

# **HOSPITAL MANAGEMENT SYSTEM**

**A Project Report**

**Submitted by:**

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in partial fulfilment for the award of the degree

of

**INTEGRATED MASTER OF SCIENCE - (CA & IT)**

at



**Department of Computer Science**

**INDUS UNIVERSITY**

**JULY - DEC 2024**



## CERTIFICATE

This is to certify that the project titled "**HOSPITAL MANAGEMENT SYSTEM**" is the bona fide work carried out by **PANDIT SUMITKUMAR KISHOR (IU2283830051)**, a student of Integrated MSc. (CA & IT) Semester - V during the academic year 2024-25, in partial fulfilment of the requirements for the award of the degree of Integrated Master of Science (CA & IT).

**Internal Guide Signature:**

**Head of Dept. Signature:**

**Date:**

**Date:**

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## 1. Acknowledgement

- I would like to take this opportunity to express my sincere gratitude to all those who contributed to the successful completion of this Hospital Management System project.
- First and foremost, I wish to extend my deep appreciation to my mentor, **Mrs. Mansi Mehta**, for her invaluable guidance, insightful feedback, and continuous support throughout the development of this project. Her expertise and encouragement have been instrumental in shaping the final outcome.
- I would also like to express my sincere thanks to **Dr. Bhavana Hotchandani**, Head of the Department, for her leadership and for providing the direction and resources necessary to successfully execute this project.
- I am grateful to my dedicated team members, whose collaboration, commitment, and hard work were key to overcoming challenges and achieving our goals. Their ideas, contributions, and enthusiasm significantly improved the overall quality of the project.
- Additionally, I would like to acknowledge my instructors and peers for their constructive feedback and valuable suggestions, which helped enhance various aspects of the system.
- This project has been a tremendous learning experience, broadening my knowledge in web development, system design, and problem-solving. I am thankful for the opportunity to engage in such meaningful work.
- Thank you all.

## 2. Introduction

- This document introduces the **Hospital Management System (HMS)**, a system created to make hospital management easier and more efficient. The HMS helps with important tasks like managing patient records, scheduling appointments, and managing doctor-patient interactions.
- In this report, we will go over how the system works, its main features, and how it can help hospitals run more smoothly. The HMS is designed to be user-friendly and make the work of healthcare professionals easier by reducing the time spent on administrative tasks, allowing them to focus more on patient care.
- This document will provide a clear understanding of the system and how it can improve the overall operations of a hospital.
- Today, we'll show you how our HMS works, the key features it offers, and how it can help improve the day-to-day operations of a hospital.

### **3. Project Profile**

#### **3.1 Scope of System**

- Improve patient care and streamline hospital operations.
- Enhance administrative efficiency and reduce paperwork.
- Ensure secure and accurate patient information management.
- Provide real-time data and analysis for decision-making.
- Integrate various hospital departments for seamless operation.

#### **3.2 Modules**

##### **1. Admin Management**

- Patient Management
- Doctor management
- Customization access

##### **2. Doctor Management**

- Registration
- Manage Patients
- Access control A/R
- View/update Appointment history
- Prescribe Medicine

### 3. Patients Management

- Registration
- Book Appointment
- View/Cancel Appointment
- Edit Profile
- View Medical Records

### 4. Appointment Scheduling and Record History

- Scheduling and Managing Appointments
- Download Medical Report

#### 3.3 Tools and Technology

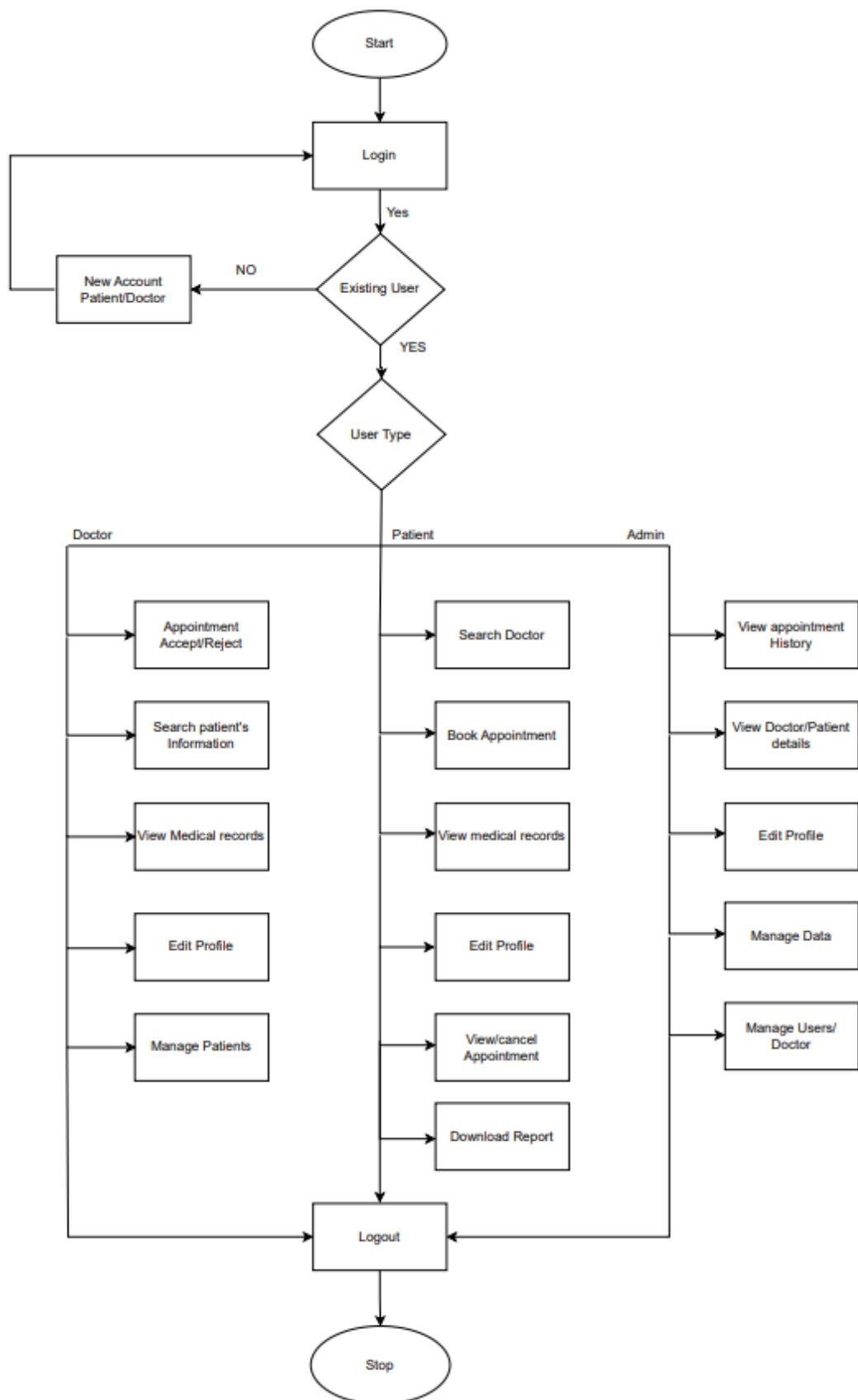
|   | FRONTEND  | BACKEND   | DATABASE  | TOOLS  |
|---|---|---|---|--|
| 1 | <br>HTML5      | <br>JavaScript | <br>PHP MySQL |               |
| 2 | <br>Bootstrap  |                |   | <br>Notepad++ |
| 3 | <br>JavaScript |   |   | <br>draw.io   |

## 4. Analysis

### 4.1 Need for the System

- **Make Work Easier:** Automate tasks like patient registration, appointment scheduling, and billing to save time and reduce paperwork.
- **Better Patient Care:** Quickly access patient information to make informed decisions and coordinate care between departments.
- **Keep Accurate Records:** Maintain centralized and accurate patient records that are easy to access.
- **Manage Resources:** Track medical supplies, equipment, and staff schedules efficiently.
- **Follow Rules:** Ensure compliance with healthcare regulations and standards.
- **Protect Data:** Secure patient data and ensure privacy.
- **Get Insights:** Generate reports and analyze data to monitor performance and make better decisions.
- **Improve Patient Experience:** Provide better service through efficient scheduling, and communication with patients.

