	Advance	Other charges	Total	Due	Status
Aadarsh Bhandari	1000	5000	8000	9000	0	Paid
Anukrita Bharaktiya	700	4500	12500	13200	0	Paid
Raghu Raj	0	100	1000	1000	0	Paid
Mouluka	0	1000	0 Edit		-1000	Unpaid Mark paid
Aadarsh Bhandari	0	100	0 Edit		-100	Unpaid Mark paid
Pranathi	0	1000	0 Edit		-1000	Unpaid Mark paid

```

<?php
session_start();

```

```

include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View Admitted";
include("inc/header.php");

if(isset($_POST['submit'])){
    $name = $_POST['fullname'];
    $type = $_POST['type'];
    $dob = $_POST['dob'];
    $address = $_POST['address'];
    $phone = $_POST['phone'];
    $username = $_POST['username'];
    $password = $_POST['password'];

    $query = "INSERT INTO `staff` (`id`, `staff_name`, `username`, `password`,
`mobile_number`, `address`, `type`) VALUES (NULL, '$name', '$username',
'$password', '$phone', '$address', '$type')";

    if(mysqli_query($con,$query)){
        $msg="Added successfully!";
    }else{
        $msg="Some error occured!";
    }
}

if(isset($_GET['markPaid'])){
    $paid_id = $_GET['markPaid'];
    if(mysqli_query($con,"UPDATE billing SET status=1 where
admit_id=$paid_id")){
        $msg = "Marked as paid";
    }else{
        $msg = "Error!";
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">

```

```

<?php include("inc/menu.php"); ?>
<div class="container">
    <br>
    <div class="btn-group" role="group">
        <a href="?viewunpaid=0" class="btn btn-primary">Unpaid</a>
        <a href="?viewunpaid=1" class="btn btn-primary">View all</a>
    </div><br><br>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <table class="table">
        <tr>
            <th>Patient's name</th>
            <th>Room charges</th>
            <th>Advance</th>
            <th>Other charges</th>
            <th>Total</th>
            <th>Due</th>
            <th>Status</th>
        </tr>
        <?php
            if(isset($_GET['viewunpaid']) and $_GET['viewunpaid']==0){
                $query = "SELECT * FROM billing where status=0 and admit_id is
not NULL";
            } else{
                $query = "SELECT * FROM billing where admit_id is not NULL";
            }
            $query_run=mysqli_query($con,$query);
            while($data = mysqli_fetch_array($query_run)){
                $admit_id = $data['admit_id'];
                $patient = mysqli_fetch_array(mysqli_query($con,"SELECT patient_id
FROM admit where id=$admit_id"));
                $patient_id = $patient['patient_id'];
                $room_charges = $data['room_charges'];
                $advance = $data['advance'];
                $total = $data['total'];
                $due = $total - $advance;
                if(isset($total)){
                    $other_charges = $total - $room_charges;
                    $due = $total - $advance;
                }else{
                    $other_charges = 0;
                    $due = $room_charges - $advance;
                }
            }
        ?>
    </table>

```

```

    }
    $status = $data['status'];
    $pquery = mysqli_query($con,"select name from patient where
id=$patient_id");
    $patient_data = mysqli_fetch_array($pquery);
    ?>
    <tr>
        <td><?php echo $patient_data['name'];?></td>
        <td><?php echo $room_charges;?></td>
        <td><?php echo $advance;?></td>
        <td><?php echo $other_charges." "; if($status==0){ echo "<a
href='admit-bill.php?admitid=$admit_id&charges=$other_charges' class='btn btn-
dark btn-sm'>Edit</a>";}?></td>
        <td><?php echo $total;?></td>
        <td><?php if($status==0){echo $due;} else {echo "0";}?></td>
        <td><?php if($status==0){ echo "<span class='text-
danger'><b>Unpaid</b></span> <a href='admit-billing.php?markPaid=$admit_id'
class='btn btn-success btn-sm'>Mark paid</a>"; }else{ echo "<span class='text-
success'><b>Paid</b></span>";} ?> </td>
    </tr>
    <?php
    }
    ?>
</table>
</div>

<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix I: Add Patient Page - Screenshot and Code

localhost:8000/add-patient.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Add patient

Fullname

Pranathi

Sex

Female

Date of birth

06/08/1996

Blood Group

A+

Phone Number

1234567891

Submit

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "Add patient";
include("inc/header.php");

if(isset($_POST['submit'])){
    $name = $_POST['fullname'];
    $sex = $_POST['sex'];
    $dob = $_POST['dob'];
    $bgroup = $_POST['bgroup'];
    $phone = $_POST['phone'];
    $staff_id = $_SESSION['id'];
    $query = "INSERT INTO `patient` (`id`, `name`, `sex`, `dob`, `phone`,
`blood_group`, `staff_id`) VALUES (NULL, '$name', '$sex', '$dob', '$phone',
'$bgroup', '$staff_id')";

    if(mysqli_query($con,$query)){
        $msg="Added successfully!";
    }else{
        $msg="Some error ocured!";
    }
}
```

```

}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="form-signin" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <div class="form-control">
        <label for="fullname">Fullname</label>
        <input type="text" name="fullname" id="fullname" class="form-
control" required>
        <label for="sex">Sex</label>
        <select name="sex" id="sex" class="form-control p-2">
            <option value="Male">Male</option>
            <option value="Female">Female</option>
        </select>
        <label for="dob">Date of birth</label>
        <input type="date" name="dob" id="dob" class="form-control"
required>
        <label for="bgroup">Blood Group</label>
        <select name="bgroup" id="bgroup" class="form-control p-2">
            <option value="A+">A+</option>
            <option value="A-">A-</option>
            <option value="B+">B+</option>
            <option value="B-">B-</option>
            <option value="AB+">AB+</option>
            <option value="AB-">AB-</option>
            <option value="O+">O+</option>
            <option value="O-">O-</option>
        </select>
        <label for="phone">Phone Number</label>
        <input type="text" name="phone" id="phone" class="form-control"
maxlength="10" pattern="[1-9]{1}[0-9]{9}" required><br>
        <input type="submit" class="btn btn-primary" name="submit">
    </div>

```



```

        </form>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix J: Add Doctor Page - Screenshot and Code

The screenshot shows a web browser at localhost:8000/add-doctor.php. The page title is "Hospital Management System". The navigation bar includes links for Home, Appointment, Admit, Add, View, Billing, and Logout. The main content area is titled "Add doctor details" and contains a form with the following fields:

- Fullname: Moulika
- Department: ENT (selected from a dropdown)
- Work time: 12-2
- Phone Number: 1234567891

A blue "Submit" button is located at the bottom of the form.

