



Project Name: Hospital Management System

Branch DAC March-2024

Documentation On

“HOSPITAL MANAGEMENT SYSTEM”

DAC March 2024

Guided By: Bakul Joshi

Submitted By :

Group No: 05

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|-------------------------|--------------|
| • Chinmay Mahajan | 240343020027 |
| • Devendrasing Kachhawa | 240343020030 |
| • Rahul Diyewar | 240343020079 |
| • Yash Sakharwade | 240343020109 |

Table of Contents

1. Introduction.....	5
1. Document Purpose.....	5
2. Project Background	5
3. Aim & Objectives	5
2. Business Requirements Overview	6
3.Functional Requirements	6
1. Patient Module.....	6
2. Doctor Module.....	7
3. Admin Module	7
4. Non-Functional Requirement.....	7
5. Use Case Diagram.....	8
1. Patient.....	8
2. Doctor	9
3. Admin	10
6. Project Architecture Diagram	11
7. Database Design	12
1. Patient.....	12

2. Doctor	12
3. Login.....	13
4. Bill	13
5. Room Allocated.....	13
6. Discharge	14
7. Room Category	14
8. Room Availability	14
9. Department... ..	14
8. E-R Diagram	18
9. Snapshots.....	19
10. Conclusion and Future scope	29

List of Figures

Use Case Diagrams..... 17

Fig 1 Project Architecture 8

Fig 2 Patient 8

Fig 3 Doctor9

Fig 4 Admin 10

Fig 5 ER Diagram 14

1. Introduction:

1. Document Purpose:

This document communicates the business requirements and scope for developing Hospital Management System. The scope of this document is to define the functional and non-functional requirements, business rules and other constraints requirements.

2. Project Background:

In this busy world we don't have the time to wait in infamously long hospital queues.

The problem is, queuing at hospital is often managed manually by administrative staff, then take a token there and then wait for our turn then ask for the doctor.

In some areas of country there are no medical facilities and people don't have access to any physical medical facilities.

3. Aim & Objectives:

The main objective of this project is to build a website that improves user accessibility and time flexibility to help customers and authorized vehicle service centers. Customers will be able to browse the service center's information, and view offers provided by the service centers. Customers can book service slots after login, and could track servicing status. Customers may do business for car service easily and comfortably.

2. Business Requirements Overview:

- HMS System is the public web application.
- HMS System will be opened to the global, but in the phase 1, the main target is in the India.
- There are three types of user: Patients, admin, doctors.
- Admin can register Doctor, view Doctor, Admit Patient, Discharge Patient.
- Doctor can view Patient details, can send request to admin to admit a patient.
- Patient can Register himself/herself, Login, book bed online.
- HMS is to upgrade administration of hospitals and hence providing better services to patients.
- Hospital Management System could be maintained by Administrator.

3. Functional Requirements Overview:

Hospital Management System consists of three modules described as below.

1. Admin Module
2. Doctor Module
3. Patient Module

3.1 Admin Module:

- The admin can add doctor, view doctor details.
- Admin can admit patient, discharge patient.
- Admin can confirm bed booking.
- Admin can log in the system with his/her credentials.
- Admin can generate bills.

3.2 Doctor Module:

- Doctors can view list of patient.
- Doctors can send request to admit patient.
- Doctors can login using his/her credentials.

3.3 Patient Module:

- Patients can create his/her account by putting their details.
- Patient can login using his/her credentials.
- Patients can make payment or check payment history online.

4. Non-functional Requirements

- The website should use professional design, look and feel and color scheme.
- Users will have no limitations for accessing the application through Internet. The portal being an internet application, it is difficult specify exact number of visitor or users. Hence we will target the system to support between 5 and 10 million users on launch of phase 1.
- Being a public website, the site must follow general usability guidelines for menus, navigation, colors, links and other actions provided on the screens.
- The system should be designed in such a manner that user will be able to complete tasks in minimum number of steps.