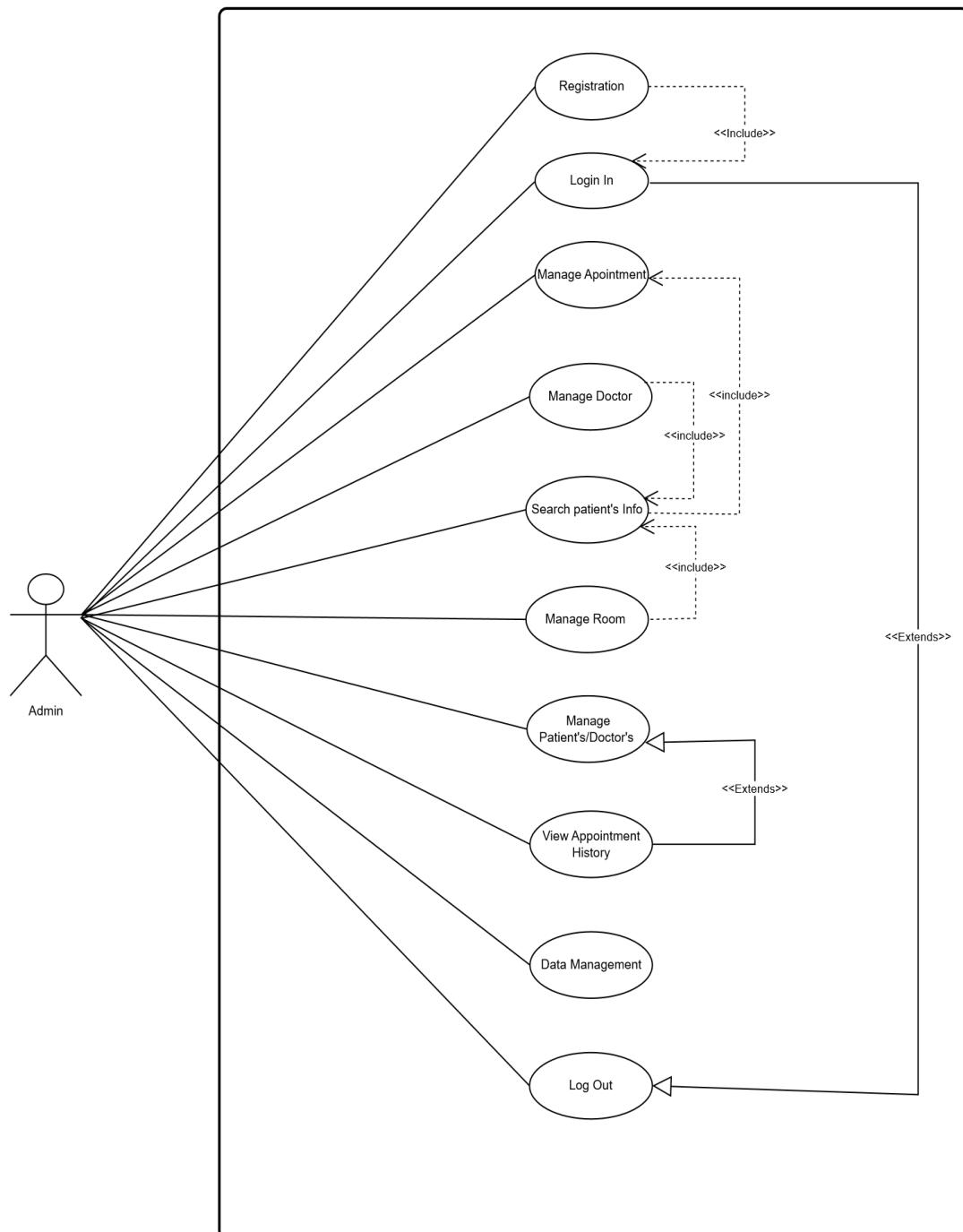
## 4.2 System Flow Diagram



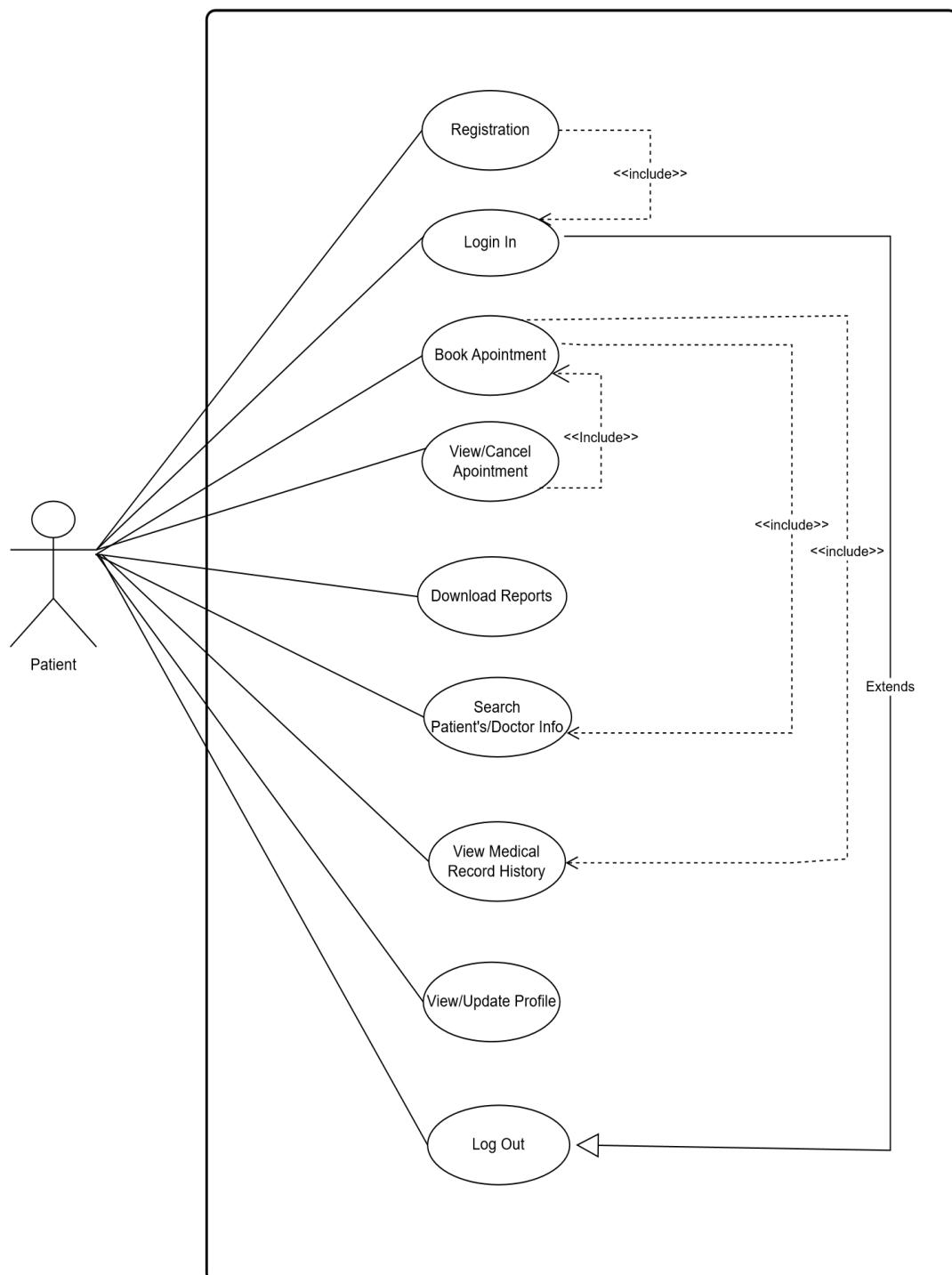
## 5. UML DIAGRAM

### 5.1 USE-CASE DIAGRAM

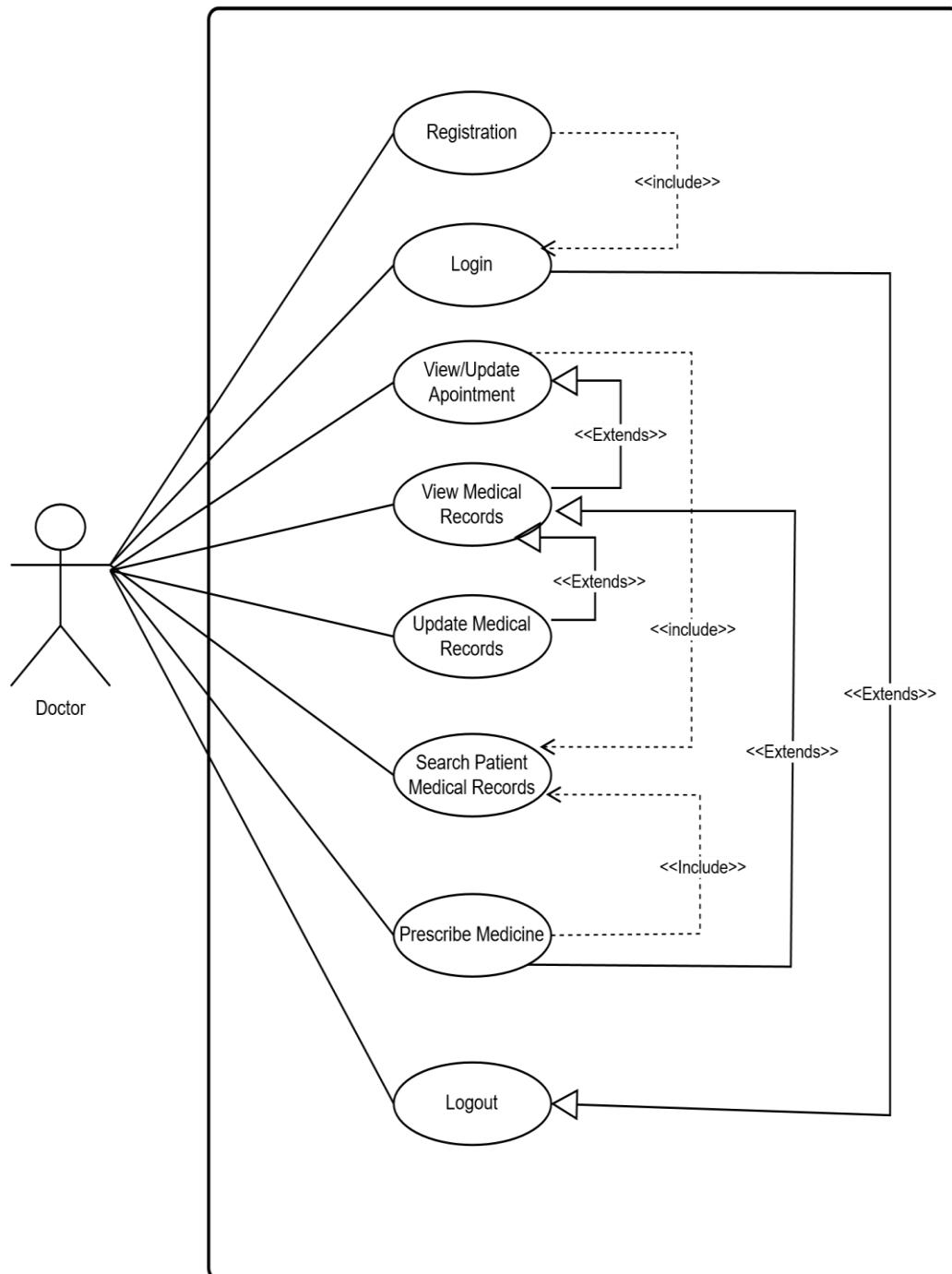
#### 5.1.1 ADMIN USE-CASE DIAGRAM



### 5.1.2 PATIENT USE-CASE DIAGRAM

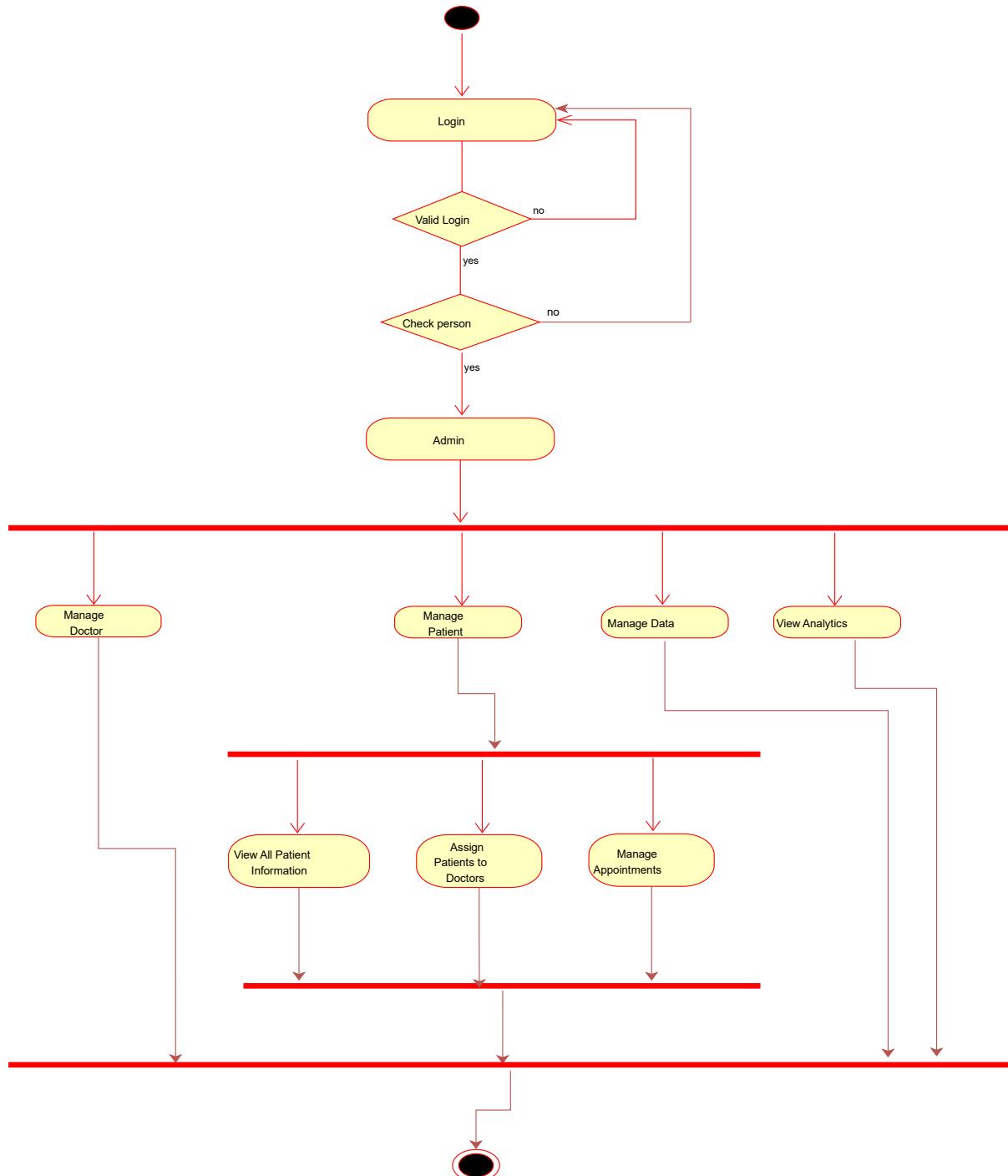


### 5.1.3 DOCTOR USE-CASE DIAGRAM

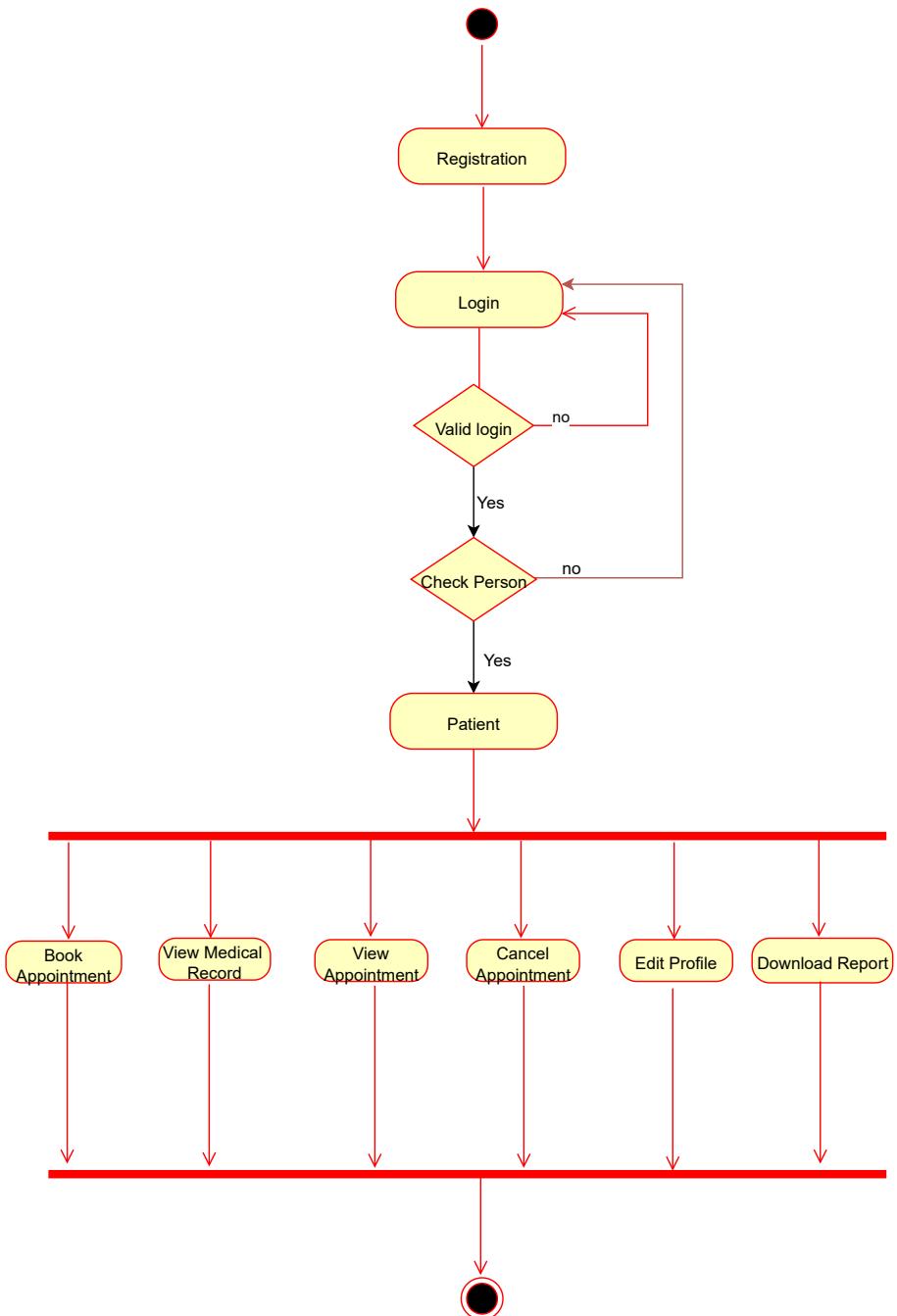


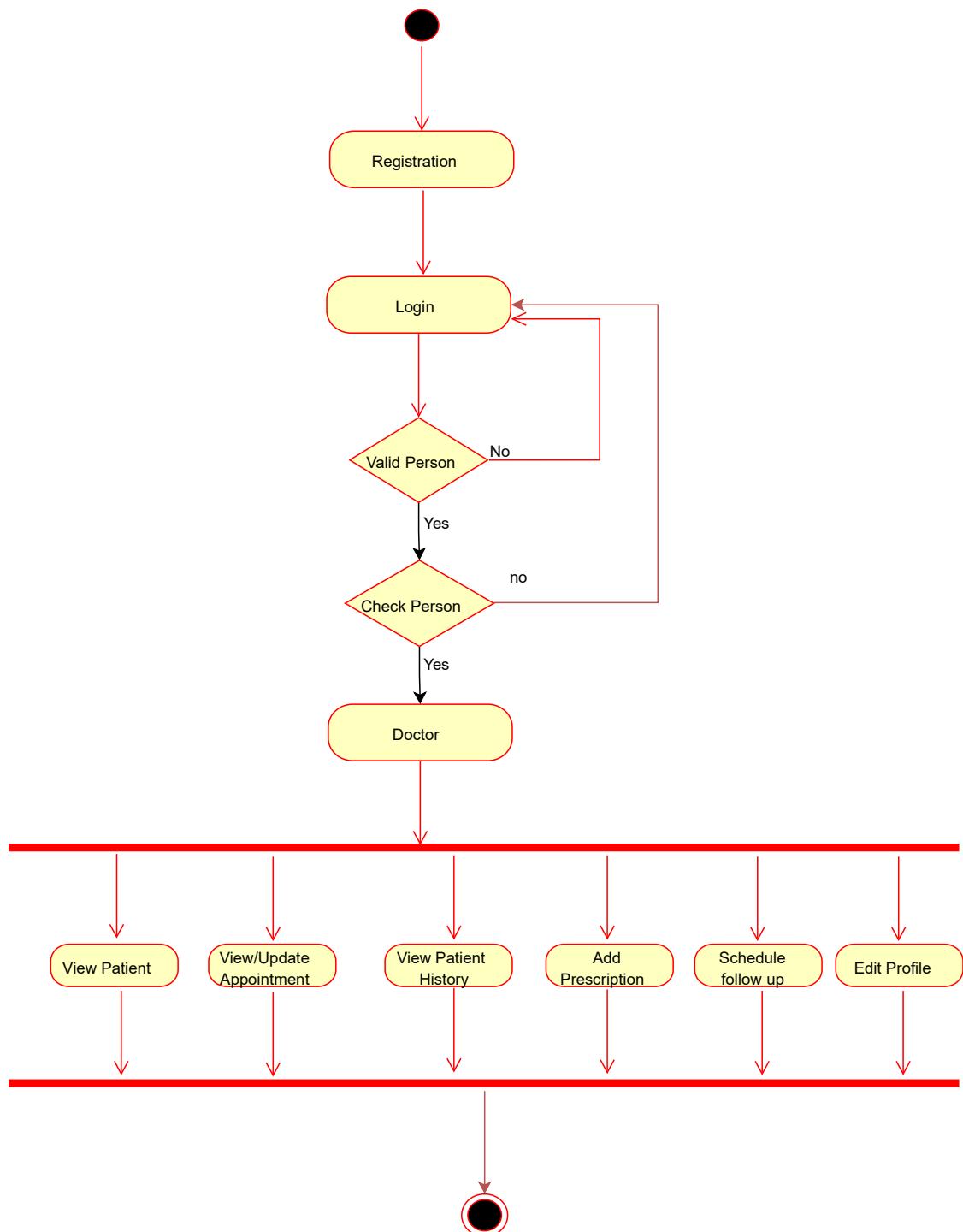
## 5.2 ACTIVITY DIAGRAM

### 5.2.1 ADMIN ACTIVITY DIAGRAM



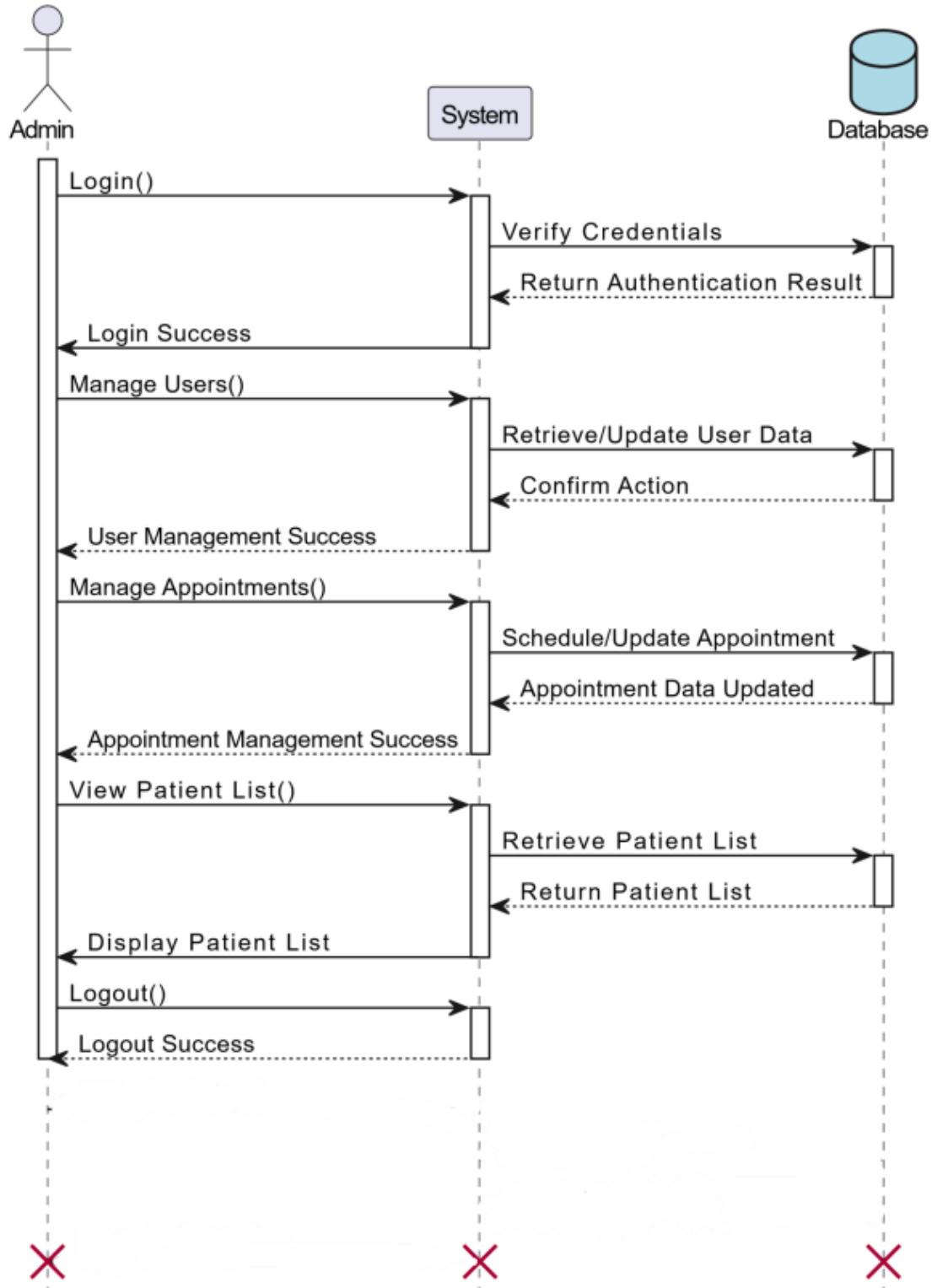
### 5.2.2 PATIENT ACTIVITY DIAGRAM



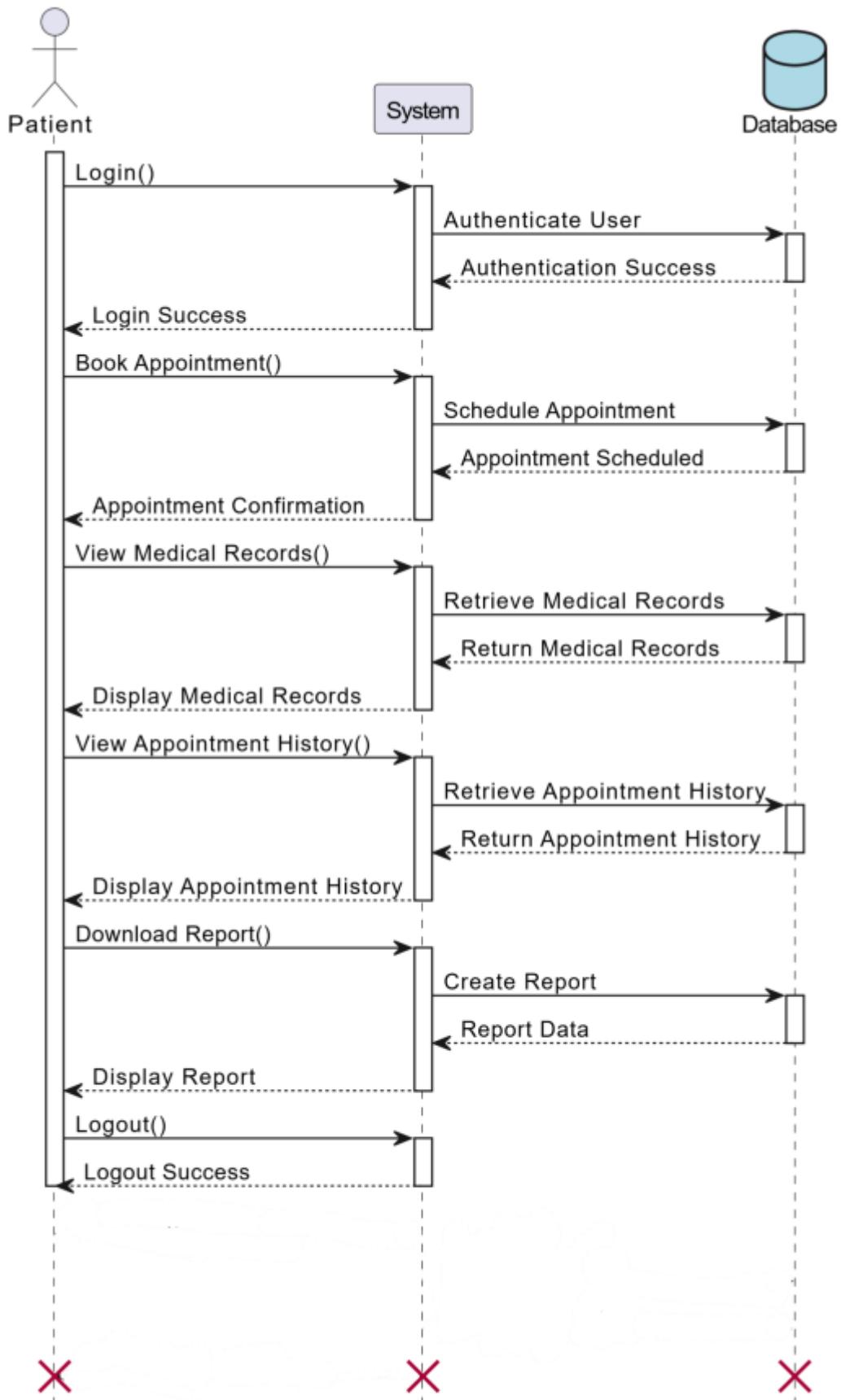
**5.2.3 DOCTOR ACTIVITY DIAGRAM**

## 5.3 SEQUENCE DIAGRAM

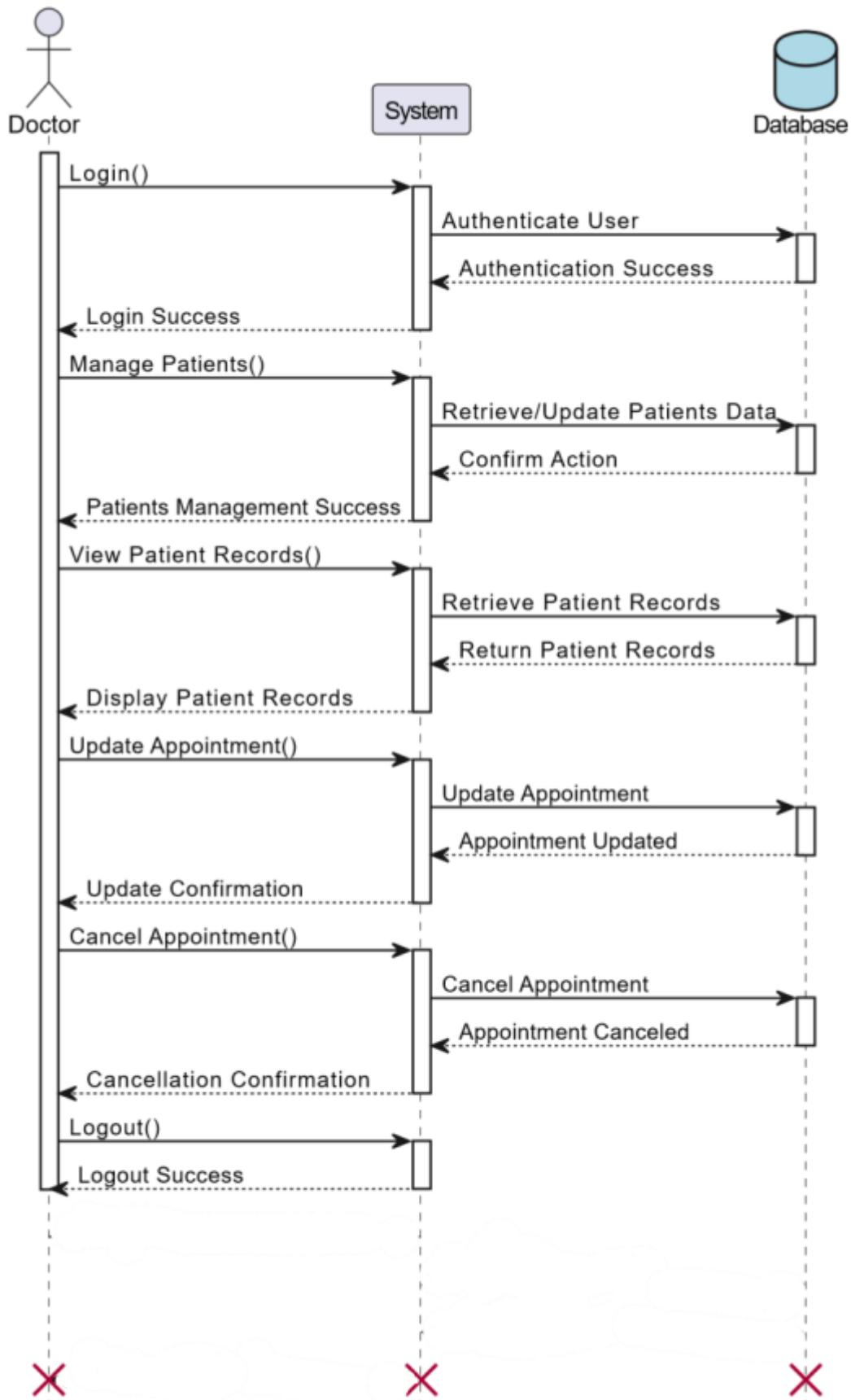
### 5.3.1 ADMIN SEQUENCE DIAGRAM



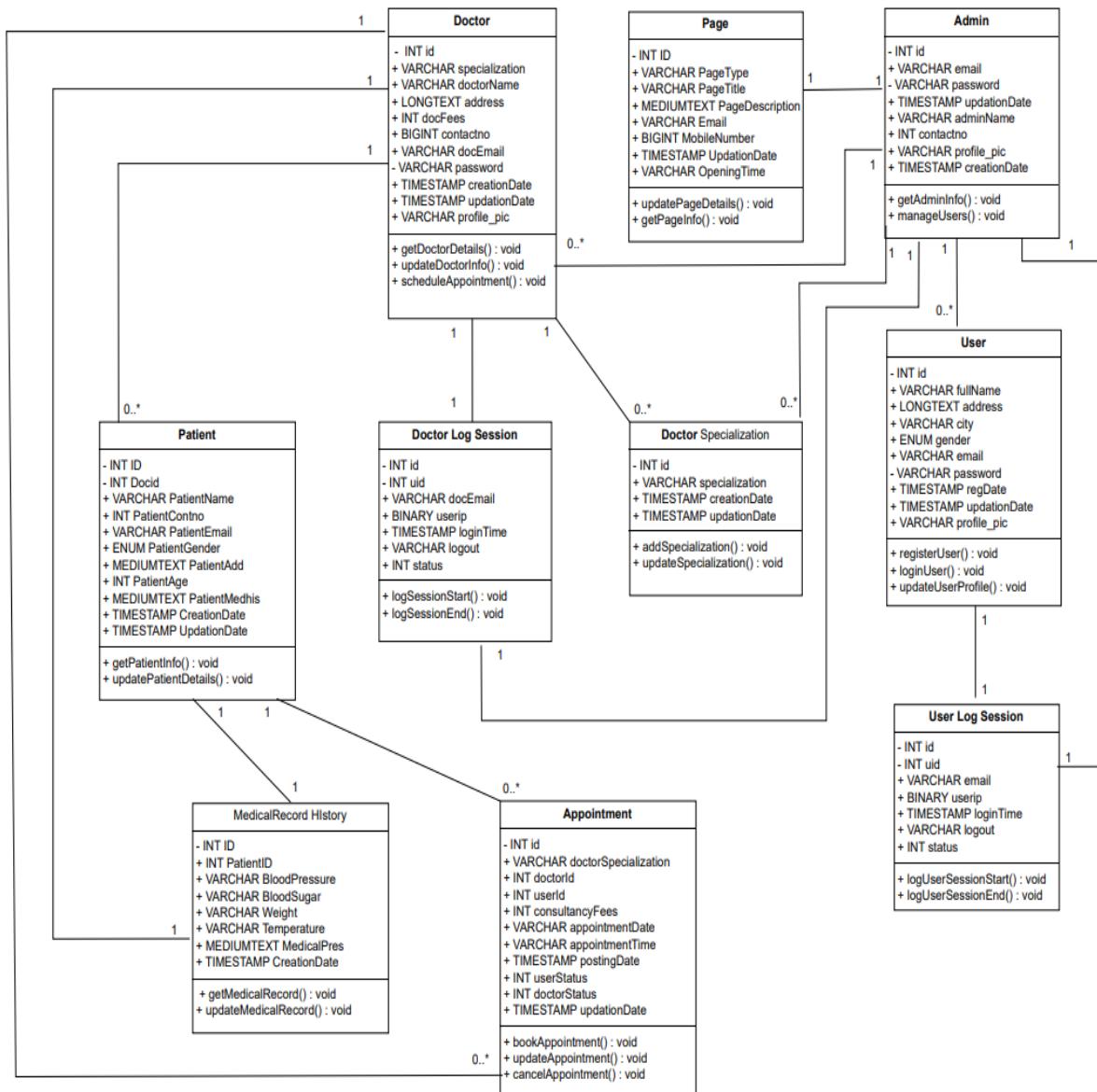
### 5.3.2 PATIENT SEQUENCE DIAGRAM



### 5.3.3 DOCTOR SEQUENCE DIAGRAM



## 5.4 CLASS DIAGRAM



## 6 DATA DICTIONARY

### 1. Patient Table

| Field Name    | Data Type  | Size   | Description                    | Constraints                     |
|---------------|------------|--------|--------------------------------|---------------------------------|
| ID            | int        | 10     | Unique identifier              | Primary Key,<br>AUTO_INCREMENT  |
| Docid         | int        | 10     | Doctor ID                      | Not Null                        |
| PatientName   | varchar    | 100    | Name of the patient            | Not Null                        |
| PatientContno | int        | 10     | Patient's contact number       | Not Null                        |
| PatientEmail  | varchar    | 100    | Patient's email address        | Not Null                        |
| PatientGender | ENUM       | 1 Byte | Gender of the patient          | Values: Male, Female, Other     |
| PatientAdd    | mediumtext | N/A    | Address of the patient         | Not Null                        |
| PatientAge    | int        | 10     | Age of the patient             | Not Null                        |
| PatientMedhis | mediumtext | N/A    | Medical history of the patient | Not Null                        |
| CreationDate  | timestamp  | N/A    | Record creation date and time  | Default:<br>current_timestamp() |
| UpdationDate  | timestamp  | N/A    | Record update date and time    | Null                            |