```

<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "Add doctor details";
include("inc/header.php");

if(isset($_POST['submit'])){
    $name = $_POST['fullname'];
    $dept = $_POST['department'];
    $phone = $_POST['phone'];
}

```

```

        $work_time = $_POST['worktime'];
        $query = "INSERT INTO `doctor` (`id`, `name`, `work_time`, `phone_number`,
`department_id`) VALUES (NULL, '$name', '$work_time', '$phone', '$dept')";

        if(mysqli_query($con,$query)){
            $msg="Added successfully!";
        }else{
            $msg="Some error occurred!";
        }
    }
}
?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="form-signin" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <div class="form-control">
        <label for="fullname">Fullname</label>
        <input type="text" name="fullname" id="fullname" class="form-
control" required>
        <label for="department">Department</label>
        <select name="department" id="department" class="form-control p-
2">

            <?php
                $dept_query = "SELECT * from department";
                $query_run = mysqli_query($con,$dept_query);
                while($dept_data = mysqli_fetch_array($query_run)){
                    ?>
                    <option value="<?php echo $dept_data['id']?>"><?php
echo $dept_data['name']?></option>
                    <?php
                }
            ?>
        </select>
        <label for="worktime">Work time</label>

```

```

        <input type="text" name="worktime" id="worktime" class="form-
control" required>
        <label for="phone">Phone Number</label>
        <input type="text" name="phone" id="phone" class="form-control"
required maxLength="10" pattern="[1-9]{1}[0-9]{9}"><br>
        <input type="submit" class="btn btn-primary" name="submit">
    </div>
    </form>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix K: Add Room Page - Screenshot and Code

The screenshot shows a web browser window at localhost:8000/add-room.php. The page title is 'Add room'. The form contains the following fields:

- Room no.: 134
- Room type: General Ward (dropdown menu)
- Rent: 1500
- Submit button

```

<?php

/* Definitions
Rooms:
    1: General Ward
    2: ICU
    3: Emergency
*/

```

```

$page_title = "Add room";
include("inc/header.php");
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}

if(isset($_POST['submit'])){
    $number = $_POST['number'];
    $type = $_POST['type'];
    $rent = $_POST['rent'];

    $query = "INSERT INTO `room` (`number`, `type`, `rent`) VALUES ('$number',
'$type', '$rent')";

    if(mysqli_query($con,$query)){
        $msg="Added successfully!";
    }else{
        $msg="Some error occured!";
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body>
<div class="row">
<div class="col-md-12">
<?php include("inc/menu.php"); ?>
</div></div>
<div class="row">
<form class="form-signin text-center" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }

    ?>
    <div class="form-control">
        <label for="number">Room no.</label>

```

```

        <input type="text" name="number" id="number" class="form-control"
required autofocus>
        <label for="">Room type</label>
        <select class="form-control p-2" name="type">
        <option value="1">General Ward</option>
        <option value="2">ICU</option>
        <option value="3">Emergency</option>

        </select>
        <label for="rent">Rent</label>
        <input type="text" name="rent" id="rent" class="form-control"
required>
        <br>
        <input type="submit" class="btn btn-primary" name="submit">
    </div>
    </form>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix L: Doctor Appointment Page - Screenshot and Code

The screenshot displays the 'Appointment' page of a 'Hospital Management System'. The page features a navigation bar with links: Home, Appointment, Admit, Add, View, Billing, and Logout. The main form is titled 'Appointment' and contains the following fields:

- Patient name:** A dropdown menu with 'Pranathi' selected.
- Department:** A dropdown menu with 'Dentist' selected.
- Doctor:** A dropdown menu with 'Jay Shrivastav' selected.
- Appointment date:** A date input field showing '04/22/2023'.
- Appointment time:** A text input field showing '10AM - 2PM'.
- Fees:** A text input field showing '100'.
- Problem:** A text input field showing 'Teeth Cavities'.

A blue 'Submit' button is located at the bottom center of the form.

```

<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "Appointment";
include("inc/header.php");

if(isset($_POST['submit'])){
    $patient = $_POST['patient'];
    $dept = $_POST['department'];
    $doctor = $_POST['doctor'];
    $problem = $_POST['problem'];
    $apdate = $_POST['appointmentdate'];
    $aptime = $_POST['appointmenttime'];
    $advance = $_POST['advance'];
    $query = "INSERT INTO `doc_appointment` (`id`, `symptom`, `date`, `time`,
`patient_id`, `department_id`, `doctor_id`) VALUES (NULL, '$problem',
'$apdate', '$aptime', '$patient', '$dept', '$doctor')";

    if(mysqli_query($con,$query)){
        $appointmentid = mysqli_insert_id($con);
        $billquery="INSERT INTO `billing` (`appointment_id`, `total`) VALUES
('$appointmentid', '$advance')";
        if(mysqli_query($con,$billquery)){
            $msg="Added successfully!";
        }else{
            $msg = "Billing error";
        }
    }else{
        $msg="Some error occured!";
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="container" method="post">

```

```

<h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
<?php
    if(isset($msg)){
        echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
    }
?>
<div class="form-control">
    <div class="row">
        <div class="col-md-6">
            <label for="patient">Patient name</label>
            <select name="patient" id="patient" class="form-control p-2">
                <?php
                    $patient_query = "SELECT * from patient";
                    $query_run = mysqli_query($con,$patient_query);
                    while($patient_data = mysqli_fetch_array($query_run)){
                        ?>
                        <option value="<?php echo $patient_data['id'];?>"><?php
echo $patient_data['name'];?></option>
                        <?php
                    }
                ?>
            </select>
            <label for="department">Department</label>
            <select name="department" id="department" class="form-control p-
2">
                <?php
                    $dept_query = "SELECT * from department";
                    $query_run = mysqli_query($con,$dept_query);
                    while($dept_data = mysqli_fetch_array($query_run)){
                        ?>
                        <option value="<?php echo $dept_data['id'];?>"><?php
echo $dept_data['name'];?></option>
                        <?php
                    }
                ?>
            </select>
            <label for="doctor">Doctor</label>
            <select name="doctor" id="doctor" class="form-control">

            </select>
            <label for="problem">Problem</label>
            <input type="text" name="problem" id="problem" class="form-
control" required>
        </div>
    </div>

```

```

        <div class="col-md-6">
            <label for="appointmentdate">Appointment date</label>
            <input type="date" name="appointmentdate" id="appointmentdate"
class="form-control" value="<?php echo date("Y-m-d");?>" max="<?php echo
date("Y-m-d");?>"required>
            <label for="appointmenttime">Appointment time</label>
            <input type="text" name="appointmenttime" id="appointmenttime"
class="form-control" required>
            <label for="advance">Fees</label>
            <input type="text" name="advance" id="advance" class="form-
control" required>
        </div>
    </div><br>
    <input type="submit" class="btn btn-primary" name="submit">
</div>
</form>

```

```

<?php
include_once("inc/bootstrap.php");
?>
<script>
$("#department").bind("click", function(e){
    $url = "helpers/doctor_fetch.php?searchTerm=" + $("#department").val(),
    fetch($url).then(response => {
        return response.json();
    }).then(data => {
        var row=0;
        $('#doctor').html("");
        while(row < data.length){