5. Use-Case Diagram

1. Patient:

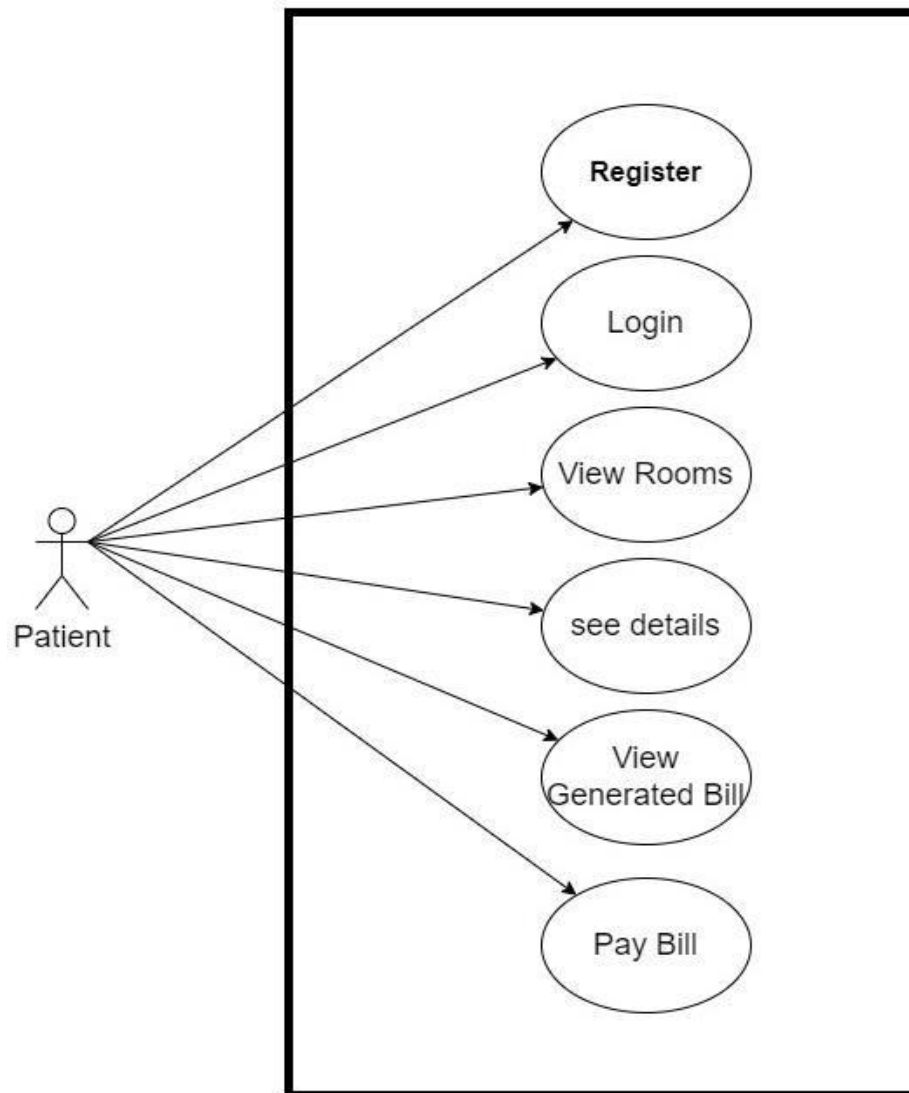


Fig. Use-Case Diagram for Patient.