## 2. Doctor Specialization table

| Field Name     | Data Type | Size | Description                          | Constraints                  |
|----------------|-----------|------|--------------------------------------|------------------------------|
| id             | int       | 10   | Unique identifier for specialization | Primary Key, AUTO_INCREMENT  |
| specialization | varchar   | 100  | Description of the specialization    | Not Null                     |
| creationDate   | timestamp | N/A  | Record creation date and time        | Default: current_timestamp() |
| updationDate   | timestamp | N/A  | Last update date                     | Null                         |

## 3. Doctor Log Session table

| Field Name | Data Type | Size | Description                         | Constraints                  |
|------------|-----------|------|-------------------------------------|------------------------------|
| id         | int       | 10   | Unique identifier                   | Primary Key, AUTO_INCREMENT  |
| userid     | int       | 10   | User identifier                     | Not Null                     |
| docEmail   | varchar   | 100  | Doctor's email address              | Not Null                     |
| userip     | binary    | 16   | User's IP address in binary format  | Not Null                     |
| loginTime  | timestamp | N/A  | Timestamp of user login             | Default: current_timestamp() |
| logout     | timestamp | 10   | Timestamp of user logout            | Default: current_timestamp() |
| status     | TINYINT   | 1    | User's login status (True or false) | Not Null                     |

#### 4. Doctor Table

| Field Name     | Data Type | Size | Description                   | Constraints                     |
|----------------|-----------|------|-------------------------------|---------------------------------|
| id             | int       | 10   | Unique identifier             | Primary Key,<br>AUTO_INCREMENT  |
| specialization | varchar   | 100  | Doctor's specialization       | Not Null                        |
| doctorName     | varchar   | 100  | Name of the doctor            | Not Null                        |
| address        | longtext  | N/A  | Address of the doctor         | Not Null                        |
| docFees        | int       | 4    | Fees charged by the doctor    | Not Null                        |
| contactno      | bigint    | 10   | Doctor's contact number       | Not Null                        |
| docEmail       | varchar   | 100  | Doctor's email address        | Not Null                        |
| password       | varchar   | 20   | Password for login            | Not Null                        |
| creationDate   | timestamp | N/A  | Record creation date and time | Default:<br>current_timestamp() |
| updationDate   | timestamp | N/A  | Record update date and time   | Null                            |
| profile_pic    | Blob      | 100  | Profile picture of the doctor | Null                            |

## 5. Appointment Table

| Field Name           | Data Type | Size | Description                   | Constraints                     |
|----------------------|-----------|------|-------------------------------|---------------------------------|
| Id                   | int       | 10   | Unique identifier             | Primary Key,<br>AUTO_INCREMENT  |
| doctorSpecialization | varchar   | 100  | Doctor's specialization       | Not Null                        |
| doctorId             | int       | 10   | ID of the doctor              | Not Null                        |
| userId               | int       | 10   | ID of the user (patient)      | Not Null                        |
| consultancyFees      | int       | 4    | Fees for the consultation     | Not Null                        |
| appointmentDate      | Date      | 10   | Appointment date              | Not Null                        |
| appointmentTime      | Time      | 10   | Appointment time              | Not Null                        |
| postingDate          | timestamp | N/A  | Record creation date and time | Default:<br>current_timestamp() |
| userStatus           | int       | 1    | Status of the user (patient)  | Null                            |
| doctorStatus         | int       | 1    | Status of the doctor          | Null                            |
| updationDate         | timestamp | N/A  | Record update date and time   | Null                            |

## 6. Medical Record Table

| Field Name    | Data Type  | Size | Description                   | Constraints                  |
|---------------|------------|------|-------------------------------|------------------------------|
| ID            | int        | 10   | Unique identifier             | Primary Key                  |
| PatientID     | int        | 10   | ID of the patient             | Not Null                     |
| BloodPressure | int        | 3    | Patient's blood pressure      | Not Null                     |
| BloodSugar    | int        | 3    | Patient's blood sugar         | Not Null                     |
| Weight        | int        | 3    | Patient's weight              | Not Null                     |
| Temperature   | int        | 3    | Patient's temperature         | Not Null                     |
| MedicalPres   | mediumtext | N/A  | Medical prescription details  | Not Null                     |
| CreationDate  | timestamp  | N/A  | Record creation date and time | Default: current_timestamp() |

## 7. Admin Table

| Field Name   | Data Type | Size | Description                   | Constraints                  |
|--------------|-----------|------|-------------------------------|------------------------------|
| id           | int       | 10   | Unique identifier             | Primary Key                  |
| email        | varchar   | 100  | Email address of the admin    | Not Null                     |
| password     | varchar   | 100  | Password for admin login      | Not Null                     |
| updationDate | varchar   | 100  | Last update date              | Not Null                     |
| adminName    | varchar   | 100  | Name of the admin             | Not Null                     |
| contactno    | int       | 10   | Admin's contact number        | Not Null                     |
| profile_pic  | Blob      | 100  | Profile picture URL/path      | Null                         |
| creationDate | timestamp | N/A  | Record creation date and time | Default: current_timestamp() |

## 8. Users Table

| Field Name   | Data Type | Size   | Description                | Constraints                     |
|--------------|-----------|--------|----------------------------|---------------------------------|
| id           | int       | 10     | Unique identifier          | Primary Key,<br>AUTO_INCREMENT  |
| fullName     | varchar   | 100    | Full name of the user      | Not Null                        |
| address      | longtext  | N/A    | User's address             | Not Null                        |
| city         | varchar   | 50     | User's city                | Null                            |
| gender       | ENUM      | 1 Byte | User's gender              | Values: Male, Female, Other     |
| email        | varchar   | 100    | User's email address       | Not Null                        |
| password     | varchar   | 100    | User's password            | Not Null                        |
| regDate      | timestamp | N/A    | Registration date and time | Default:<br>current_timestamp() |
| updationDate | timestamp | N/A    | Last update date           | Null                            |
| profile_pic  | Blob      | 100    | Profile picture URL/path   | Null                            |

## 9. Users Log session table

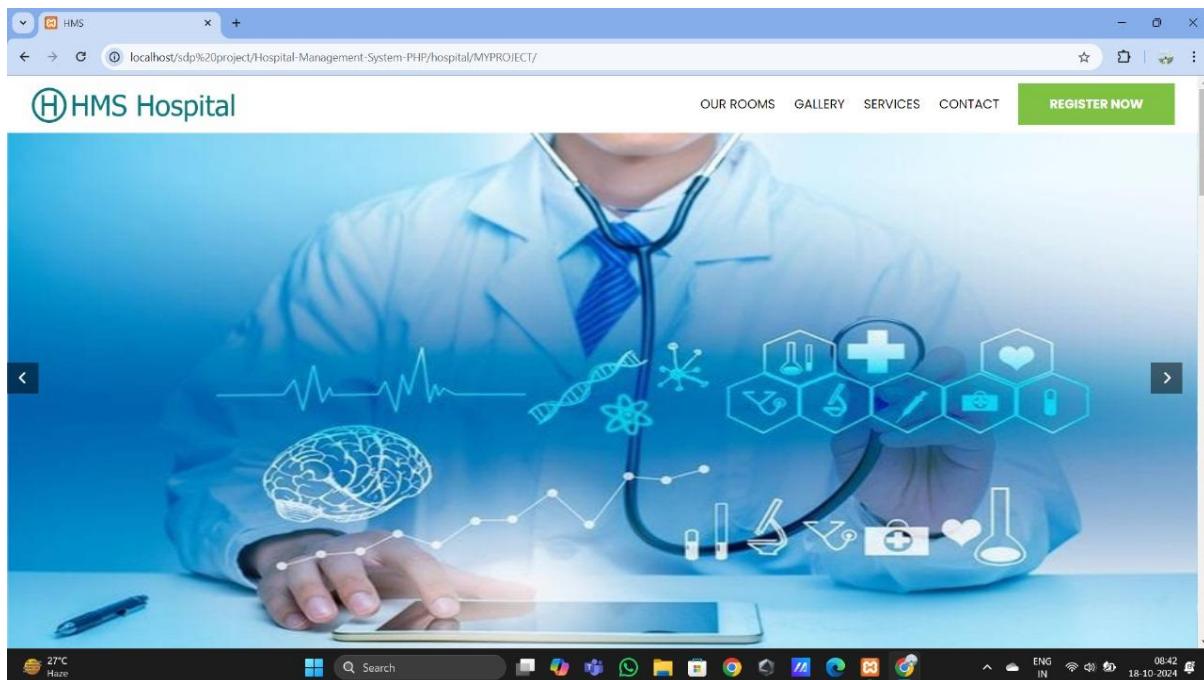
| Field Name | Data Type | Size | Description                             | Constraints                     |
|------------|-----------|------|---|---------------------------------|
| id         | Int       | 10   | Unique identifier                       | Primary Key,<br>AUTO_INCREMENT  |
| userid     | Int       | 10   | User identifier                         | Not Null                        |
| Email      | varchar   | 100  | User's email address                    | Not Null                        |
| userip     | binary    | 16   | User's IP address in binary format      | Not Null                        |
| loginTime  | timestamp | N/A  | Timestamp of user login                 | Default:<br>current_timestamp() |
| logout     | timestamp | N/A  | Timestamp of user logout                | Default:<br>current_timestamp() |
| status     | TINYINT   | 1    | User's login status (e.g., True, False) | Not Null                        |

## 10. Table Page

| Field Name      | Data Type  | Size | Description                             | Constraints                  |
|-----------------|------------|------|---|------------------------------|
| ID              | Int        | 10   | Unique identifier for the page          | Primary Key, AUTO_INCREMENT  |
| PageType        | varchar    | 100  | Type of the page (e.g., About, Contact) | Not Null                     |
| PageTitle       | varchar    | 100  | Title of the page                       | Not Null                     |
| PageDescription | mediumtext | N/A  | Detailed description of the page        | Not Null                     |
| Email           | varchar    | 100  | Contact email for the page              | Not Null                     |
| MobileNumber    | bigint     | 10   | Contact mobile number                   | Not Null                     |
| UpdationDate    | timestamp  | N/A  | Date and time of the last update        | Default: current_timestamp() |

## USER INTERFACE SS

### Home Page



### Welcome Page

## Our Rooms Page

The screenshot shows a web browser window titled 'Admin | Manage Users' with the URL 'localhost/sdp%20project/Hospital-Management-System-PHP/hospital/MYPROJECT/'. The main content is titled 'EXPLORE Our Rooms'. It features three cards for different room types:

- General-Ward**: Shows a long hallway with multiple beds. Rating: ★★★★. Book Now button. Price: ₹1000 Per Day.
- ICU**: Shows medical staff attending to a patient in a high-tech intensive care unit. Rating: ★★★★. Book Now button. Price: ₹3500 Per Day.
- Deluxe**: Shows a spacious room with a large window overlooking a city, featuring a single bed. Rating: ★★★★★. Book Now button. Price: ₹2000 Per Day.

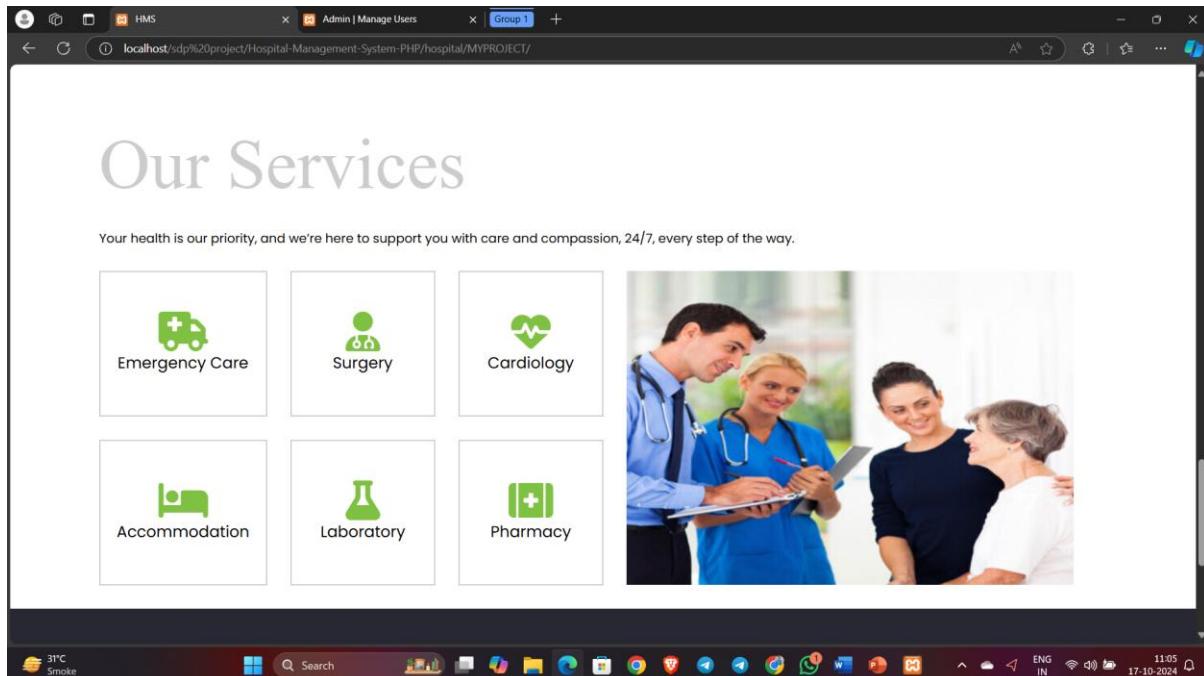
The browser taskbar at the bottom shows various icons and the date 17-10-2024.