            $('#doctor').append('<option
value="'+data[row]["id"]+'"'>'+data[row]["text"]+'</option>');
            row+=1;
        }
    }).catch(err => {
        //errors here
    });
});
$("#doctor").bind("click", function(e){
    $url = "helpers/doctor_time_fetch.php?searchTerm=" + $("#doctor").val(),
    fetch($url).then(response => {
        return response.json();
    }).then(data => {
        $('#appointmenttime').val(data[0]['free']);
    });
});

```



```

}).catch(err => {
    //errors here
});
});
</script>
<?php
include_once("inc/footer.php");
?>

```

Appendix M: View the Patients Page - Screenshot and Code

← → ↻ localhost:8000/view-patients.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add ▾ View ▾ Billing ▾ Logout

Patient's name	Mobile no.	Sex	Date of birth	Blood group	Added by
Raghu Raj	9856457878	Male	1952-02-15	AB+	Test Staff
Aadarsh Bhandari	7478784547	Male	1985-08-25	A-	Test Staff
Anukrita Bharaktiya	7999727605	Female	1998-10-25	O-	Test Staff
Devang Joshi	8521479633	Male	1991-11-17	B+	Test Staff
Moulika	1234567891	Female	1996-08-06	B-	Test Staff
Pranathi	1234567891	Female	1996-06-08	A+	Test Staff

```

<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View all patients";
include("inc/header.php");

?>

```

```

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br><br>
    <table class="table">
        <tr>
            <th>Patient's name</th>
            <th>Mobile no.</th>
            <th>Sex</th>
            <th>Date of birth</th>
            <th>Blood group</th>
            <th>Added by</th>
        </tr>
        <?php
        $query = "SELECT * FROM patient";
        $query_run=mysqli_query($con,$query);
        while($data = mysqli_fetch_array($query_run)){
            $staff_id = $data['staff_id'];
            $staff_details = mysqli_fetch_array(mysqli_query($con, "SELECT
staff_name from staff where id=$staff_id"));
            $staff_name = $staff_details['staff_name'];
            ?>
            <tr>
                <td><?php echo $data['name']?></td>
                <td><?php echo $data['phone'] ?></td>
                <td><?php echo $data['sex']?></td>
                <td><?php echo $data['dob']?></td>
                <td><?php echo $data['blood_group']?></td>
                <td><?php echo $staff_name?></td>
            </tr>
            <?php
        }
        ?>
    </table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix N: View Doctors Page - Screenshot and Code

localhost:8000/view-doctors.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Doctors's name	Mobile no.	Depatment	Work hours
Rajkumar Agarwal	9696969565	General Physician	10AM - 2PM
Nikhil Saksena	7149066355	ENT	5PM - 9PM
Anil Mutha	9826294565	Cardiologist	7AM - 11AM
Jay Shrivastav	7999727585	Dentist	10AM - 2PM
Sunil Grover	7156589332	General Physician	10AM - 6PM
Kapil Sharma	9920654787	Cardiologist	5PM - 9PM
Moulika	1234567891	ENT	12-2

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View doctors";
include("inc/header.php");

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br><br>
    <table class="table">
        <tr>
            <th>Doctors's name</th>
            <th>Mobile no.</th>
            <th>Depatment</th>
            <th>Work hours</th>
```

```

        </tr>
        <?php
        $query = "SELECT * FROM doctor";
        $query_run=mysqli_query($con,$query);
        while($data = mysqli_fetch_array($query_run)){
            $dept_id = $data['department_id'];
            $dept_details = mysqli_fetch_array(mysqli_query($con, "SELECT name
from department where id=$dept_id"));
            $dept_name = $dept_details['name'];
            ?>
            <tr>
                <td><?php echo $data['name']?></td>
                <td><?php echo $data['phone_number'] ?></td>
                <td><?php echo $dept_name?></td>
                <td><?php echo $data['work_time']?></td>
            </tr>
            <?php
        }
        ?>
    </table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix O: View Room Page - Screenshot and Code

localhost:8000/view-room.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Room number	Type	Rent	Status
101	General Ward	500	Allocated
102	General Ward	500	Allocated
103	General Ward	500	Allocated
104	General Ward	500	Vacant
105	General Ward	500	Vacant
106	General Ward	450	Vacant
134	General Ward	1500	Vacant
143	ICU	1200	Vacant
201	ICU	1000	Vacant
202	ICU	1000	Vacant

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View all staff";
include("inc/header.php");

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br><br>
    <table class="table">
        <tr>
            <th>Room number</th>
            <th>Type</th>
            <th>Rent</th>
            <th>Status</th>
        </tr>
```

```

<?php
$query = "SELECT * FROM room";
$query_run=mysqli_query($con,$query);
while($data = mysqli_fetch_array($query_run)){
    $type_code = $data['type'];
    $status_code = $data['status'];
    if($type_code==1){
        $type = "General Ward";
    }elseif($type_code==2){
        $type = "ICU";
    }elseif($type_code==3){
        $type = "Emergency";
    }
    if($status_code == 1){
        $status = "<span class='text-success'><b>Vacant</b></span>";
    } else{
        $status = "<span class='text-danger'><b>Allocated</b></span>";
    }
    ?>
    <tr>
        <td><?php echo $data['number']?></td>
        <td><?php echo $type ?></td>
        <td><?php echo $data['rent'] ?></td>
        <td><?php echo $status ?></td>
    </tr>
    <?php
}
?>
</table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix P: View Staff Page - Screenshot and Code

localhost:8000/view-staff.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Name	Username	Type	Date of birth	Address	Phone number
Test Staff	test	admin	1985-10-20	12/24 Karol Bagh	9826285858
The Viewer	viewer	viewer	1999-12-01	17, BCE Colony	8585457545
Nurse1	nurse1	viewer	1999-12-29	6709 W 141st Ter	1234567891
Sampath	test1	admin	1996-06-08	6709 W 141st Ter	1234567891

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View all staff";
include("inc/header.php");
?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br><br>
    <table class="table">
        <tr>
            <th>Name</th>
            <th>Username</th>
            <th>Type</th>
            <th>Date of birth</th>
            <th>Address</th>
            <th>Phone number</th>
```

```

    </tr>
    <?php
    $query = "SELECT * FROM staff";
    $query_run=mysqli_query($con,$query);
    while($data = mysqli_fetch_array($query_run)){
        ?>
        <tr>
            <td><?php echo $data['staff_name']?></td>
            <td><?php echo $data['username'] ?></td>
            <td><?php echo $data['type']?></td>
            <td><?php echo $data['dob']?></td>
            <td><?php echo $data['address']?></td>
            <td><?php echo $data['mobile_number']?></td>
        </tr>
    <?php
    }
    ?>
</table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix Q: View the Appointment Page - Screenshot and Code

localhost:8000/view-appointments.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System Home Appointment Admit Add View Billing Logout