5.2 Doctor:

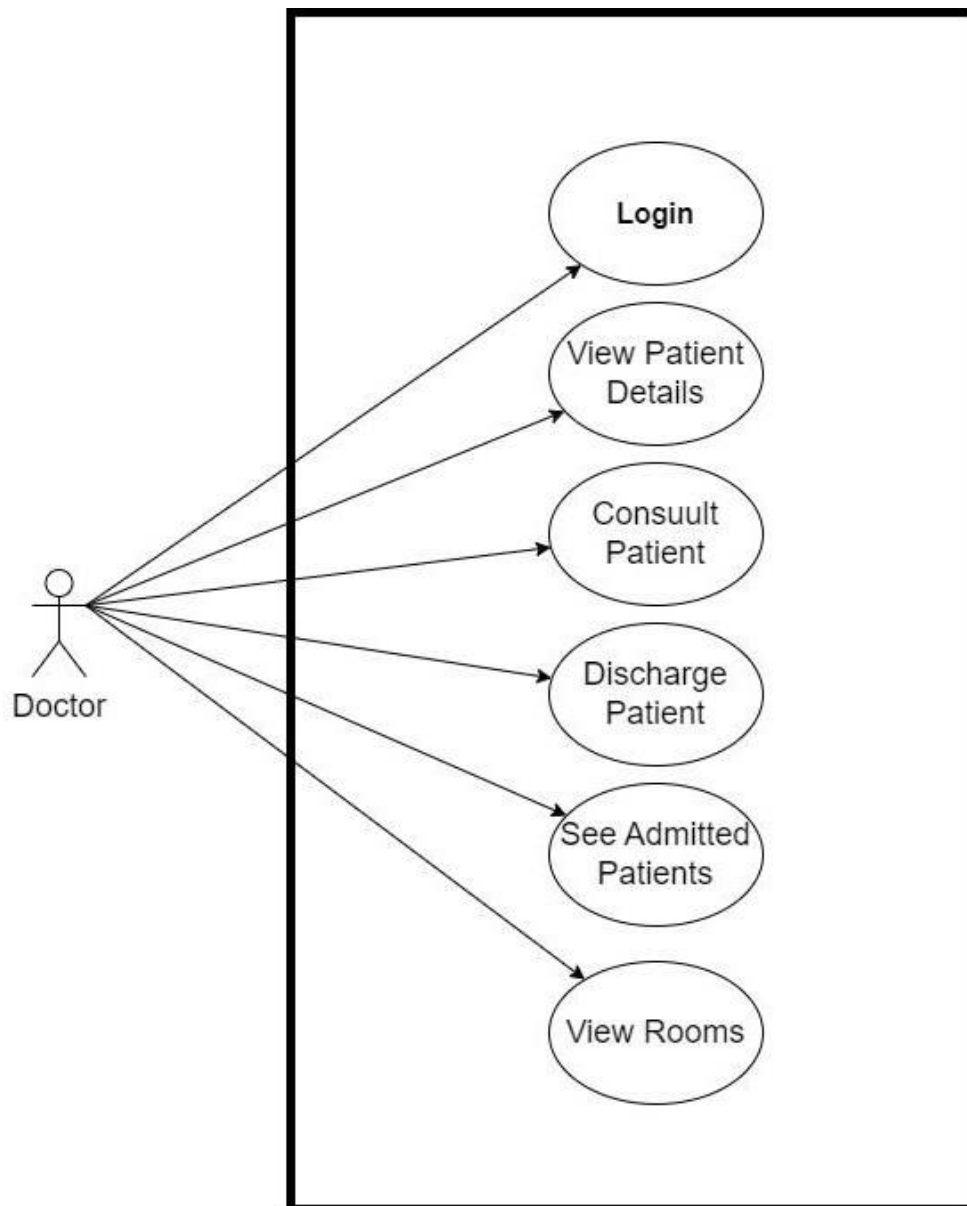


Fig. Use-Case Diagram for Doctor

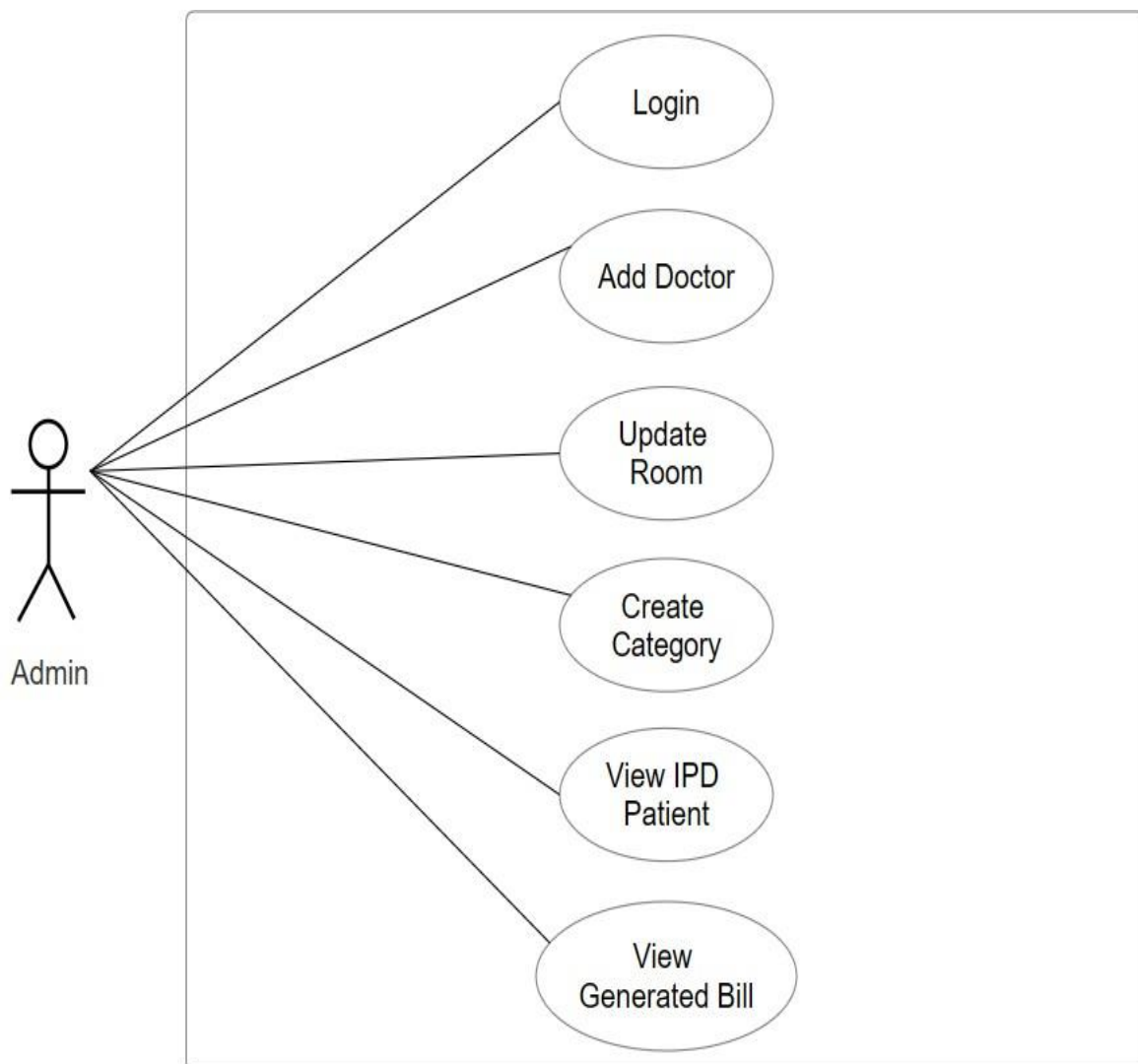
5.3 : Admin :