## Our Gallery Page

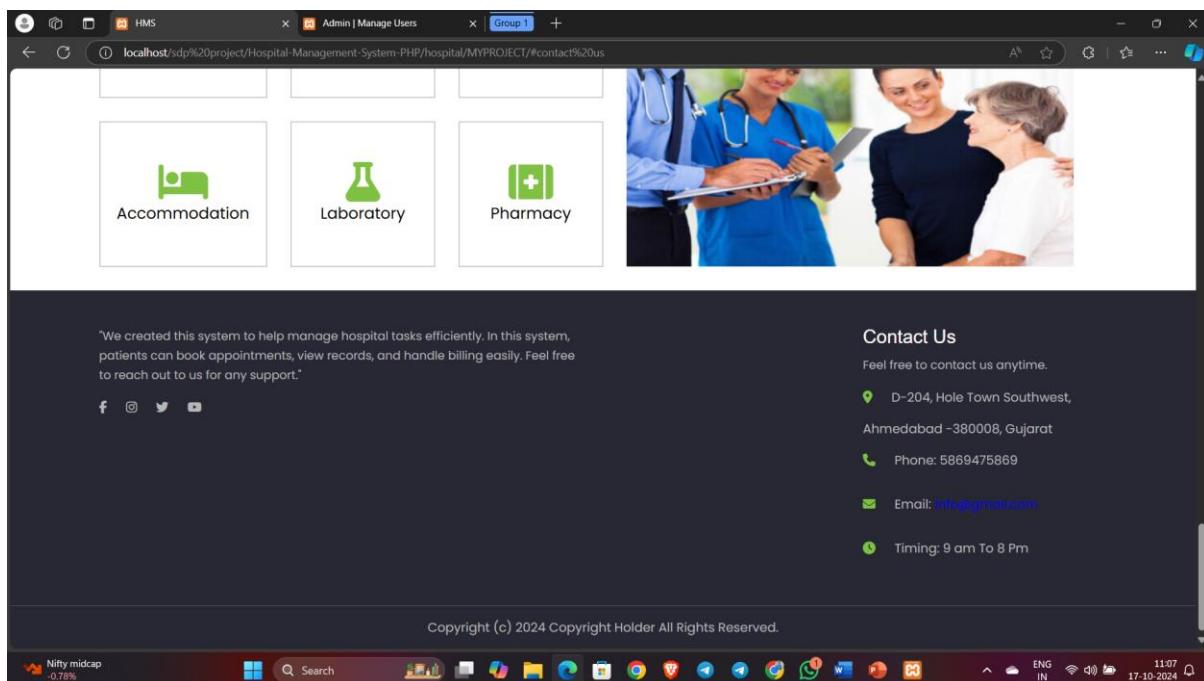
The screenshot shows a web browser window titled 'Admin | Manage Users' with the URL 'localhost/sdp%20project/Hospital-Management-System-PHP/hospital/MYPROJECT/'. The main content is titled 'Our Gallery'. It features a grid of six images showing various medical facilities:

- Operating Room
- Storage or Equipment Room
- MRI Scanner Room
- Surgical Procedure Room
- Procedure Room with Equipment
- Hospital Hallway or Reception Area

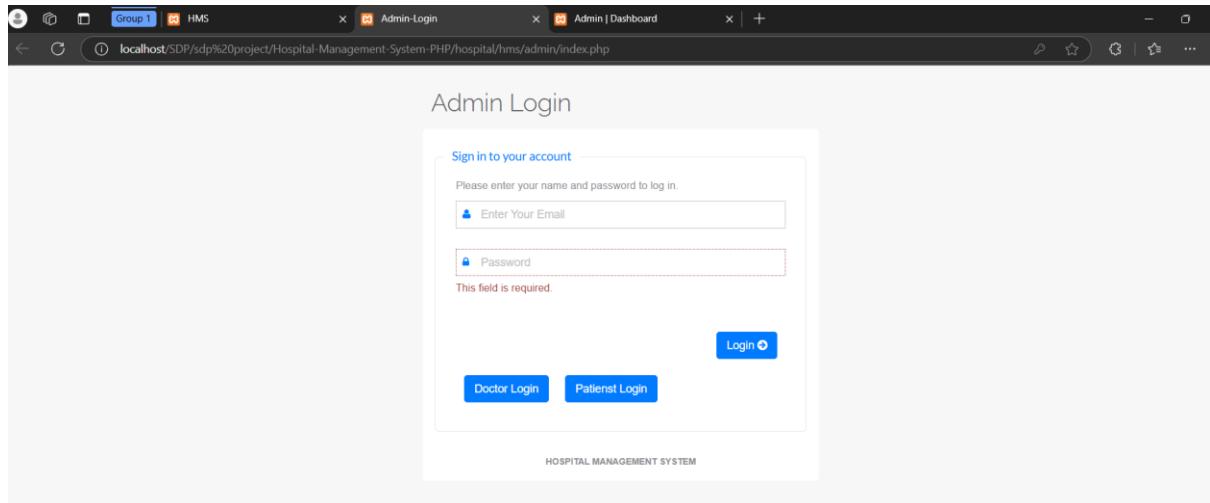
## Our Services Page



## Contact Us Page

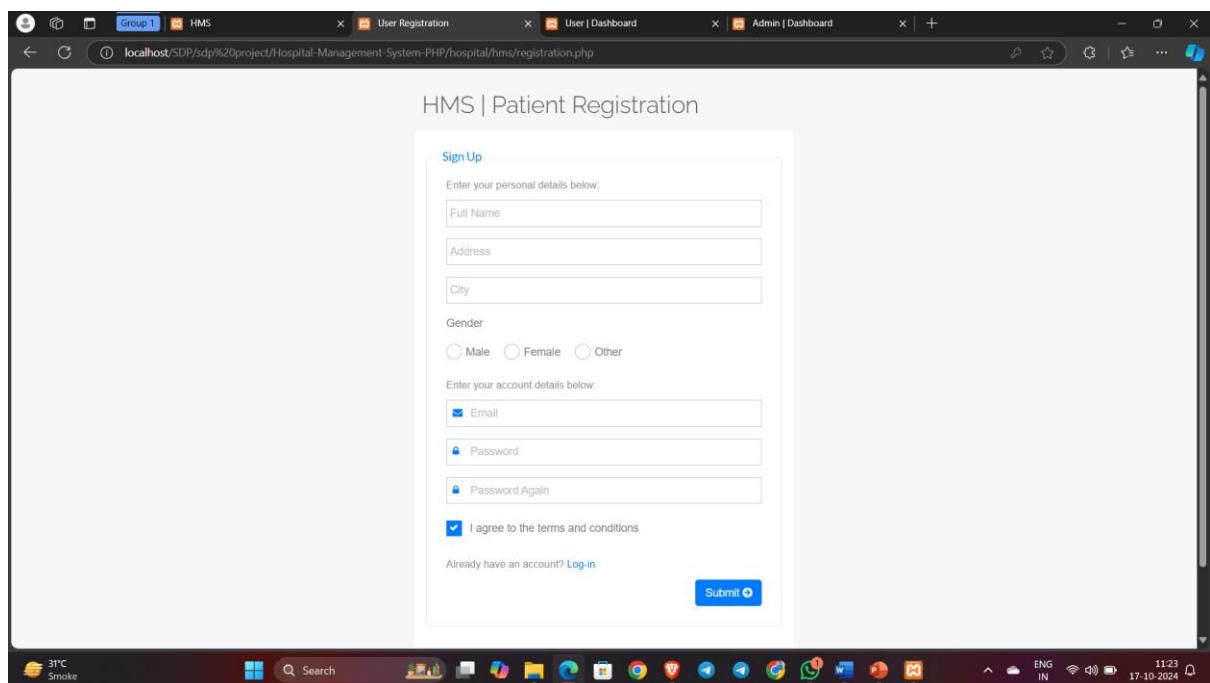


## Login Page



The screenshot shows a web browser window with three tabs: "Group 1" (active), "HMS", "Admin-Login", and "Admin | Dashboard". The URL in the address bar is "localhost/SDP/sdp%20project/Hospital-Management-System-PHP/hospital/hms/admin/index.php". The main content area is titled "Admin Login" and contains a "Sign in to your account" form. It includes fields for "Enter Your Email" (with a placeholder icon) and "Password" (with a placeholder icon and a note "This field is required"). Below the form are "Login" and "Forgot Password" buttons. At the bottom of the form is the text "HOSPITAL MANAGEMENT SYSTEM".

## Registration Page



The screenshot shows a web browser window with four tabs: "Group 1" (active), "HMS", "User Registration" (active), and "User | Dashboard", "Admin | Dashboard". The URL in the address bar is "localhost/SDP/sdp%20project/Hospital-Management-System-PHP/hospital/hms/registration.php". The main content area is titled "HMS | Patient Registration" and contains a "Sign Up" form. It includes fields for "Full Name", "Address", and "City". A "Gender" section with radio buttons for "Male", "Female", and "Other". An "Account Details" section with fields for "Email", "Password", and "Password Again". A checkbox for "I agree to the terms and conditions" is checked. Below the form is a link "Already have an account? Log-in" and a "Submit" button. The taskbar at the bottom shows various application icons and system status.

## Admin Dashboard Page

The screenshot shows the Admin Dashboard page of the Hospital Management System (HMS). The dashboard features a main navigation menu on the left with options such as Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The central area is titled "ADMIN | DASHBOARD" and contains five cards: "Manage Users" (Total Users: 3), "Manage Doctors" (Total Doctors: 4), "Appointments" (Total Appointments: 9), "Manage Patients" (Total Patients: 2), and "Pharmacy" (Total orders: [not visible]). The top right corner shows the user profile "Admin". The bottom of the screen displays a Windows taskbar with various application icons.

## Doctor Specialization Page

The screenshot shows the Doctor Specialization page. The left sidebar includes the same navigation menu as the dashboard. The main content area has two sections: "Doctor Specialization" with a form containing a text input field labeled "Enter Doctor Specialization" and a "Submit" button; and "Manage Doctor Specialization" which displays a table of existing specializations. The table columns are #, Specialization, Creation Date, Updation Date, and Action. The data in the table is as follows:

| #  | Specialization | Creation Date       | Updation Date | Action |
|----|----------------|---------------------|---------------|--------|
| 1. | Dentists       | 2024-10-07 20:14:13 |               |        |
| 2. | Gynecologists  | 2024-10-07 20:14:22 |               |        |
| 3. | ENT            | 2024-10-07 20:14:26 |               |        |
| 4. | Cardiologists  | 2024-10-07 20:14:45 |               |        |
| 5. | Orthopedic     | 2024-10-07 20:14:50 |               |        |
| 6. | Neurologists   | 2024-10-07 20:15:24 |               |        |
| 7. | Oncologists    | 2024-10-07 20:15:33 |               |        |

## Manage Doctor Page

The screenshot shows the 'Admin | Manage Doctors' page. The left sidebar has a 'MAIN NAVIGATION' section with links: Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The main content area is titled 'ADMIN | MANAGE DOCTORS'. It contains a table titled 'Manage Doctors' with the following data:

| #  | Specialization | Doctor Name | Creation Date       | Action |
|----|----------------|-------------|---------------------|--------|
| 1. | ENT            | jainam      | 2024-10-08 08:41:17 |        |
| 2. | Dentists       | dharvik     | 2024-10-08 08:43:27 |        |
| 3. | Gynecologists  | sumit       | 2024-10-08 08:44:25 |        |
| 4. | Cardiologists  | raj         | 2024-10-08 08:45:13 |        |

## Manage Users Page

The screenshot shows the 'Admin | Manage Users' page. The left sidebar has a 'MAIN NAVIGATION' section with links: Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The main content area is titled 'ADMIN | MANAGE USERS'. It contains a table titled 'Manage Users' with the following data:

| #  | Full Name | Address | City      | Gender | Email               | Creation Date       | Updation Date       | Action |
|----|-----------|---------|-----------|--------|---------------------|---------------------|---------------------|--------|
| 1. | jainam1   | shilaj  | ahmedabad | male   | jainam1@gmail.com   | 2024-10-08 08:47:23 | 2024-10-08 10:48:59 |        |
| 2. | sumit1    | shilaj  | ahmedabad | male   | sumit1@gmail.com    | 2024-10-08 08:48:11 |                     |        |
| 3. | parikshit | bhadaj  | ahmedabad | male   | parikshit@gmail.com | 2024-10-08 08:49:30 |                     |        |

## Manage Patient Page

The screenshot shows the 'Admin | View Patients' page of the Hospital Management System. The page title is 'ADMIN | VIEW PATIENTS'. On the left, there is a sidebar titled 'MAIN NAVIGATION' with links for Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The main content area displays a table titled 'View Patients' with columns: #, Patient Name, Patient Contact Number, Patient Gender, Creation Date, Updation Date, and Action. There are two entries: 1. sumit1 (9624472654, Male, 2024-10-08 09:05:53, 2024-10-08 09:06:24) and 2. jainam (8596475869, male, 2024-10-08 10:53:13, 2024-10-08 10:53:13). Each entry has a 'View' button in the Action column.

## Appointment History Page

The screenshot shows the 'Patients | Appointment History' page of the Hospital Management System. The page title is 'PATIENTS | APPOINTMENT HISTORY'. The left sidebar is identical to the previous screenshot. The main content area displays a table titled 'APPOINTMENT HISTORY' with columns: #, Doctor Name, Patient Name, Specialization, Consultancy Fee, Appointment Date / Time, Appointment Creation Date, Current Status, and Action. There are nine entries listed, showing various appointments made by different doctors for different patients, with details like appointment times, creation dates, and current status (Active or Canceled).

## Doctor Session Logs Page

The screenshot shows the 'ADMIN | DOCTOR SESSION LOGS' page. The left sidebar has 'Doctor Session Logs' selected. The main content area displays a table of session logs:

| #  | User id | Doctor Email     | User IP | Login time          | Logout Time | Status  |
|----|---------|------------------|---------|---------------------|-------------|---------|
| 1. | 8       | jainam@gmail.com | ::1     | 2024-10-08 08:41:47 |             | Success |
| 2. | 8       | jainam@gmail.com | ::1     | 2024-10-08 08:53:04 |             | Success |
| 3. | 8       | jainam@gmail.com | ::1     | 2024-10-08 08:55:04 |             | Success |
| 4. | 8       | jainam@gmail.com | ::1     | 2024-10-08 09:01:08 |             | Success |
| 5. | 8       | jainam@gmail.com | ::1     | 2024-10-08 09:57:51 |             | Success |
| 6. | 8       | jainam@gmail.com | ::1     | 2024-10-08 10:00:48 |             | Success |
| 7. | 8       | jainam@gmail.com | ::1     | 2024-10-08 10:51:29 |             | Success |
| 8. | 8       | jainam@gmail.com | ::1     | 2024-10-12 17:12:31 |             | Success |

## Users Session Logs Page

The screenshot shows the 'ADMIN | USER SESSION LOGS' page. The left sidebar has 'User Session Logs' selected. The main content area displays a table of session logs:

| #  | User id | User Email        | User IP | Login time          | Logout Time            | Status  |
|----|---------|-------------------|---------|---------------------|------------------------|---------|
| 1. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 08:50:04 |                        | Success |
| 2. | 15      | sumit1@gmail.com  | ::1     | 2024-10-08 08:58:26 |                        | Success |
| 3. | 15      | sumit1@gmail.com  | ::1     | 2024-10-08 09:03:09 |                        | Success |
| 4. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 09:58:37 |                        | Success |
| 5. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 10:15:38 |                        | Success |
| 6. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 10:48:42 |                        | Success |
| 7. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 10:50:46 | 08-10-2024 10:51:15 AM | Success |
| 8. | 14      | jainam1@gmail.com | ::1     | 2024-10-08 10:55:38 |                        | Success |
| 9. | 14      | jainam1@gmail.com | ::1     | 2024-10-12 17:13:41 |                        | Success |

## Report Page

The screenshot shows a web browser window titled "Admin | View Patients" with the URL "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/admin/betweendates-detailsreports.php". The page is titled "ADMIN | VIEW PATIENTS" and displays a table of patients between the dates 2024-10-01 to 2024-10-13. The table has columns: #, Patient Name, Patient Contact Number, Patient Gender, Creation Date, Updation Date, and Action. Two rows are shown:

| #  | Patient Name | Patient Contact Number | Patient Gender | Creation Date       | Updation Date       | Action               |
|----|--------------|------------------------|----------------|---------------------|---------------------|----------------------|
| 1. | sumit1       | 9624472654             | Male           | 2024-10-08 09:05:53 | 2024-10-08 09:06:24 | <a href="#">View</a> |
| 2. | jainam       | 8596475869             | male           | 2024-10-08 10:53:13 |                     | <a href="#">View</a> |

## About us Page

The screenshot shows a web browser window titled "Admin | About Us" with the URL "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/admin/about-us.php". The page is titled "ADMIN | UPDATE THE ABOUT US CONTENT" and displays a form for updating the about us content. The form includes fields for Page Title (containing ".") and Page Description (containing "hello i am dharmik i am admin on the hospital management system"). A rich text editor toolbar is visible above the description field. A "Submit" button is at the bottom of the form.

## Contact Us Page

The screenshot shows the 'Admin | Contact Us' page of the Hospital Management System. The left sidebar lists navigation options like Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The main content area is titled 'ADMIN | UPDATE THE CONTACT US CONTENT'. It contains fields for 'Page Title' (Contact Details), 'Page Description' (with a rich text editor containing 'D-204, Hole Town Southwest, Ahmedabad -380008, Gujarat'), 'Email Address' (info@gmail.com), and 'Mobile Number' (5869475869). A blue 'Update' button is at the bottom. The top right shows the user 'Admin' and a link to 'Update the Contact us Content'. The bottom status bar shows system information like weather (32°C Haze), date (13-10-2024), and time (16:14).

## Admin Searching UI Page

The screenshot shows the 'Admin | View Patients' page. The left sidebar includes Patient Search. The main content area is titled 'ADMIN | VIEW PATIENTS' and features a search bar with the placeholder 'Search by Name/Mobile No.' and a 'Search' button. Below the search bar, a message says 'Result against "jainam" keyword'. A table displays patient data with one row: # 1, Patient Name 'jainam', Patient Contact Number '8596475869', Patient Gender 'male', Creation Date '2024-10-08 10:53:13', and Action 'View'. The top right shows the user 'Admin' and a link to 'View Patients'. The bottom status bar shows system information like weather (32°C Haze), date (13-10-2024), and time (16:16).