Patient's name	Mobile no.	Doctor	Problem	Appointment date	Time
Devang Joshi	8521479633	Rajkumar Agarwal	Flu	2018-10-17	10AM - 2PM
Anukrita Bharaktiya	7999727605	Sunil Grover	Migraine	2018-10-17	10AM - 6PM
Raghu Raj	9856457878	Nikhil Saxena	Ear problem	2023-04-09	11
Moulika	1234567891	Sunil Grover	Bone problem	2023-04-09	10AM - 6PM
Raghu Raj	9856457878	Nikhil Saxena	Ear problem	2023-04-10	5PM - 9PM
Anukrita Bharaktiya	7999727605	Jay Shrivastav	Teeth problem	2023-04-17	10AM - 2PM

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}
$page_title = "View Appointments";
include("inc/header.php");

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br><br>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <table class="table">
        <tr>
```

```

        <th>Patient's name</th>
        <th>Mobile no.</th>
        <th>Doctor</th>
        <th>Problem</th>
        <th>Appointment date</th>
        <th>Time</th>
    </tr>
    <?php
    $query = "SELECT * FROM doc_appointment";
    $query_run=mysqli_query($con,$query);
    while($data = mysqli_fetch_array($query_run)){
        $patient_id = $data['patient_id'];
        $doctor_id = $data['doctor_id'];
        $pquery = mysqli_query($con,"select name,phone from patient where
id=$patient_id");
        $patient_data = mysqli_fetch_array($pquery);
        $dquery = mysqli_query($con,"select name from doctor where
id=$doctor_id");
        $doctor_data = mysqli_fetch_array($dquery);
        ?>
        <tr>
            <td><?php echo $patient_data['name']?></td>
            <td><?php echo $patient_data['phone']?></td>
            <td><?php echo $doctor_data['name']?></td>
            <td><?php echo $data['symptom']?></td>
            <td><?php echo $data['date']?></td>
            <td><?php echo $data['time']?></td>
        </tr>
    <?php
    }
    ?>
</table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix R: View Admitted Page - Screenshot and Code

← → ↻ localhost:8000/view-admitted.php

UCM Mail PMail UCM Study AWS Console

Hospital Management System

Home Appointment Admit Add ▾ View ▾ Billing ▾ Logout

Admitted View all

Patient's name	Mobile no.	Room	Doctor	Admit date
Aadarsh Bhandari	7478784547	202	Nikhil Saxena	2018-10-17
Anukrita Bharaktiya	7999727605	301	Anil Mutha	2018-10-17
Raghu Raj	9856457878	101	Nikhil Saxena	2023-04-09
Moulika	1234567891	102	Anil Mutha	2023-04-09
Aadarsh Bhandari	7478784547	103	Jay Shrivastav	2023-04-10

```
<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])) {
    header("Location: login.php");
}
$page_title = "View Admitted";
include("inc/header.php");

if(isset($_POST['submit'])) {
    $name = $_POST['fullname'];
    $type = $_POST['type'];
    $dob = $_POST['dob'];
    $address = $_POST['address'];
    $phone = $_POST['phone'];
    $username = $_POST['username'];
    $password = $_POST['password'];

    $query = "INSERT INTO `staff` (`id`, `staff_name`, `username`, `password`,
`mobile_number`, `address`, `type`) VALUES (NULL, '$name', '$username',
'$password', '$phone', '$address', '$type')";

    if(mysqli_query($con, $query)) {
        $msg = "Added successfully!";
    } else {
        $msg = "Some error occurred!";
    }
}
```

```

    }
}

if(isset($_GET['discharge'])){
    $date=date("Y-m-d");
    $dadmit_id = $_GET['discharge'];
    $details = mysqli_fetch_array(mysqli_query($con,"SELECT * FROM admit where
id=$dadmit_id"));
    $discharge_date_query = "UPDATE admit SET discharge_date='$date' where
id=$dadmit_id";////////
    $room = $details['room_number'];
    $admit_date = $details['admit_date'];
    $room_free_query = "UPDATE room SET status=1 where number=$room";////////
    $no_of_days = date_diff(date_create($admit_date),date_create($date));
    $room_rent = mysqli_fetch_array(mysqli_query($con,"SELECT * FROM room where
number=$room"));
    $room_rent_amt = $room_rent['rent'] * ($no_of_days->format("%a")+1);
    $add_room_charges = "UPDATE billing SET room_charges=$room_rent_amt where
admit_id=$dadmit_id";////////
    $discharge_status = "UPDATE admit SET status = 0 where id=$dadmit_id";

    if(mysqli_query($con,$room_free_query) and
mysqli_query($con,$discharge_status) and
mysqli_query($con,$discharge_date_query) and
mysqli_query($con,$add_room_charges)){
        $msg = "Patient discharged successfully";
    } else{
        $msg = "Some error!";
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<div class="container">
    <br>
    <div class="btn-group" role="group">
        <a href="?viewadmit=1" class="btn btn-primary">Admitted</a>

```

```

<a href="?viewadmit=0" class="btn btn-primary">View all</a>
</div><br><br>
<?php $view_admit_query = "SELECT * FROM admit where status=1";
    $view_all_query = "SELECT * FROM admit";
    ?> <br>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    ?>
    <table class="table">
        <tr>
            <th>Patient's name</th>
            <th>Mobile no.</th>
            <th>Room</th>
            <th>Doctor</th>
            <th>Admit date</th>
            <?php if(isset($_GET['viewadmit'])) and $_GET['viewadmit']==1){
?><th>Discharge</th><?php } elseif(isset($_GET['viewadmit'])) and
$_GET['viewadmit']==0){ ?><th>Discharge date</th><?php } ?>
            </tr>
            <?php
                if(isset($_GET['viewadmit'])) and $_GET['viewadmit']==1){
                    $query = "SELECT * FROM admit where status=1";
                } else{
                    $query = "SELECT * FROM admit";
                }
                $query_run=mysqli_query($con,$query);
                while($data = mysqli_fetch_array($query_run)){
                    $patient_id = $data['patient_id'];
                    $room_number = $data['room_number'];
                    $doctor_id = $data['doctor_id'];
                    $pquery = mysqli_query($con,"select name,phone from patient where
id=$patient_id");
                    $patient_data = mysqli_fetch_array($pquery);
                    $dquery = mysqli_query($con,"select name from doctor where
id=$doctor_id");
                    $doctor_data = mysqli_fetch_array($dquery);
                    ?>
                    <tr>
                        <td><?php echo $patient_data['name']?></td>
                        <td><?php echo $patient_data['phone']?></td>
                        <td><?php echo $room_number?></td>
                        <td><?php echo $doctor_data['name']?></td>

```

```

                <td><?php echo $data['admit_date'];?></td>
                <?php if(isset($_GET['viewadmit']) and $_GET['viewadmit']==1){
?><td><a href="?discharge=<?php echo $data['id'];?>" class="btn btn-danger btn-
sm">Discharge</a></td><?php } elseif(isset($_GET['viewadmit']) and
$_GET['viewadmit']==0) { ?><td><?php echo $data['discharge_date'];?></td><?php
} ?>
            </tr>
        <?php
    }
    ?>
</table>
</div>
<?php
include_once("inc/bootstrap.php");
include_once("inc/footer.php");
?>