Fig. Use-Case Diagram for Admin

6. Project Architecture Diagram:

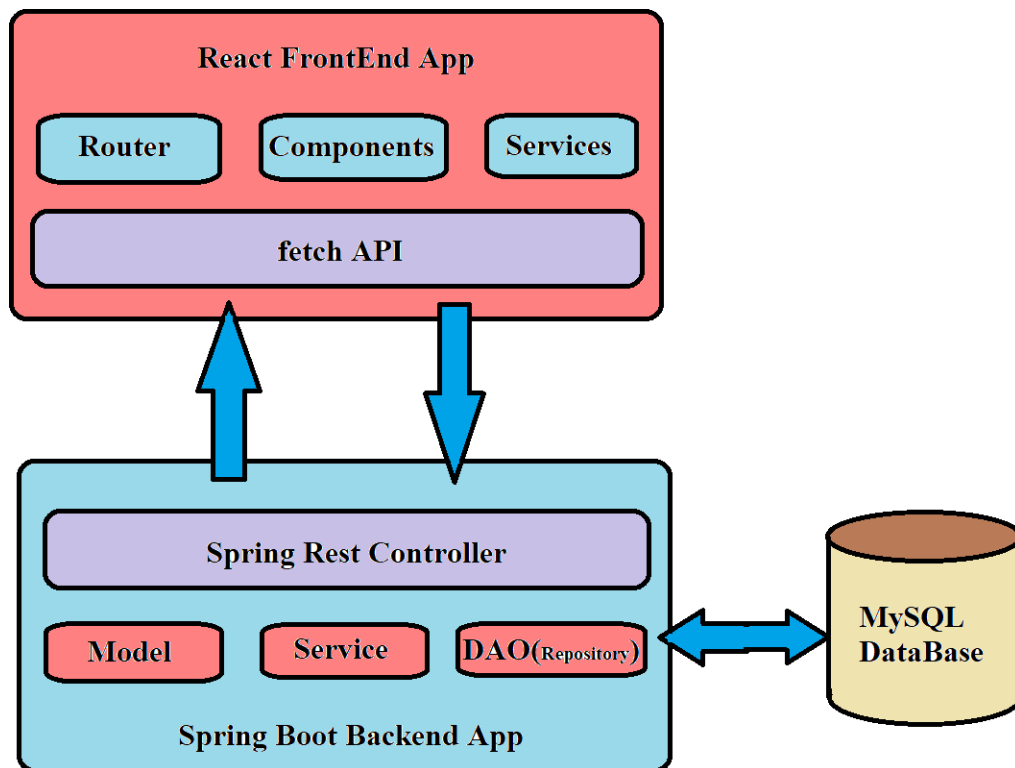


Fig. Project Architecture Diagram

7. Database Design:

1. Patient table:

Field	Type	Null	Key	Default	Description
Adharno	varchar		Primary Key	Null	Unique patient id
Pid	Integer	Not Null		Null,AI	Unique patient id
Fname	Varchar(45)	Not Null		Null	First name of patient
Lname	Varchar	Not Null		Null	Last name of patient
Mobno	Varchar(45)	Not Null		Null	Contact number of patient
Address	Varchar(45)	Not Null		Null	Address of patient
Age	Varchar(45)	Not Null		Null	Age of patient
Gender	Varchar	Not Null		Null	Address of patient
Blood group	Varchar	Not Null		Null	Blood Group of patient
Appointed Doctor	Varchar	Not Null		Null	Doctor Appointed to patient
roomid	int		Foreign Key	Null	Room allotted to patient

2. Doctor table:

Field	Type	Null	Key	Default	Description
did	Integer	Not Null	Primary key	Null,AI	Unique ID of service centers
Dfname	Varchar(45)	Not Null		Null	Name of service center
Dlname	Varchar(45)	Not Null		Null	Email ID of service center
Demailid	Varchar	Not Null			
Contactno	Varchar(45)	Not Null		Null	Contact no of service center
Address	Varchar(45)	Not Null		Null	Lane of service center's address
doctDept	Integer	Not Null		Null	Range of Booking limit
DOB	Integer	Not Null		Null	Unique ID of brand of vehicle
DOJ	Integer	Not Null		Null	Unique ID of area of service center
Registration no	Integer	Not Null		Null,Unique	Login ID
deptno	Integer	Not Null	Foreign Key		

3. Login table:

Field	Type	Null	Key	Default	Description
Userid	Integer	Not Null		Null	Id of patient or doctor
Uname	Varchar(45)	Not Null		Null	Name of user
Role	Varchar(45)	Not Null		Null	Name of user
Loginid	Integer	Not Null	Primary Key	Null	Id required for login
password	Varchar	Not Null		Null	Password required for login

4. Bill table:

Field	Type	Null	Key	Default	Description
BillId	Integer	Not Null	Primary key	Null, AI	Unique bill no
userid	Varchar(45)	Not Null		Null	User ID
amount	Decimal	Not Null		Null	Amount to be paid
Discharge date	Date	Not Null		Null	Date of patient discharge

5. Room Allocated table

Field	Type	Null	Key	Default	Description
Roomid	Integer	Not Null	Primary key	Null, AI	Unique ID of room
Category	Varchar(45)	Not Null		Null	Name of the category
Price	Decimal	Not Null		Null	Price of the room
Roomcatid	Varchar	Not Null	Foreign key	Null	Unique ID of room category

6. Room Category table:

Field	Type	Null	Key	Default	Description
roomcatid	Varchar	Not Null	Primary key	Null	Unique ID of rooms category
Charges	Decimal	Not Null		Null	Amount to be paid by Patient
Roomid	Varchar	Not Null	Foreign Key	Null	Unique id of rooms
Noofrooms	Integer	Not Null		Null	No of rooms

7. Room Availability table:

Field	Type	Null	Key	Default	Description
ravailid	Integer	Not Null	Primary key	Null	Unique ID generated
Roomcatid	Integer	Not Null	Foreign Key	Null	
Roomid	Integer	Not Null	Foreign key	Null	
Status	Varchar	Not Null	Foreign key	Null	Available or not

8. Dischatge table:

Field	Type	Null	Key	Default	Description
discid	Integer	Not Null	Primary key	Null, AI	Unique ID of discharge
Pid	Integer	Not Null	Foreign Key	Null	Unique ID of patient
did	Integer	Not Null	Foreign Key		Unique ID of doctor

9. Department table:

Field	Type	Null	Key	Default	Description
Deptno	Integer	Not Null	Primary key	Null	Unique Dept ID
deptname	Varchar	Not Null		Null	Department name