## Edit Profile Page

The screenshot shows a web browser window titled "Admin | Edit Profile". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/admin/edit-profile.php". The page header says "Hospital Management System" with a user icon labeled "Admin". On the left is a sidebar with "MAIN NAVIGATION" containing links: Dashboard, Doctors, Users, Patients, Appointment History, Doctor Session Logs, User Session Logs, Reports, Pages, and Patient Search. The main content area is titled "ADMIN | EDIT PROFILE". It has a form titled "Edit Profile" with fields for "Admin Name" (Dharmik), "Admin Email" (admin@gmail.com), "Admin Contact Number" (1234567890), and a "Profile Picture" section with a "Choose File" button. A blue "Update" button is at the bottom. The status bar at the bottom shows system information like weather (32°C Haze), date (13-10-2024), and time (16:17).

## Doctor Dashboard Page

The screenshot shows a web browser window titled "Doctor | Dashboard". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/doctor/dashboard.php". The page header says "Hospital Management System" with a user icon labeled "jainam". The left sidebar is identical to the Admin dashboard. The main content area is titled "DOCTOR | DASHBOARD" and features two cards: "My Profile" (with a smiley face icon) and "Appointments" (with a calendar icon). The status bar at the bottom shows system information like weather (32°C Haze), date (13-10-2024), and time (16:18).

## Doctor Appointment History Page

The screenshot shows a web browser window titled "Doctor | Appointment History". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/doctor/appointment-history.php". The page header includes the "HMS" logo and the user "jainam". The main content area is titled "DOCTOR | APPOINTMENT HISTORY". It displays a table of appointment records:

| #  | Patient Name | Specialization | Consultancy Fee | Appointment Date / Time | Appointment Creation Date | Current Status    | Action                    |
|----|--------------|----------------|-----------------|-------------------------|---------------------------|-------------------|---------------------------|
| 1. | jainam1      | ENT            | 450             | 2024-10-27 / 9:00 AM    | 2024-10-08 08:52:13       | Active            | <button>Cancel</button>   |
| 2. | sumit1       | ENT            | 450             | 2024-10-30 / 1:00 PM    | 2024-10-08 08:58:48       | Cancel by you     | <button>Canceled</button> |
| 3. | sumit1       | ENT            | 450             | 2024-10-15 / 9:15 AM    | 2024-10-08 09:15:53       | Active            | <button>Cancel</button>   |
| 4. | jainam1      | ENT            | 450             | 2024-10-20 / 1:00 PM    | 2024-10-08 10:49:55       | Active            | <button>Cancel</button>   |
| 5. | jainam1      | ENT            | 450             | 2024-10-20 / 1:00 PM    | 2024-10-08 10:51:00       | Cancel by you     | <button>Canceled</button> |
| 6. | jainam1      | ENT            | 450             | 2024-10-15 / 5:15 PM    | 2024-10-12 17:14:11       | Cancel by Patient | <button>Canceled</button> |

The bottom of the page features a footer with the text "HOSPITAL MANAGEMENT SYSTEM". The system tray at the bottom right shows the date as 13-10-2024 and the time as 16:19.

## Add Patient Page

The screenshot shows a web browser window titled "Doctor | Add Patient". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/doctor/add-patient.php". The page header includes the "HMS" logo and the user "jainam". The main content area is titled "Add Patient". It contains a form with the following fields:

- Patient Name \*: Input field with placeholder "Enter Patient Name".
- Patient Contact no \*: Input field with placeholder "Enter Patient Contact no".
- Patient Email \*: Input field with placeholder "Enter Patient Email id".
- Gender \*: Radio buttons for Male, Female, and Other.
- Patient Address \*: Input field with placeholder "Enter Patient Address".
- Patient Age \*: Input field with placeholder "Enter Patient Age".
- Medical History \*: Input field with placeholder "Enter Patient Medical History(if any)".

A blue "Add" button is located at the bottom of the form. The bottom of the page features a footer with the text "HOSPITAL MANAGEMENT SYSTEM". The system tray at the bottom right shows the date as 13-10-2024 and the time as 16:20.

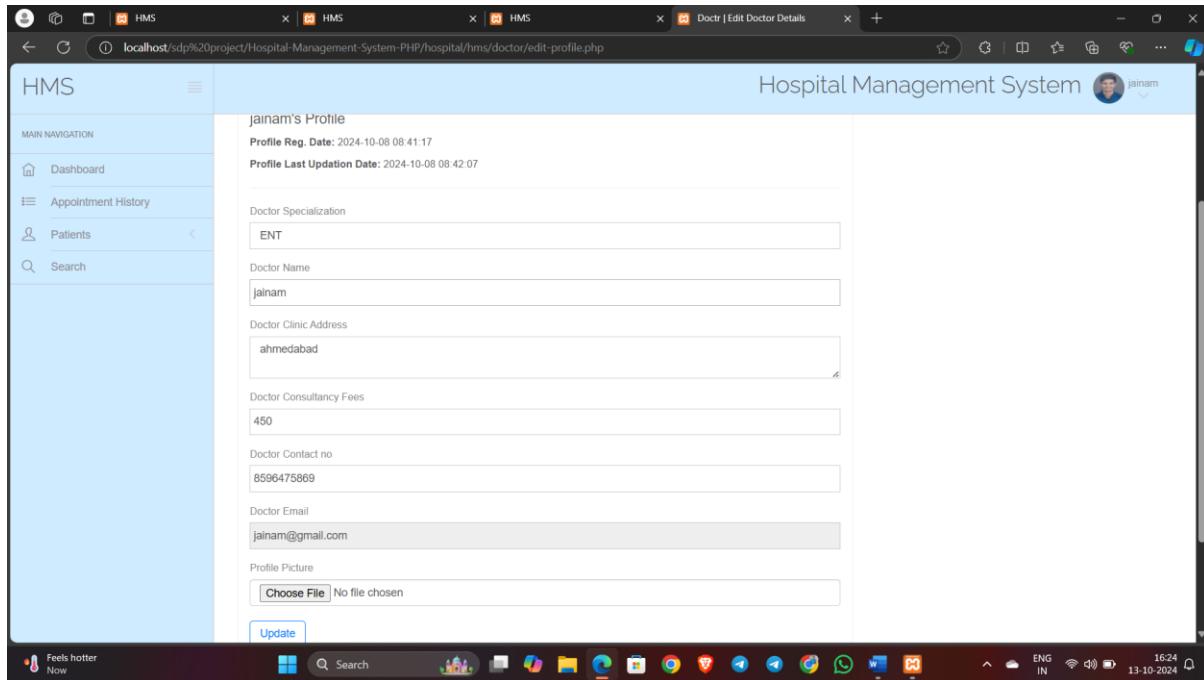
## Manage Patients Page

The screenshot shows a web browser window for the Hospital Management System (HMS). The title bar indicates the page is 'Doctor | Manage Patients'. The URL in the address bar is 'localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/doctor/manage-patient.php'. The main content area is titled 'DOCTOR | MANAGE PATIENTS' and contains a table titled 'Manage Patients'. The table has columns: #, Patient Name, Patient Contact Number, Patient Gender, Creation Date, Updation Date, and Action. One row is present, showing: 1., jainam, 8596475869, male, 2024-10-08 10:53:13, (empty), and a button labeled 'Edit' and 'View Details'. The left sidebar is titled 'MAIN NAVIGATION' and includes links for Dashboard, Appointment History, Patients, and Search. The top right corner shows the user profile 'jainam'. The system status bar at the bottom shows 'Hot weather Now' and the date '13-10-2024'.

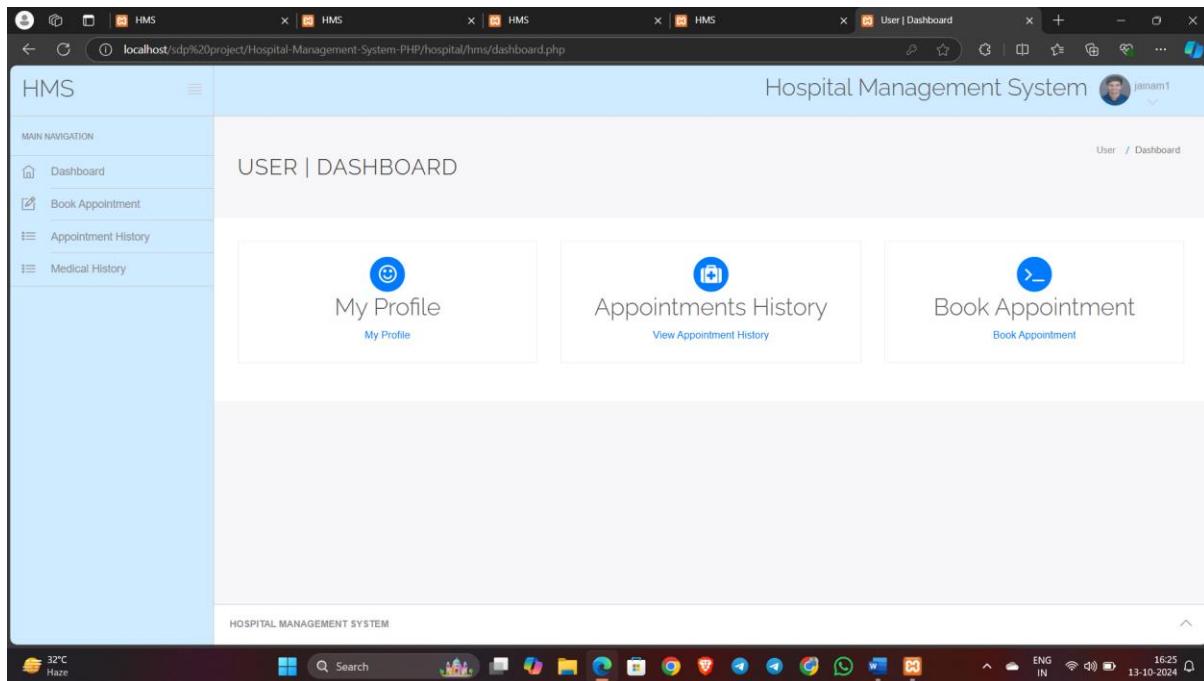
## Doctor Searching UI Page

The screenshot shows a web browser window for the Hospital Management System (HMS). The title bar indicates the page is 'Doctor | Manage Patients'. The URL in the address bar is 'localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/doctor/search.php'. The main content area is titled 'DOCTOR | MANAGE PATIENTS' and contains a search form with a placeholder 'Search by Name/Mobile No.' and a 'Search' button. Below the search form is a table titled 'Result against "jainam" keyword'. The table has columns: #, Patient Name, Patient Contact Number, Patient Gender, Creation Date, Updation Date, and Action. One row is present, showing: 1., jainam, 8596475869, male, 2024-10-08 10:53:13, (empty), and a button labeled 'Edit' and 'View Details'. The left sidebar is titled 'MAIN NAVIGATION' and includes links for Dashboard, Appointment History, Patients, and Search. The top right corner shows the user profile 'jainam'. The system status bar at the bottom shows '32°C Haze' and the date '13-10-2024'.

## Patient Profile Edit UI Page



## Patient Dashboard Page



## Booking Appointment UI Page

The screenshot shows a web browser window titled "User | Book Appointment". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/book-appointment.php". The page has a left sidebar with "MAIN NAVIGATION" containing "Dashboard", "Book Appointment" (which is selected), "Appointment History", and "Medical History". The main content area is titled "USER | BOOK APPOINTMENT" and contains a "Book Appointment" form. The form fields include "Doctor Specialization" (dropdown menu), "Doctors" (dropdown menu), "Consultancy Fees" (dropdown menu), "Date" (dropdown menu), and "Time" (dropdown menu). A "Submit" button is at the bottom. The status bar at the bottom of the browser shows "from Sardar Pat... Closed road" and system icons.

## Appointment History UI Page

The screenshot shows a web browser window titled "User | Appointment History". The URL is "localhost/sdp%20project/Hospital-Management-System-PHP/hospital/hms/appointment-history.php". The page has a left sidebar with "MAIN NAVIGATION" containing "Dashboard", "Book Appointment", "Appointment History" (which is selected), and "Medical History". The main content area is titled "USER | APPOINTMENT HISTORY" and displays a table of appointment records. The columns are: #, Doctor Name, Specialization, Consultancy Fee, Appointment Date / Time, Appointment Creation Date, Current Status, and Action (with "Cancel" buttons). The table data is as follows:

| #  | Doctor Name | Specialization | Consultancy Fee | Appointment Date / Time | Appointment Creation Date | Current Status   | Action                  |
|----|-------------|----------------|-----------------|-------------------------|---------------------------|------------------|-------------------------|
| 1. | dharmik     | Dentists       | 500             | 2024-10-10 / 12:00 PM   | 2024-10-08 08:50:50       | Active           | <button>Cancel</button> |
| 2. | sumit       | Gynecologists  | 500             | 2024-10-15 / 9:00 AM    | 2024-10-08 08:51:25       | Active           | <button>Cancel</button> |
| 3. | raj         | Cardiologists  | 550             | 2024-10-13 / 9:00 AM    | 2024-10-08 08:51:48       | Active           | <button>Cancel</button> |
| 4. | jainam      | ENT            | 450             | 2024-10-27 / 9:00 AM    | 2024-10-08 08:52:13       | Active           | <button>Cancel</button> |
| 5. | jainam      | ENT            | 450             | 2024-10-20 / 1:00 PM    | 2024-10-08 10:49:55       | Active           | <button>Cancel</button> |
| 6. | jainam      | ENT            | 450             | 2024-10-20 / 1:00 PM    | 2024-10-08 10:51:00       | Cancel by Doctor | Canceled                |
| 7. | jainam      | ENT            | 450             | 2024-10-15 / 5:15 PM    | 2024-10-12 17:14:11       | Cancel by You    | Canceled                |

The status bar at the bottom of the browser shows "from Sardar Pat... Closed road" and system icons.

## Medical History UI Page

**Patient Details**

|                                 |            |                  |                     |
|---------------------------------|------------|------------------|---------------------|
| Patient Name                    | jainam     | Patient Email    | jainam1@gmail.com   |
| Patient Mobile Number           | 8596475869 | Patient Address  | ahmedabad           |
| Patient Gender                  | male       | Patient Age      | 20                  |
| Patient Medical History(if any) | fever      | Patient Reg Date | 2024-10-08 10:53:13 |

**Medical History**

| # | Blood Pressure | Weight | Blood Sugar | Body Temperature | Medical Prescription | Visit Date          |
|---|----------------|--------|-------------|------------------|----------------------|---------------------|
| 1 | 120            | 50     | 85          | 102              | dolo 500             | 2024-10-08 10:54:50 |

## Validation In Login Page

**Sign in to your account**

Please enter your name and password to log in.