```

Appendix S: Create Admit Page – Screenshot and Code

The screenshot shows a web browser at localhost:8000/admit.php. The page is titled 'Hospital Management System' and has a navigation menu. The main content area is titled 'Admit' and contains a form with the following fields:

- Patient name: Pranathi
- Admit date: 04/22/2023
- Department: Dentist
- Advance amount: 1000
- Doctor: Jay Shrivastav
- Room type: General
- Room no.: 105
- Problem: Teeth Cavities

A blue 'Submit' button is located at the bottom of the form.

```

<?php
session_start();
include_once("helpers/db.php");
if(!isset($_SESSION['username'])){
    header("Location: login.php");
}

```

```

    }
    $page_title = "Admit";
    include("inc/header.php");

    if(isset($_POST['submit'])){
        $patient = $_POST['patient'];
        $dept = $_POST['department'];
        $doctor = $_POST['doctor'];
        $problem = $_POST['problem'];
        $adddate = $_POST['admitdate'];
        $advance = $_POST['advance'];
        $roomnum = $_POST['roomno'];
        $query = "INSERT INTO `admit` (`id`, `problem`, `admit_date`, `patient_id`,
`department_id`, `doctor_id`, `room_number`) VALUES (NULL, '$problem',
'$adddate', '$patient', '$dept', '$doctor', '$roomnum')";
        $room_status = "update room set status = 0 where number=$roomnum";

        if(mysqli_query($con,$query)){
            $admitid = mysqli_insert_id($con);
            $billquery="INSERT INTO `billing` (`admit_id`, `advance`) VALUES
($admitid, $advance)";
            if(mysqli_query($con,$billquery) and mysqli_query($con,$room_status)){
                $msg="Added successfully!";
            }else{
                $msg = "Billing or room allocation error";
            }
        }else{
            $msg="Some error occurred!";
        }
    }
}

?>

<link rel="stylesheet" href="assets/css/custom.css">

</head>
<body class="text-center">
<?php include("inc/menu.php"); ?>
<form class="container" method="post">
    <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
    <?php
        if(isset($msg)){
            echo "<div class='alert alert-warning'
role='alert'>".$msg."</div>";
        }
    }

```

```

?>
<div class="form-control">
    <div class="row">
        <div class="col-md-6">
            <label for="patient">Patient name</label>
            <select name="patient" id="patient" class="form-control p-2">
                <?php
                    $patient_query = "SELECT * from patient";
                    $query_run = mysqli_query($con,$patient_query);
                    while($patient_data = mysqli_fetch_array($query_run)){
                        ?>
                        <option value="<?php echo $patient_data['id']?>"><?php
echo $patient_data['name']?></option>
                    <?php
                        }
                    ?>
                </select>
            <label for="department">Department</label>
            <select name="department" id="department" class="form-control p-
2">
                <?php
                    $dept_query = "SELECT * from department";
                    $query_run = mysqli_query($con,$dept_query);
                    while($dept_data = mysqli_fetch_array($query_run)){
                        ?>
                        <option value="<?php echo $dept_data['id'];?>"><?php
echo $dept_data['name']?></option>
                    <?php
                        }
                    ?>
                </select>
            <label for="doctor">Doctor</label>
            <select name="doctor" id="doctor" class="form-control">

            </select>
            <label for="problem">Problem</label>
            <input type="text" name="problem" id="problem" class="form-
control" required>
        </div>
        <div class="col-md-6">
            <label for="admitdate">Admit date</label>
            <input type="date" name="admitdate" id="admitdate" class="form-
control" value="<?php echo date("Y-m-d");?>" max="<?php echo date("Y-m-d");?>"
required>
            <label for="advance">Advance amount</label>

```



```

        <input type="text" name="advance" id="advance" class="form-
control" required>
        <div class="row">
            <div class="col-md-6">
                <label for="roomtype">Room type</label>
                <select name="roomtype" id="roomtype" class="form-control p-2">
                    <?php
                        $room_query = "SELECT distinct type from room";
                        $query_run = mysqli_query($con,$room_query);
                        while($room_data = mysqli_fetch_array($query_run)){
                            ?>
                                <option value="<?php echo $room_data['type'];?>"><?php
if($room_data['type']==1){
                                echo "General";}elseif($room_data['type']==2){echo
"ICU";}elseif($room_data['type']==3){echo "Emergency";} ?></option>
                                <?php
                                    }
                                ?>
                            </select>
                        </div>
                        <div class="col-md-6">
                            <label for="roomno">Room no.</label>
                            <select name="roomno" id="roomno" class="form-control">

                                </select>
                            </div>
                        </div>
                    </div>
                    <div><br>
                        <input type="submit" class="btn btn-primary" name="submit">
                    </div>
                </form>

```

```

<?php
include_once("inc/bootstrap.php");
?>
<script>
$("#department").bind("click", function(e){
    $url = "helpers/doctor_fetch.php?searchTerm=" + $("#department").val(),
    fetch($url).then(response => {
        return response.json();
    }).then(data => {
        var row=0;
        $('#doctor').html("");

```

```

        while(row < data.length){

            $('#doctor').append('<option
value="'+data[row]["id"]+'">'+data[row]["text"]+'</option>');
            row+=1;
        }
    }).catch(err => {
        //errors here
    });
});
$("#roomtype").bind("click", function(e){
    $url = "helpers/free_room_fetch.php?searchTerm=" + $("#roomtype").val(),
    fetch($url).then(response => {
        return response.json();
    }).then(data => {
        var row=0;
        $('#roomno').html("");
        while(row < data.length){
            $('#roomno').append('<option
value="'+data[row]["roomno"]+'">'+data[row]["roomno"]+'</option>');
            row+=1;
        }
    }).catch(err => {
        //errors here
    });
});
</script>
<?php
include_once("inc/footer.php");
?>

```

Appendix T: Create File

```

--
-- Database: `Hospital Management System`
--
--
-- -----
--
--
-- Table structure for table `admit`
--

```

```

CREATE TABLE `admit` (
  `id` int(11) NOT NULL,
  `admit_date` date NOT NULL,
  `discharge_date` date NOT NULL,
  `problem` varchar(255) NOT NULL,
  `patient_id` int(11) NOT NULL,
  `department_id` int(11) NOT NULL,
  `room_number` int(11) NOT NULL,
  `doctor_id` int(11) NOT NULL,
  `status` int(11) NOT NULL DEFAULT '1'
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `admit`
--

INSERT INTO `admit` (`id`, `admit_date`, `discharge_date`, `problem`,
`patient_id`, `department_id`, `room_number`, `doctor_id`, `status`) VALUES
(25, '2018-10-17', '2018-10-17', 'Tonsils', 12, 3, 202, 8, 0),
(26, '2018-10-17', '2018-10-17', 'Heart Attack', 13, 6, 301, 9, 0);

-- -----
--
-- Table structure for table `billing`
--

CREATE TABLE `billing` (
  `advance` int(11) DEFAULT NULL,
  `status` int(10) DEFAULT '0',
  `room_charges` int(11) NOT NULL,
  `total` int(11) DEFAULT NULL,
  `appointment_id` int(11) DEFAULT NULL,
  `admit_id` int(11) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `billing`
--

INSERT INTO `billing` (`advance`, `status`, `room_charges`, `total`,
`appointment_id`, `admit_id`) VALUES
(NULL, 1, 0, 250, 8, NULL),
(NULL, 0, 0, 500, 9, NULL),
(5000, 1, 1000, 9000, NULL, 25),