8. ER-Diagram:

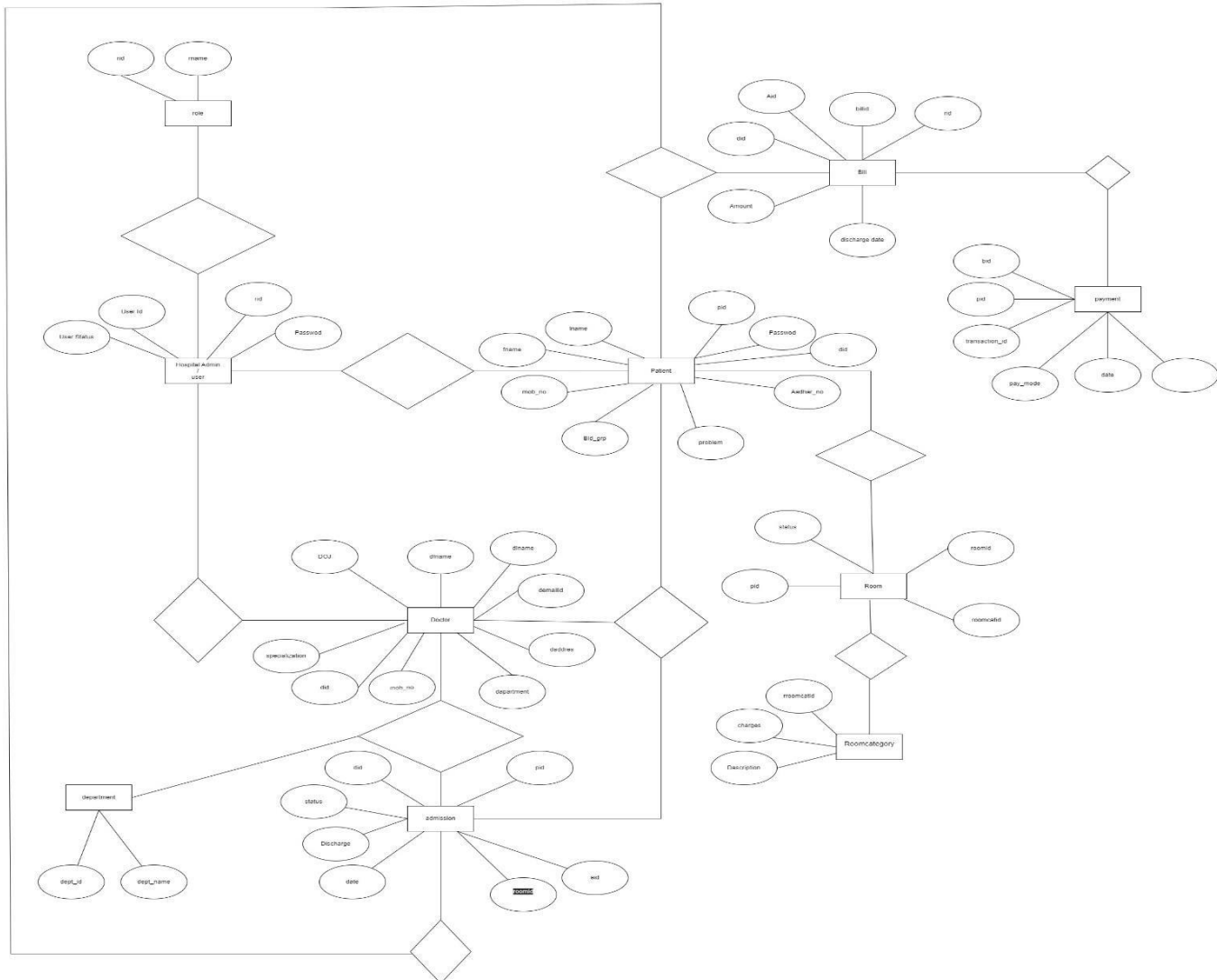
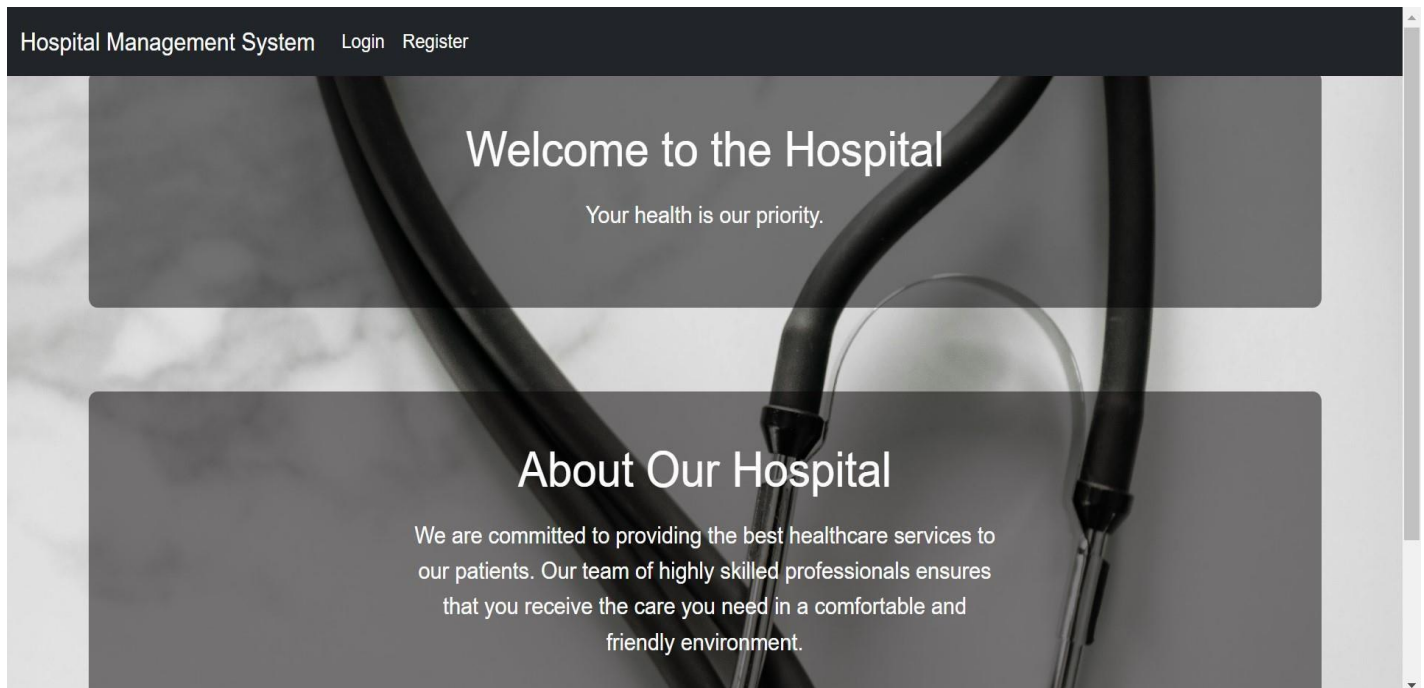