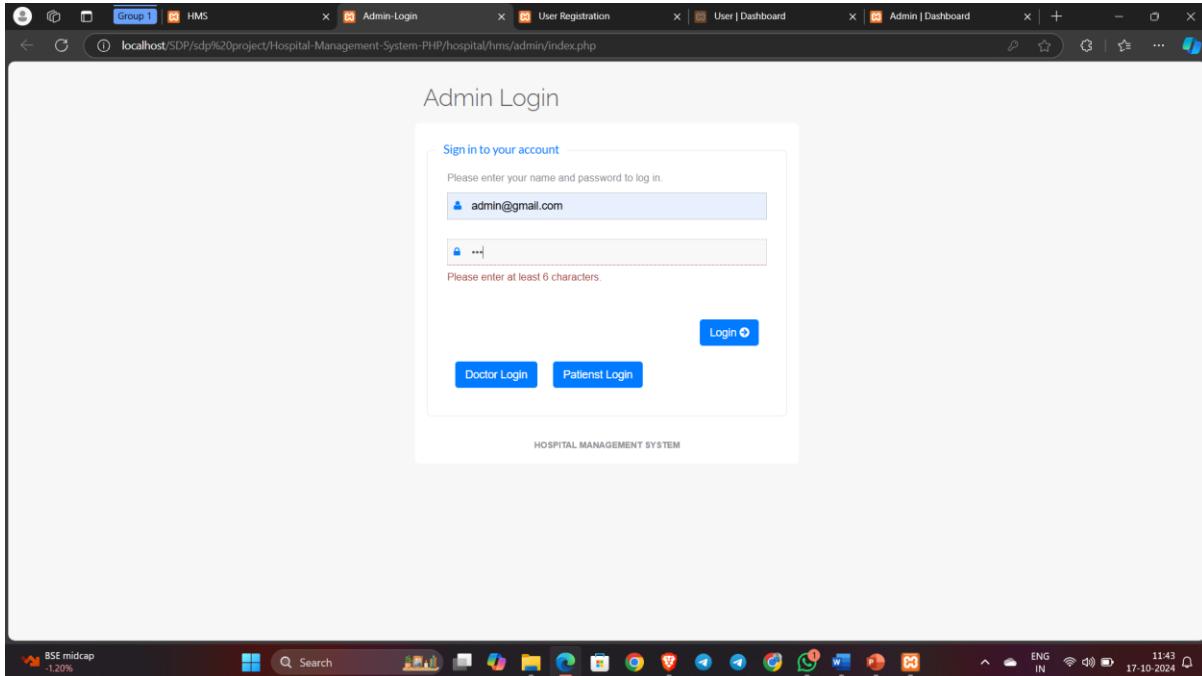
(Required)

Please enter a valid email address.

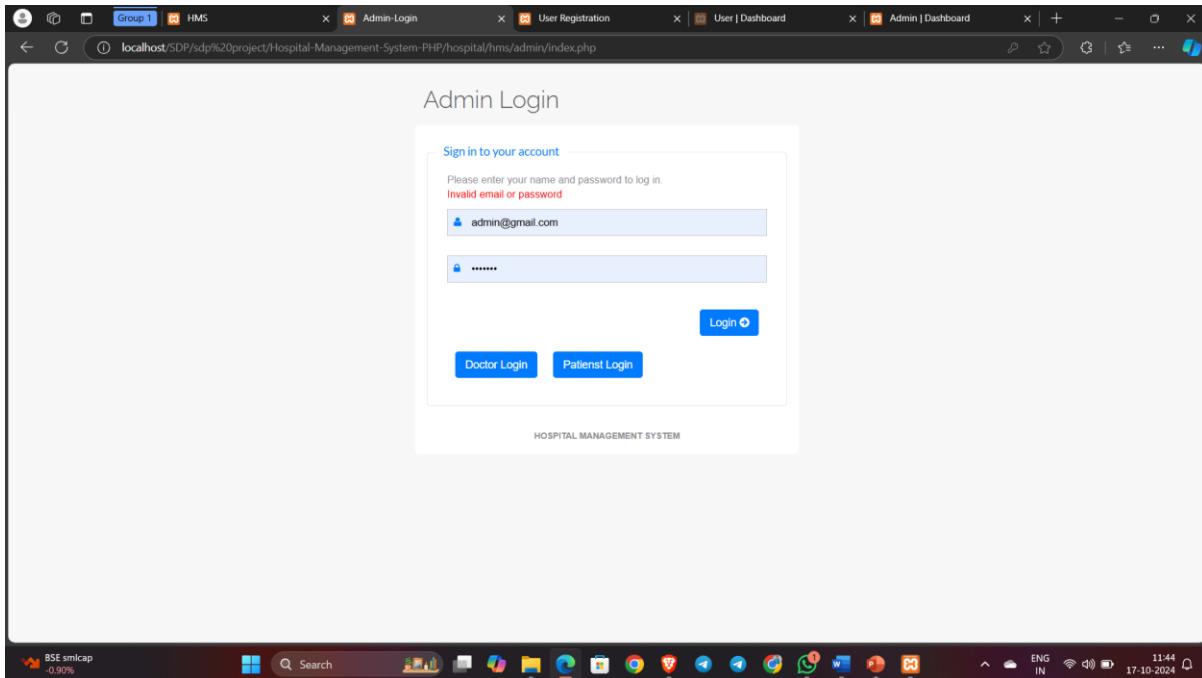
[Doctor Login](#) [Patient Login](#)

HOSPITAL MANAGEMENT SYSTEM

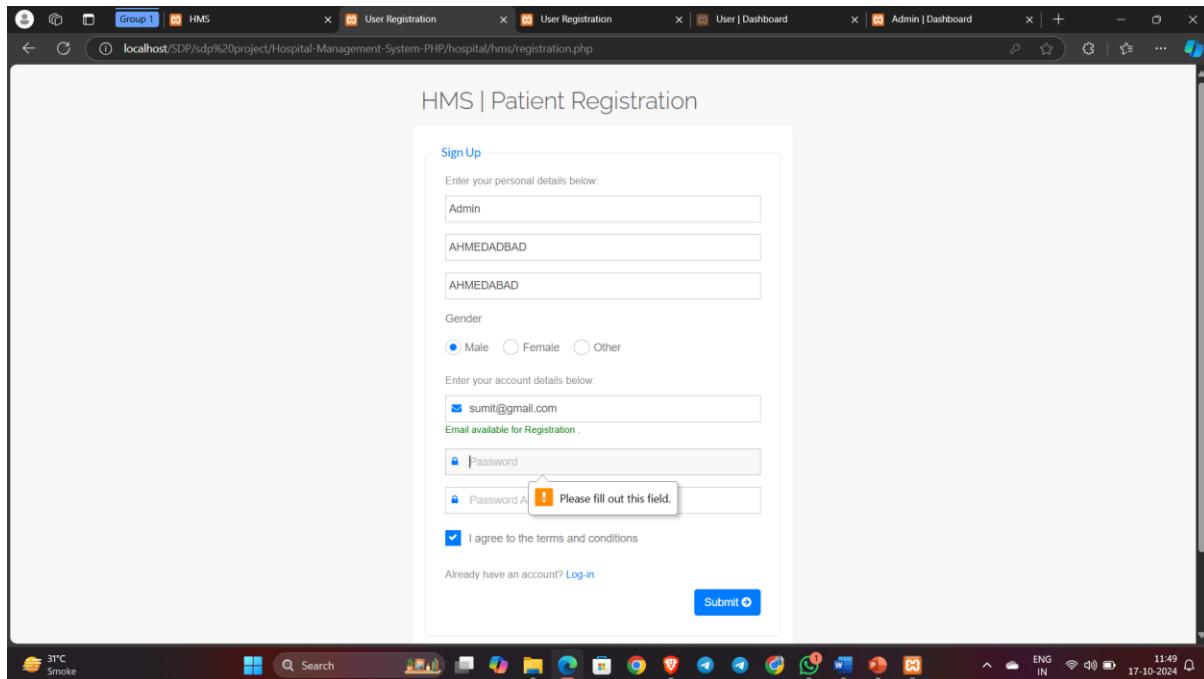
## Validation In Password Page



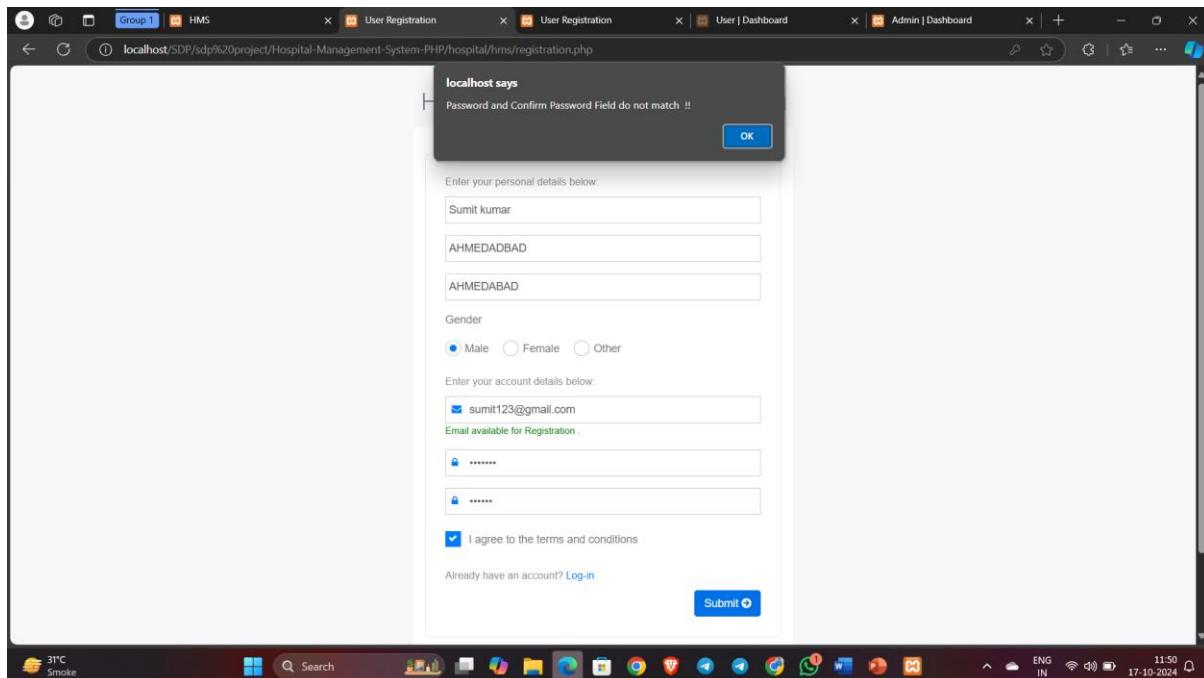
## Validation in Email and Password



## Validation In Sign Up Available Email Page



## Validation In Password Not Same



## Validation Sign Up in Email Already exists

The screenshot shows the 'Admin | Add Doctor' page of the Hospital Management System. The form fields include:

- Doctor Name: Enter Doctor Name
- Doctor Clinic Address: Enter Doctor Clinic Address
- Doctor Consultancy Fees: Enter Doctor Consultancy Fees
- Doctor Contact no: Enter Doctor Contact no
- Doctor Email: jainam@gmail.com (highlighted in red)
- Confirm Password: Confirm Password

A red error message 'Email already exists.' is displayed next to the Doctor Email field. The status bar at the bottom shows system information like '31°C Smoke' and the date '17-10-2024'.

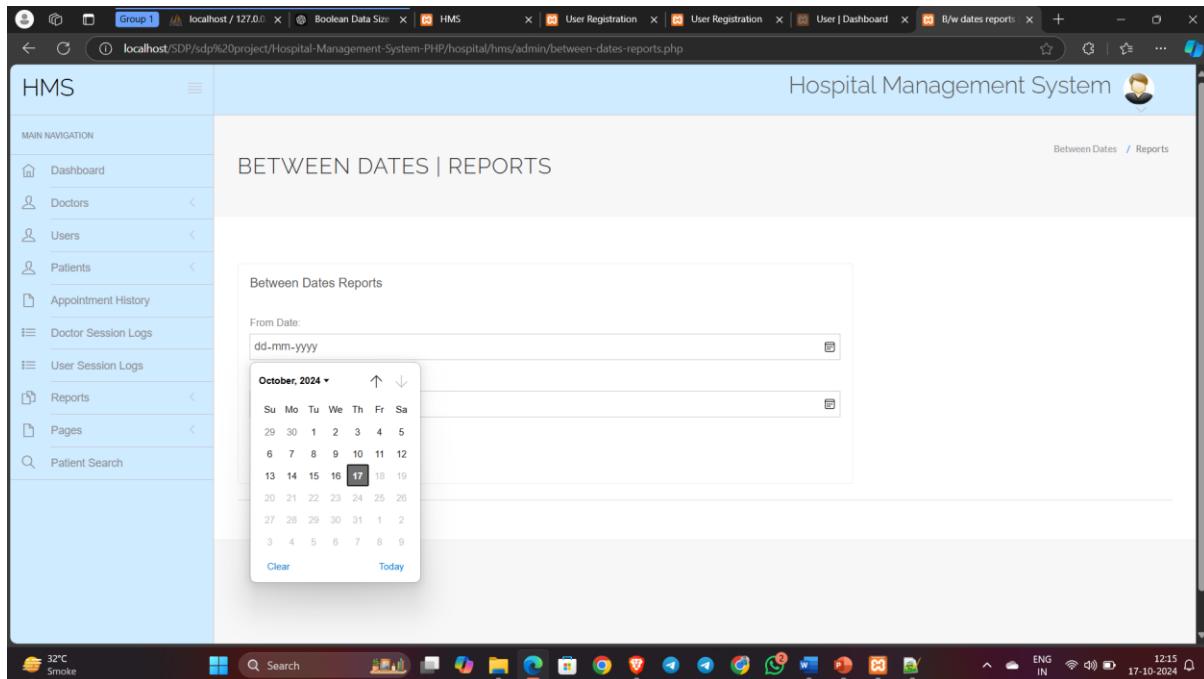
## Validation In Contact No

The screenshot shows the 'Admin | Add Doctor' page of the Hospital Management System. The form fields include:

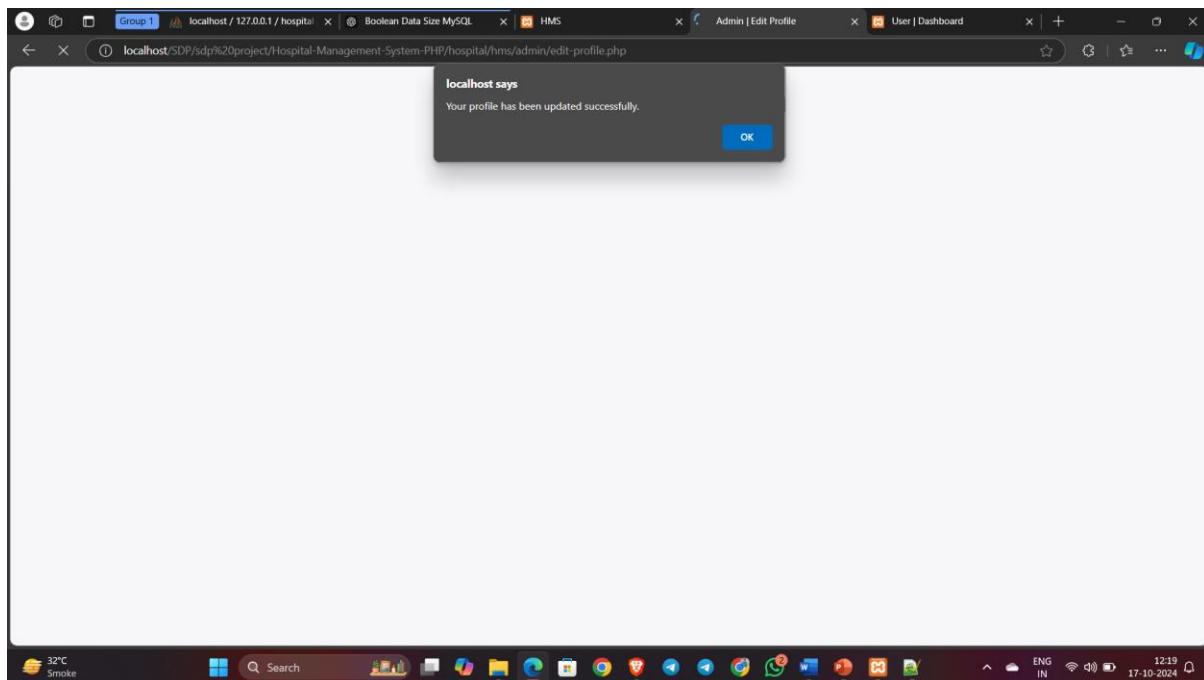
- Doctor Specialization: ENT
- Doctor Name: sumitkumar
- Doctor Clinic Address: AHMEDABAD
- Doctor Consultancy Fees: 650
- Doctor Contact no: 212 (highlighted in red)
- Doctor Email: sumit123@gmail.com (highlighted in red)
- Confirm Password: Confirm Password

An orange error message 'Please lengthen this text to 10 characters or more (you are currently using 3 characters).' is displayed next to the Doctor Contact no field. A green note 'Email available for Registration.' is shown above the Doctor Email field. The status bar at the bottom shows system information like '32°C Smoke' and the date '17-10-2024'.