```

```

(4500, 0, 700, 13200, NULL, 26);

-- -----

--
-- Table structure for table `department`
--

CREATE TABLE `department` (
  `id` int(11) NOT NULL,
  `name` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `department`
--

INSERT INTO `department` (`id`, `name`) VALUES
(3, 'ENT'),
(4, 'Gynaecologist'),
(5, 'Dentist'),
(6, 'Cardiologist'),
(7, 'General Physician'),
(8, 'Neurologist');

-- -----

--
-- Table structure for table `doctor`
--

CREATE TABLE `doctor` (
  `id` int(11) NOT NULL,
  `name` varchar(255) NOT NULL,
  `work_time` varchar(255) NOT NULL,
  `phone_number` varchar(10) NOT NULL,
  `department_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `doctor`
--

INSERT INTO `doctor` (`id`, `name`, `work_time`, `phone_number`,
`department_id`) VALUES

```

```

(7, 'Rajkumar Agarwal', '10AM - 2PM', '9696969565', 7),
(8, 'Nikhil Saksena', '5PM - 9PM', '7149066355', 3),
(9, 'Anil Mutha', '7AM - 11AM', '9826294565', 6),
(10, 'Jay Shrivastav', '10AM - 2PM', '7999727585', 5),
(11, 'Sunil Grover', '10AM - 6PM', '7156589332', 7),
(12, 'Kapil Sharma', '5PM - 9PM', '9920654787', 6);

-- -----

--
-- Table structure for table `doc_appointment`
--

CREATE TABLE `doc_appointment` (
  `id` int(11) NOT NULL,
  `symptom` varchar(255) NOT NULL,
  `date` date NOT NULL,
  `time` varchar(255) NOT NULL,
  `patient_id` int(11) NOT NULL,
  `department_id` int(11) NOT NULL,
  `doctor_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `doc_appointment`
--

INSERT INTO `doc_appointment` (`id`, `symptom`, `date`, `time`, `patient_id`,
`department_id`, `doctor_id`) VALUES
(8, 'Flu', '2018-10-17', '10AM - 2PM', 14, 7, 7),
(9, 'Migraine ', '2018-10-17', '10AM - 6PM', 13, 7, 11);

-- -----

--
-- Table structure for table `patient`
--

CREATE TABLE `patient` (
  `id` int(11) NOT NULL,
  `name` varchar(255) NOT NULL,
  `sex` varchar(10) NOT NULL,
  `dob` date NOT NULL,
  `phone` varchar(10) NOT NULL,
  `blood_group` varchar(10) NOT NULL,

```

```

    `staff_id` int(11) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `patient`
--

INSERT INTO `patient` (`id`, `name`, `sex`, `dob`, `phone`, `blood_group`,
`staff_id`) VALUES
(11, 'Raghu Raj', 'Male', '1952-02-15', '9856457878', 'AB+', 1),
(12, 'Aadarsh Bhandari', 'Male', '1985-08-25', '7478784547', 'A-', 1),
(13, 'Anukrita Bharaktiya', 'Female', '1998-10-25', '7999727605', 'O-', 1),
(14, 'Devang Joshi', 'Male', '1991-11-17', '8521479633', 'B+', 1);

-----

--
-- Table structure for table `room`
--

CREATE TABLE `room` (
  `number` int(10) NOT NULL,
  `type` varchar(255) NOT NULL,
  `rent` int(11) NOT NULL,
  `status` int(11) NOT NULL DEFAULT '1'
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

.
--
-- Dumping data for table `room`
--

INSERT INTO `room` (`number`, `type`, `rent`, `status`) VALUES
(101, '1', 500, 1),
(102, '1', 500, 1),
(103, '1', 500, 1),
(104, '1', 500, 1),
(105, '1', 500, 1),
(106, '1', 450, 1),
(201, '2', 1000, 1),
(202, '2', 1000, 1),
(203, '2', 1000, 1),
(301, '3', 700, 1),
(302, '3', 700, 1),
(303, '3', 700, 1);

```

```

-----

--
-- Table structure for table `staff`
--

CREATE TABLE `staff` (
  `id` int(11) NOT NULL,
  `staff_name` varchar(255) NOT NULL,
  `username` varchar(255) NOT NULL,
  `password` varchar(255) NOT NULL,
  `mobile_number` varchar(10) NOT NULL,
  `dob` date NOT NULL,
  `address` varchar(255) NOT NULL,
  `type` varchar(255) NOT NULL
) ENGINE=InnoDB DEFAULT CHARSET=latin1;

--
-- Dumping data for table `staff`
--

INSERT INTO `staff` (`id`, `staff_name`, `username`, `password`,
`mobile_number`, `dob`, `address`, `type`) VALUES
(1, 'Test Staff', 'test', 'test', '9826285858', '1985-10-20', '12/24 Karol
Bagh', 'admin'),
(11, 'The Viewer', 'viewer', 'viewer', '8585457545', '1999-12-01', '17, BCE
Colony', 'viewer');

--
-- Indexes for dumped tables
--

--
-- Indexes for table `admit`
--
ALTER TABLE `admit`
  ADD PRIMARY KEY (`id`),
  ADD KEY `department_id` (`department_id`),
  ADD KEY `patient_id` (`patient_id`),
  ADD KEY `room_number` (`room_number`),
  ADD KEY `doctor_id` (`doctor_id`);

--
-- Indexes for table `billing`