Fig. E-R diagram shows database of Vehicle Service Management System

9. Snapshots:

1. Home Page:

Following snapshot shows the Home page for Hospital Management System

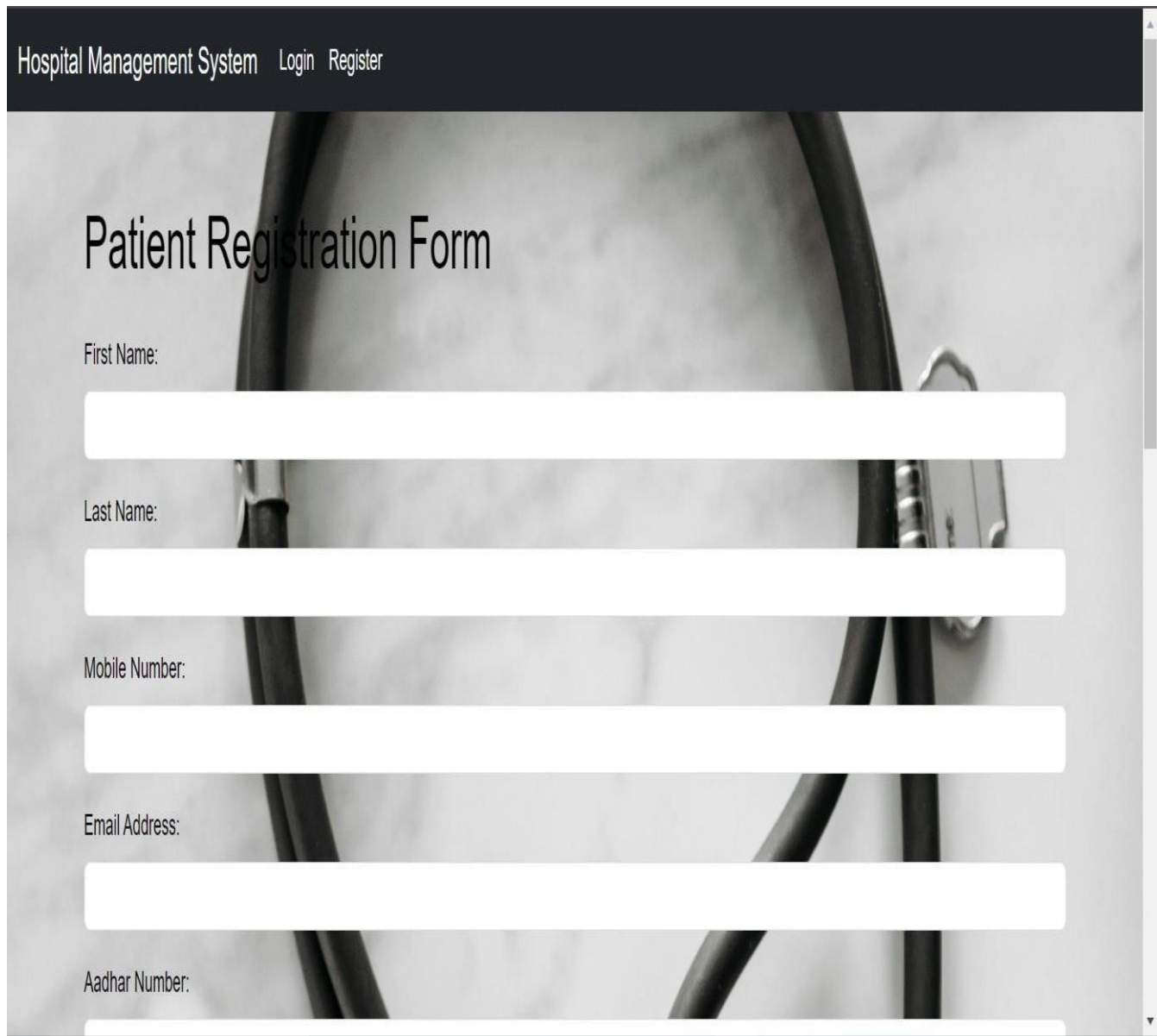


This page contains following controls

- Login
- Register

9.2 Register Page:

Following snapshot shows the Register page of Hospital Management System



The screenshot displays the 'Patient Registration Form' within a web application. The header bar is dark grey with the text 'Hospital Management System' and links for 'Login' and 'Register'. The background of the form area is a light grey image of a stethoscope. The form contains five input fields, each preceded by a label: 'First Name:', 'Last Name:', 'Mobile Number:', 'Email Address:', and 