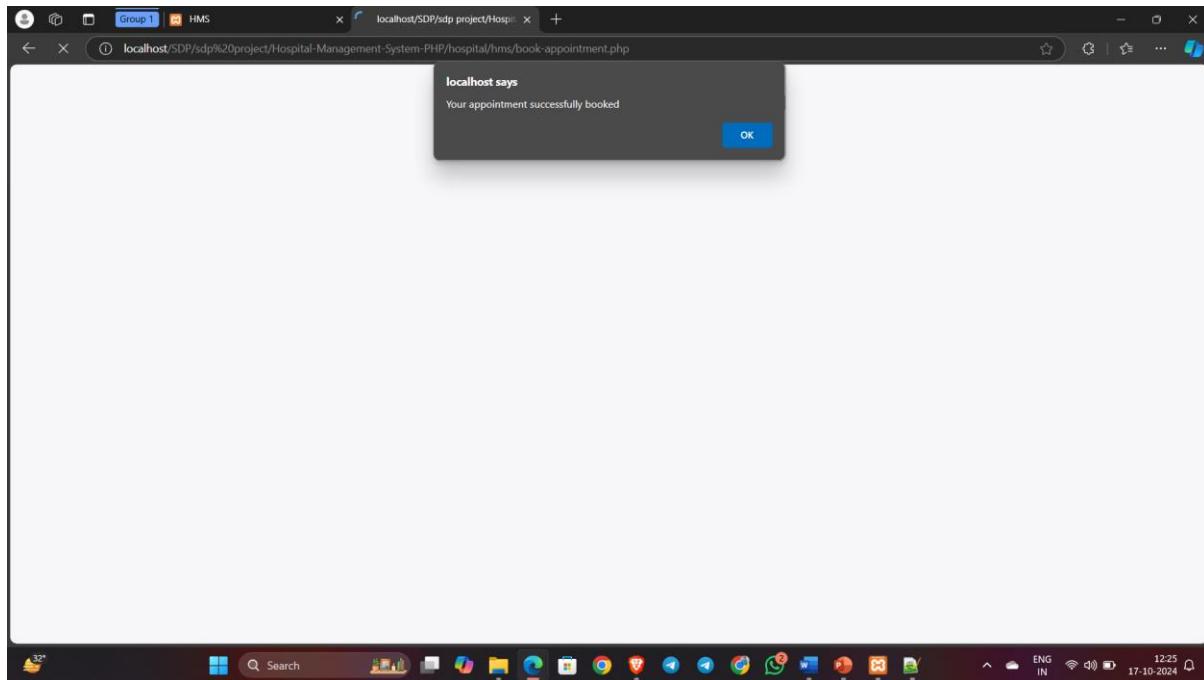
## Validation In Date



## Alert Box for Update Profile



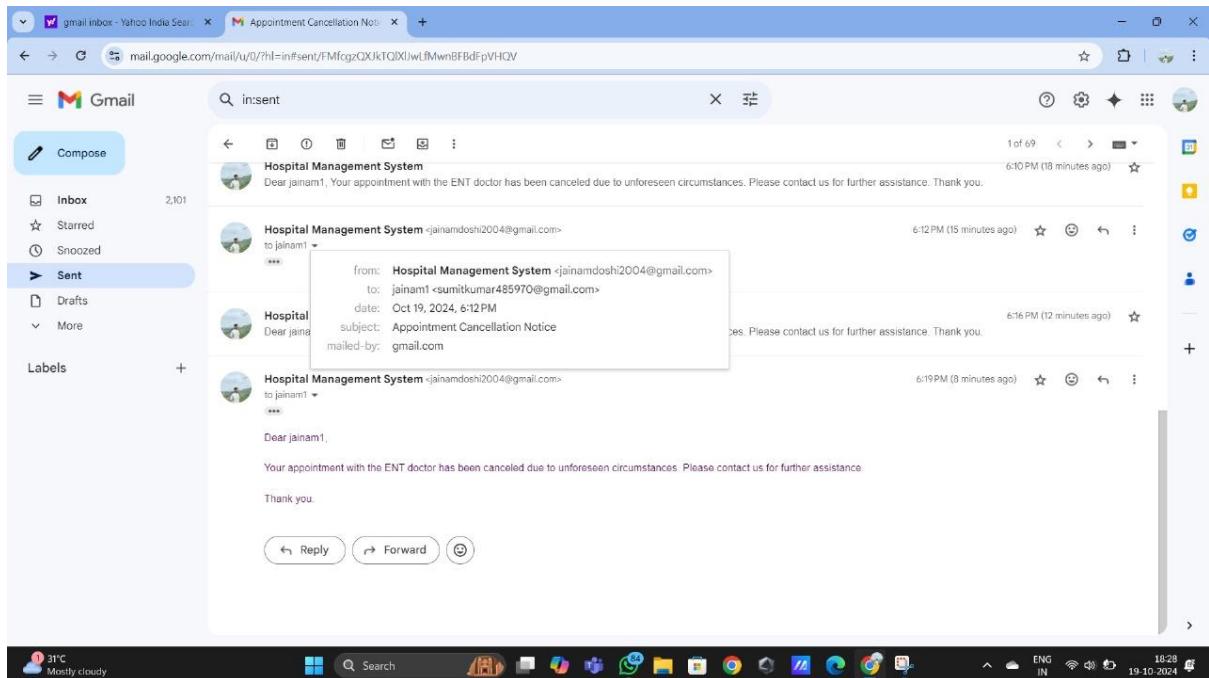
## Alert Box for booking Appointment



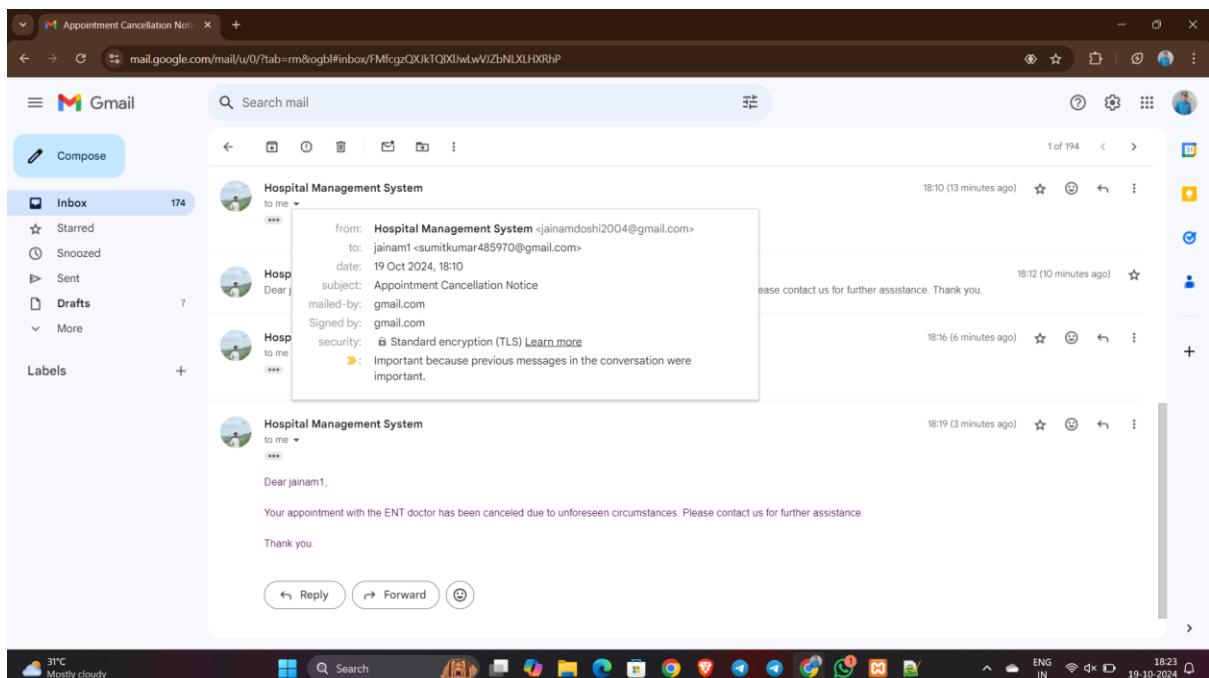
## Pdf Download

A screenshot of a PDF print dialog box overlaid on a patient details page. The patient details page on the left shows 'Patient Details' with fields for ID (5), Name (jainam), Email (jainam1@gmail.com), Contact (8596475869), Address (ahmedabad), Gender (Male), and Age (21). It also shows 'Medical History' with a table of vital signs: Blood Pressure (120/80), Weight (50 kg), Blood Sugar (85 mg/dL), Temperature (102°F), Prescription (dolo 500 mg), and Visit Date (2024-10-08 10:54:50). The print dialog box on the right has 'Print' at the top and '1 sheet of paper' selected. It includes sections for 'Destination' (Microsoft Print to PDF), 'Pages' (All), 'Layout' (Portrait), and 'Color' (Color). At the bottom are 'Print' and 'Cancel' buttons.

## Appointment Cancel Email Notification Sender side



## Appointment Cancel Email Notification Receiver side



## 8. Test Plan and Test Cases

| Test Case ID | Test Scenario             | Preconditions      | Test Steps  | Expected Result   | Actual Result                       | Remarks                             |
|--------------|---------------------------|--------------------|---|---|-------------------------------------|-------------------------------------|
| 1            | Successful User Login     | User is registered | 1. Open login page<br>Enter valid email and password<br>Click "Login"   | User is redirected to the dashboard without any messages                | Pass                                | No issue found                      |
| 2            | Invalid Login Attempt     | User is registered | 1. Open login page<br>2. Enter valid email and incorrect password<br>3. Click "Login"                                     | System should display an error message like "Invalid email or password" | Error message displayed as expected | Pass; system functioning correctly. |
| 3            | Add Doctor Specialization | Admin is logged in | 1. Navigate to Admin module<br>2. Click "Add Doctor Specialization"<br>3. Enter Specialization name<br>4. Click "Submit". | Doctor Specialization added successfully !!.                            | Pass                                | No issue found                      |

|   |              |                    |   |                                 |      |                |
|---|--------------|--------------------|---|---------------------------------|------|----------------|
| 4 | Manage users | Admin in logged in | <ol style="list-style-type: none"> <li>1. Navigate to Admin module</li> <li>2. Click "Manage Users"</li> <li>3. Click "Cross sign"</li> </ol> | User Data Deleted successfully! | Pass | No issue Found |
|---|--------------|--------------------|---|---------------------------------|------|----------------|

| Test Case ID | Test Scenario | Preconditions      | Test Steps  | Expected Result                               | Actual Result | Remarks        |
|--------------|---------------|--------------------|---|---|---------------|----------------|
| 5            | Add Doctor    | Admin In Logged in | <ol style="list-style-type: none"> <li>1. Navigate to Admin module</li> <li>2. Click "Add Doctor"</li> <li>3. Enter all details</li> <li>4. Click "Submit"</li> </ol> | Doctor info added Successfully                | Pass          | No issue Found |
| 6            | Manage Doctor | Admin in logged in | <ol style="list-style-type: none"> <li>1. Navigate to Admin module</li> <li>2. Click "Manage Doctor"</li> <li>3. Click "Cross and edit sign"</li> </ol>               | Doctor Data Deleted and Updated successfully! | Pass          | No issue Found |

|   |                    |                         |  |                                      |      |                |
|---|--------------------|-------------------------|--|--------------------------------------|------|----------------|
| 7 | Add Patient        | Doctor In<br>Logged in  | 1. Navigate to Doctor module<br>2. Click "Add Patient"<br>3. Enter all details<br>4. Click "Submit"          | Patient info added Successfully      | Pass | No issue Found |
| 8 | Book Appointment   | Patient In<br>Logged in | 1. Navigate to Patient module<br>2. Click "Book Appointment"<br>3. Enter all details<br>4. Click "Submit"    | Your appointment successfully booked | Pass | No issue Found |
| 9 | Cancel Appointment | Patient In<br>Logged in | 1. Navigate to Patient module<br>2. Click "Appointment History"<br>3. Enter all details<br>4. Click "Submit" | Your appointment cancelled !!        | Pass | No issue Found |

## 9. Future Enhancement

### 1. Mobile App Development:

- **Explanation:** Creating a mobile app for your Hospital Management System (HMS) would improve accessibility for both patients and hospital staff. A dedicated app would allow users to easily manage appointments, view medical records, communicate with doctors, and receive notifications (like appointment reminders or test results) directly on their smartphones. The app could also feature push notifications to provide real-time updates and alerts.
- **Features:**
  - Patient access to medical history and test results.
  - Appointment booking and cancellations via the app.
  - Integration of telemedicine (video consultations).
  - Push notifications for important updates (appointment reminders, prescription refills, etc.).
- **Impact:** The mobile app will make it more convenient for users to interact with the HMS, improving overall user experience and engagement by allowing access anytime and anywhere.

## 2. Pharmacy Module:

- **Explanation:** Adding a Pharmacy Module to the HMS allows patients to order medications online after their appointments or prescription updates. The module could be integrated with the inventory system to manage stock levels and alert the pharmacy of low-stock items. Patients can track their orders, request refills, and even make payments for medications through the app or website.
- **Features:**
  - Online ordering of prescribed medications.
  - Pharmacy inventory management to track stock levels and automatic reordering.
  - Prescription tracking and refill requests by patients.
  - Integration with the payment system for easy online transactions.
- **Impact:** The pharmacy module will streamline the process for patients to receive medications after appointments, saving them time and ensuring a smooth medication management process.

## 3. Laboratory Module:

- **Explanation:** A Laboratory Module would allow the hospital to manage lab tests and their results more effectively. Patients can book laboratory tests online, receive notifications when their test results are available, and access their reports directly through the system. Lab staff can update test results in real-time, ensuring that both doctors and patients are kept informed.

- **Features:**
  - Online booking and tracking of lab tests by patients.
  - Real-time result updates accessible by both doctors and patients.
  - Lab inventory management for test kits and supplies.
  - Integration with patient medical records for seamless access to test results.
- **Impact:** This feature will help in reducing manual paperwork, ensuring quicker access to lab results, and improving communication between doctors and patients regarding test outcomes.

#### 4. Payment Gateway:

- **Explanation:** Adding a Payment Gateway would allow patients to make online payments for consultations, treatments, lab tests, and medications. This can be done either through the website or the mobile app, ensuring a smooth and secure payment process. Integrating popular payment options like credit/debit cards, UPI, and digital wallets (e.g., PayPal) will provide flexibility and convenience.
- **Features:**
  - Secure online payment for services like appointments, lab tests, and pharmacy purchases.
  - Integration with multiple payment methods (credit cards, UPI, wallets, etc.).
  - Transaction history view for patients to keep track of payments.
  - Automated invoice generation after payments.

- **Impact:** A payment gateway will simplify the billing process for both patients and the hospital, making it easier to collect fees and reducing manual billing errors. It will also improve the user experience by offering quick and easy payment options.

## 5. Improved User Interface (UI) and User Experience (UX):

- **Explanation:** Improving the UI/UX of your HMS website and mobile app is essential for creating a more user-friendly and intuitive experience. A clean, modern interface with easy navigation will help users—whether patients, doctors, or admins—find what they need quickly and efficiently. Enhancing responsiveness for mobile devices, improving load times, and ensuring accessibility for people with disabilities are key elements of UI/UX improvement.
- **Features:**
  - A visually appealing, responsive design that adjusts to different devices (desktop, tablet, mobile).
  - Intuitive navigation to ensure that users can easily access key features like appointments, test results, and billing.
  - Accessible design that meets WCAG (Web Content Accessibility Guidelines) for users with disabilities.
  - Faster load times and performance optimization for a seamless experience.
- **Impact:** A more polished UI/UX will not only make the system more attractive but also increase user satisfaction and retention by reducing frustration and improving usability.

## 10. References / Bibliography

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