```

```
--
ALTER TABLE `billing`
  ADD KEY `appointment_id` (`appointment_id`),
  ADD KEY `admit_id` (`admit_id`);

--
-- Indexes for table `department`
--
ALTER TABLE `department`
  ADD PRIMARY KEY (`id`);

--
-- Indexes for table `doctor`
--
ALTER TABLE `doctor`
  ADD PRIMARY KEY (`id`),
  ADD KEY `department_id` (`department_id`);

--
-- Indexes for table `doc_appointment`
--
ALTER TABLE `doc_appointment`
  ADD PRIMARY KEY (`id`),
  ADD KEY `patient_id` (`patient_id`),
  ADD KEY `department_id` (`department_id`),
  ADD KEY `doctor_id` (`doctor_id`);

--
-- Indexes for table `patient`
--
ALTER TABLE `patient`
  ADD PRIMARY KEY (`id`),
  ADD KEY `staff_id` (`staff_id`);

--
-- Indexes for table `room`
--
ALTER TABLE `room`
  ADD PRIMARY KEY (`number`);

--
-- Indexes for table `staff`
--
ALTER TABLE `staff`
  ADD PRIMARY KEY (`id`),
```



```
ADD UNIQUE KEY `username` (`username`);

--
-- AUTO_INCREMENT for dumped tables
--

--
-- AUTO_INCREMENT for table `admit`
--
ALTER TABLE `admit`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=27;
--
-- AUTO_INCREMENT for table `department`
--
ALTER TABLE `department`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=9;
--
-- AUTO_INCREMENT for table `doctor`
--
ALTER TABLE `doctor`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=13;
--
-- AUTO_INCREMENT for table `doc_appointment`
--
ALTER TABLE `doc_appointment`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=10;
--
-- AUTO_INCREMENT for table `patient`
--
ALTER TABLE `patient`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=15;
--
-- AUTO_INCREMENT for table `staff`
--
ALTER TABLE `staff`
  MODIFY `id` int(11) NOT NULL AUTO_INCREMENT, AUTO_INCREMENT=12;
--
-- Constraints for dumped tables
--

--
-- Constraints for table `admit`
--
ALTER TABLE `admit`
```

```

    ADD CONSTRAINT `admit_ibfk_1` FOREIGN KEY (`department_id`) REFERENCES
`department` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    ADD CONSTRAINT `admit_ibfk_2` FOREIGN KEY (`patient_id`) REFERENCES `patient`
(`id`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    ADD CONSTRAINT `admit_ibfk_3` FOREIGN KEY (`room_number`) REFERENCES `room`
(`number`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    ADD CONSTRAINT `admit_ibfk_4` FOREIGN KEY (`doctor_id`) REFERENCES `doctor`
(`id`) ON DELETE NO ACTION ON UPDATE NO ACTION;

--
-- Constraints for table `billing`
--
ALTER TABLE `billing`
    ADD CONSTRAINT `billing_ibfk_1` FOREIGN KEY (`appointment_id`) REFERENCES
`doc_appointment` (`id`) ON DELETE CASCADE ON UPDATE SET NULL,
    ADD CONSTRAINT `billing_ibfk_2` FOREIGN KEY (`admit_id`) REFERENCES `admit`
(`id`) ON DELETE CASCADE ON UPDATE SET NULL;

--
-- Constraints for table `doctor`
--
ALTER TABLE `doctor`
    ADD CONSTRAINT `doctor_ibfk_1` FOREIGN KEY (`department_id`) REFERENCES
`department` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION;

--
-- Constraints for table `doc_appointment`
--
ALTER TABLE `doc_appointment`
    ADD CONSTRAINT `doc_appointment_ibfk_1` FOREIGN KEY (`patient_id`) REFERENCES
`patient` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    ADD CONSTRAINT `doc_appointment_ibfk_2` FOREIGN KEY (`department_id`)
REFERENCES `department` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION,
    ADD CONSTRAINT `doc_appointment_ibfk_3` FOREIGN KEY (`doctor_id`) REFERENCES
`doctor` (`id`) ON DELETE NO ACTION ON UPDATE NO ACTION;

--
-- Constraints for table `patient`
--
ALTER TABLE `patient`
    ADD CONSTRAINT `patient_ibfk_1` FOREIGN KEY (`staff_id`) REFERENCES `staff`
(`id`) ON DELETE NO ACTION ON UPDATE NO ACTION;
COMMIT;

```

Appendix U: SQL Table Descriptions

```
mysql> use hms
Database changed
mysql> describe patient
-> ;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	
sex	varchar(10)	NO		NULL	
dob	date	NO		NULL	
phone	varchar(10)	NO		NULL	
blood_group	varchar(10)	NO		NULL	
staff_id	int	NO	MUL	NULL	

7 rows in set (0.01 sec)

```
mysql> describe doctor
-> ;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	
work_time	varchar(255)	NO		NULL	
phone_number	varchar(10)	NO		NULL	
department_id	int	NO	MUL	NULL	

5 rows in set (0.00 sec)

```
mysql> describe room;
```

Field	Type	Null	Key	Default	Extra
number	int	NO	PRI	NULL	
type	varchar(255)	NO		NULL	
rent	int	NO		NULL	
status	int	NO		1	

4 rows in set (0.00 sec)

```
mysql> describe staff;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
staff_name	varchar(255)	NO		NULL	
username	varchar(255)	NO	UNI	NULL	
password	varchar(255)	NO		NULL	
mobile_number	varchar(10)	NO		NULL	
dob	date	NO		NULL	
address	varchar(255)	NO		NULL	
type	varchar(255)	NO		NULL	

```
8 rows in set (0.00 sec)
```

```
mysql> describe doc_appointment
```

```
-> ;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
symptom	varchar(255)	NO		NULL	
date	date	NO		NULL	
time	varchar(255)	NO		NULL	
patient_id	int	NO	MUL	NULL	
department_id	int	NO	MUL	NULL	
doctor_id	int	NO	MUL	NULL	

```
7 rows in set (0.00 sec)
```

```
mysql> describe department;
```

Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
name	varchar(255)	NO		NULL	

```
2 rows in set (0.00 sec)
```

```
mysql> describe billing;
```

Field	Type	Null	Key	Default	Extra
advance	int	YES		NULL	
status	int	YES		0	
room_charges	int	NO		NULL	
total	int	YES		NULL	
appointment_id	int	YES	MUL	NULL	
admit_id	int	YES	MUL	NULL	