'Aadhar Number:'. Each label is followed by a white rectangular input box. The 'Aadhar Number' field is partially visible at the bottom.

Hospital Management System Login Register

Patient Registration Form

First Name:

Last Name:

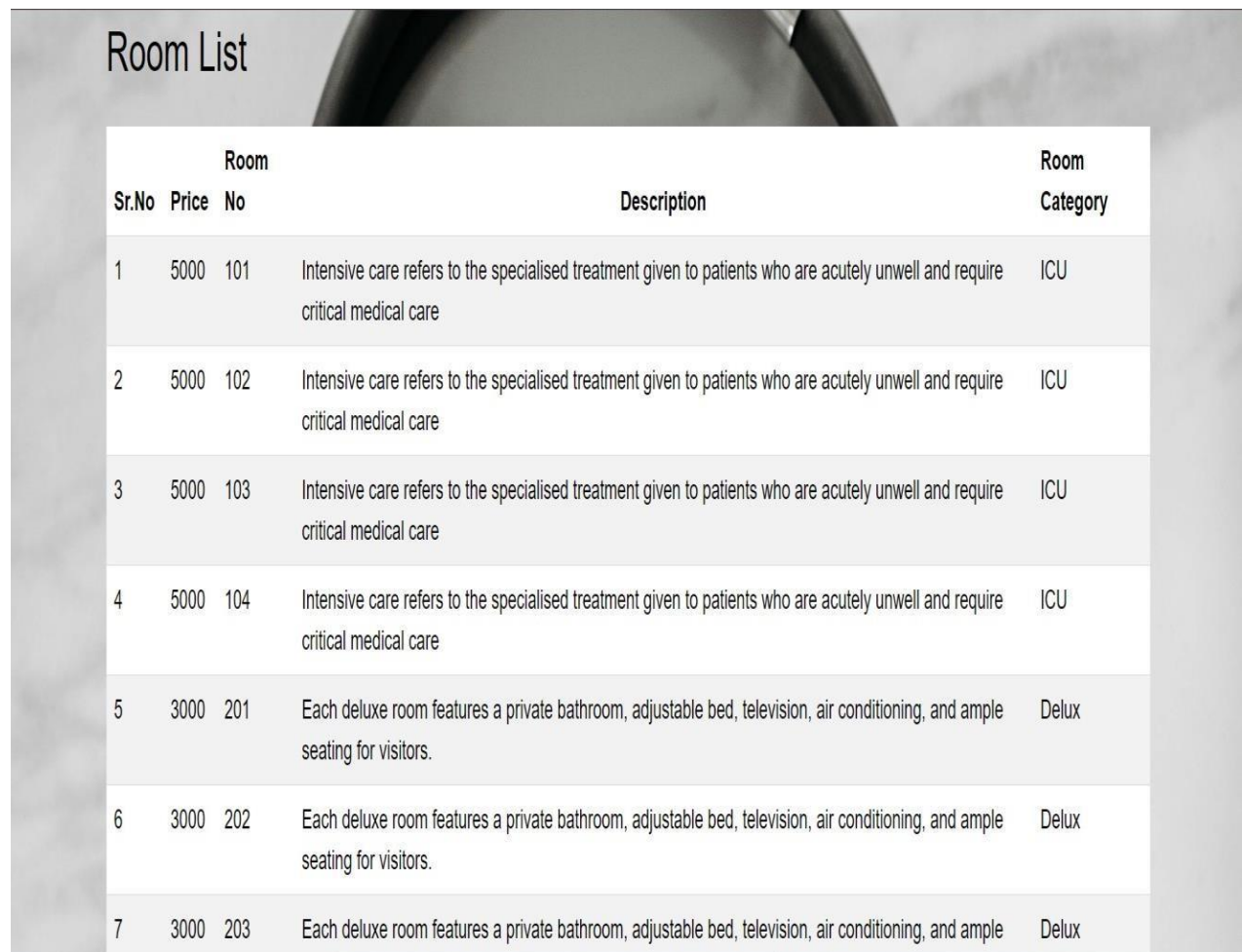
Mobile Number:

Email Address:

Aadhar Number:

9.4 Details Page:

Following snapshot shows the details page for Hospital Management System

A screenshot of a web application titled "Room List". It features a table with 7 rows of room data. The table has columns for Sr.No, Price, Room No, Description, and Room Category. The first four rows represent ICU rooms, and the last three represent Deluxe rooms. The background of the page shows a blurred image of a hospital interior.