6 rows in set (0.00 sec)

```
mysql> describe admit;
```

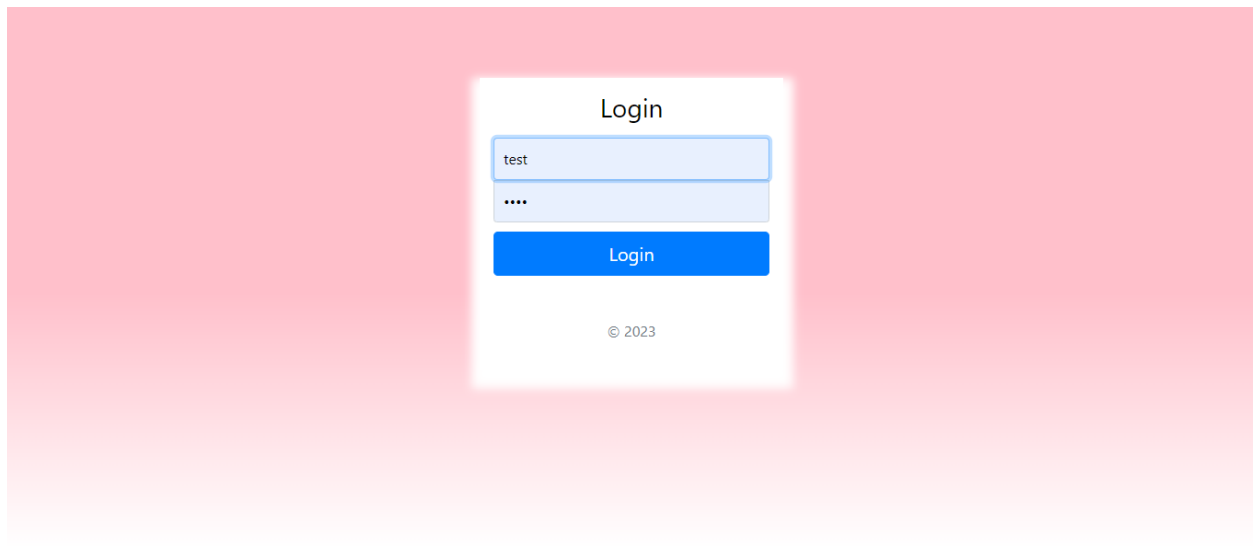
Field	Type	Null	Key	Default	Extra
id	int	NO	PRI	NULL	auto_increment
admit_date	date	NO		NULL	
discharge_date	date	NO		NULL	
problem	varchar(255)	NO		NULL	
patient_id	int	NO	MUL	NULL	
department_id	int	NO	MUL	NULL	
room_number	int	NO	MUL	NULL	
doctor_id	int	NO	MUL	NULL	
status	int	NO		1	

9 rows in set (0.00 sec)

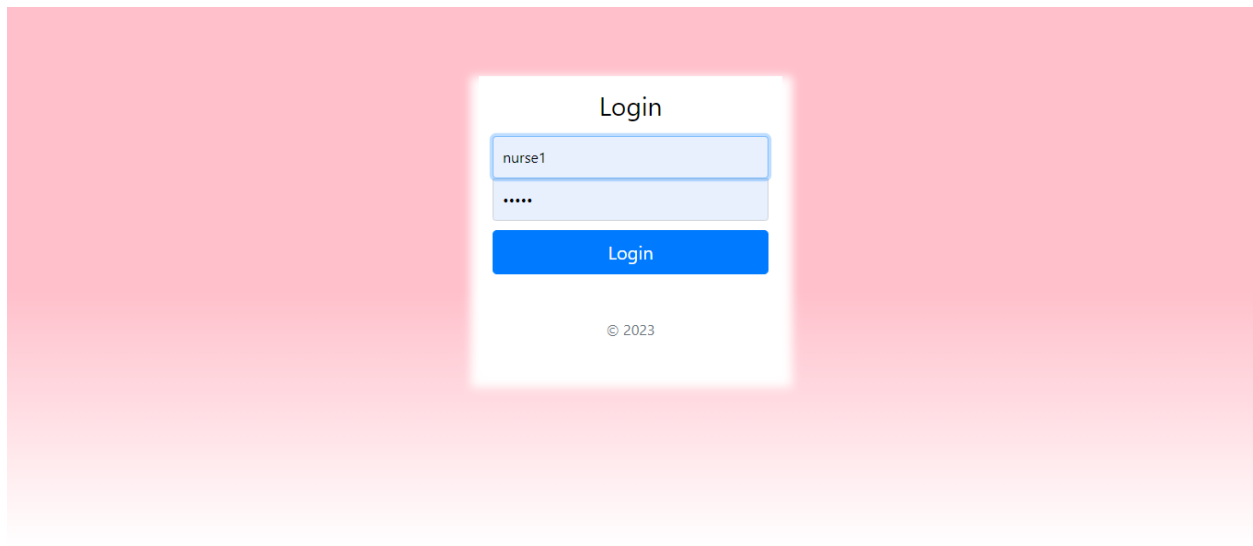
Appendix V: Other Source Code

Please see the other source code pages.

ADMIN LOGIN PAGE – Screenshot and Code



NURSE LOGIN PAGE – Screenshot and Code



```
<?php
session_start();
ob_start();
include("helpers/db.php");
$page_title = "Login";
include("inc/header.php");
    if(isset($_SESSION['username'])){
        header("Location: dashboard.php");
    }
}
```

```

if(isset($_POST['username'])){
    $username = $_POST['username'];
    $password = $_POST['password'];
    $query = "SELECT * FROM staff WHERE username = '$username' and password
= '$password'";
    $query_run = mysqli_query($con,$query);
    // $num = mysqli_num_rows($query_run);
    $num = mysqli_num_rows($query_run);
    if($num>0){
        $row = mysqli_fetch_array($query_run);
        $db_username = $row['username'];
        $db_id = $row['id'];
        $db_role = $row['type'];
        $_SESSION['username'] = $db_username;
        $_SESSION['id'] = $db_id;
        $_SESSION['role'] = $db_role;
        if($db_role=='viewer'){
            header("Location: viewer.php");
        }else{
            header("Location: dashboard.php");
        }
    }
    else{
        $error_msg = "Wrong credentials";
        //echo "Some error!";
    }
}
?>

<style>
html,

body {
    -ms-flex-align: center;
    align-items: center;
    padding-top: 40px;
    padding-bottom: 40px;
    background-image: linear-gradient(180deg,pink 49%,white 99%);
    height:100%;
}

.form-signin {
    width:auto;
    max-width: 330px;

```

```

padding: 15px;
margin: auto; background-color: white;
color:black;
box-shadow:1px 10px 10px 10px white;
}
.form-signin .checkbox {
font-weight: 400; background-color: blue;
}
.form-signin .form-control {
position: relative;
box-sizing: border-box;
height: auto;
padding: 10px;
font-size: 16px;
background-color: blue;
}
.form-signin .form-control:focus {
z-index: 2;
}
.form-signin input[type="email"] {
margin-bottom: -1px;
border-bottom-right-radius: 0;
border-bottom-left-radius: 0;
}
.form-signin input[type="password"] {
margin-bottom: 10px;
border-top-left-radius: 0;
border-top-right-radius: 0;
}
</style>
<link rel="stylesheet" href="assets/css/bootstrap.min.css">

</head>
<body class="text-center">
<form class="form-signin" method="post" action="">
  <h1 class="h3 mb-3 font-weight-normal"><?php echo $page_title;?></h1>
  <?php
    if(isset($error_msg)){
      echo "<div class='alert alert-danger'
role='alert'>".$error_msg."</div>";
    }

  ?>
  <label for="inputEmail" class="sr-only">Username</label>
  <input type="text" id="inputEmail" class="form-control"
placeholder="Username" name="username" required autofocus>

```



```
        <label for="inputPassword" class="sr-only">Password</label>
        <input type="password" id="inputPassword" class="form-control"
placeholder="Password" name="password" required>
        <input class="btn btn-lg btn-primary btn-block" type="submit"
name="login" value="Login">
        <p class="mt-5 mb-3 text-muted">&copy; 2023</p>
    </form>
<?php
include("inc/bootstrap.php");
include("inc/footer.php");
?>
```