Room List				
Sr.No	Price	Room No	Description	Room Category
1	5000	101	Intensive care refers to the specialised treatment given to patients who are acutely unwell and require critical medical care	ICU
2	5000	102	Intensive care refers to the specialised treatment given to patients who are acutely unwell and require critical medical care	ICU
3	5000	103	Intensive care refers to the specialised treatment given to patients who are acutely unwell and require critical medical care	ICU
4	5000	104	Intensive care refers to the specialised treatment given to patients who are acutely unwell and require critical medical care	ICU
5	3000	201	Each deluxe room features a private bathroom, adjustable bed, television, air conditioning, and ample seating for visitors.	Delux
6	3000	202	Each deluxe room features a private bathroom, adjustable bed, television, air conditioning, and ample seating for visitors.	Delux
7	3000	203	Each deluxe room features a private bathroom, adjustable bed, television, air conditioning, and ample seating for visitors.	Delux

- Admission Request

Hospital Management SystemLoginRegister

Add DoctorView DoctorsAll RoomsAvailable RoomsAdmission RequestsAdmitted patients

Logout

Admission Requests

ID	Doctor Name	Patient Name	Date	Reason	Status	Assign Room	Admission Date	Action
32	Abhishek Ingle	akash salvi	8/19/2024	Stomach	Waiting	Select Room ▾	dd-mm-yyyy 📅	Confirm

9.3 Login Page:

Following snapshot shows the Login page for Hospital Management System

Hospital Management System [Login](#) [Register](#)

Login

Username

admin@admin.com

Password

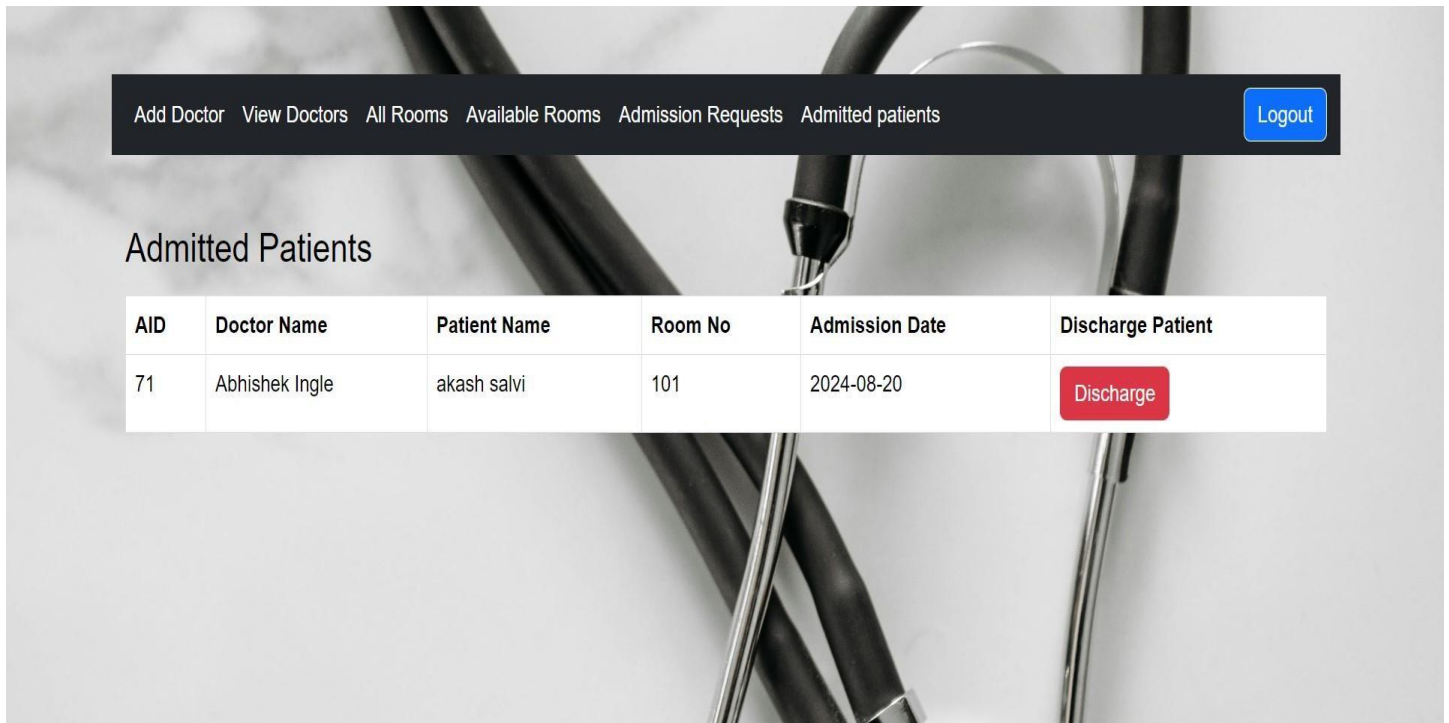
.....

Login

[New user? Register here](#)

9.6 Admitted Patients Page:

Following snapshot shows the admitted patients page for Hospital Management System



10. CONCLUSION AND FUTURE SCOPE

Conclusion: The Hospital Management System (HMS) optimizes hospital administration by managing patient data and streamlining the room allocation process. The system designates three key roles—admin, doctor, and patient—each with distinct responsibilities.

Admins oversee department management, room allocation, and doctor registration, while doctors recommend room allocation for patients. By automating these processes, the system ensures efficient management of patient records and room assignments, reducing staff workload and making critical information easily accessible for future use.

Expansion of Modules: Additional modules for inventory management, pharmacy integration, and billing automation could further streamline hospital operations, making the HMS a comprehensive solution for healthcare management.

