

A PROJECT ON
“HOSPITAL MANAGEMENT SYSTEM”

SUBMITTED IN
PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE COURSE OF
DIPLOMA IN ADVANCED COMPUTING FROM CDAC



SUNBEAM INSTITUTE OF INFORMATION TECHNOLOGY
Hinjawadi.

SUBMITTED BY:

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UNDER THE GUIDENCE OF:

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Faculty Member
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CERTIFICATE

This is to certify that the project work under the title '**Hospital Management System**' is done by **Bagal Rohit Mahadev** in partial fulfillment of the requirement for award of Diploma in Advanced Computing Course.

Mr Snehal Jadhav
Project Guide

Mr. Yogesh Kolhe
Course Co-Coordinator

Date: 16/08/2024

ACKNOWLEDGEMENT

A project usually falls short of its expectation unless aided and guided by the right persons at the right time. We avail this opportunity to express our deep sense of gratitude towards Mr. Nitin Kudale (Center Coordinator, SIIT, Pune) and Mr. Yogesh Kolhe (Course Coordinator, SIIT ,Pune) .

We are deeply indebted and grateful to them for their guidance, encouragement and deep concern for our project. Without their critical evaluation and suggestions at every stage of the project, this project could never have reached its present form.

Last but not the least we thank the entire faculty and the staff members of Sunbeam Institute of Information Technology, Pune for their support.

Bagal Rohit Mahadev
DAC March 2024 Batch,
SIIT Pune.

1. INTRODUCTION

In the dynamic landscape of healthcare, efficient management of hospital operations and patient care has become increasingly crucial. The rapid growth in patient volumes, diverse medical services, and the complexity of administrative tasks pose significant challenges to healthcare institutions. To address these challenges and streamline hospital operations, the development of a comprehensive Hospital Management System (HMS) has emerged as an essential solution.

Healthcare institutions play a pivotal role in our society by providing essential medical services, catering to a wide range of patients with varying medical needs. However, the manual and paper-based methods traditionally employed for managing hospital operations have proven to be inefficient and error-prone. The administrative burden of appointment scheduling, patient record maintenance, staff management, billing, and other critical tasks can lead to operational bottlenecks, miscommunication, and a lack of data accuracy.

In addition, the healthcare industry is under constant pressure to enhance patient care quality, reduce waiting times, and ensure seamless communication among medical professionals. These demands, coupled with the need to maintain compliance with regulatory standards and ensure patient data privacy, further emphasize the necessity for an advanced Hospital Management System.

The proposed Hospital Management System aims to address these challenges by providing a technologically advanced platform that automates and optimizes various hospital functions. Through the integration of intuitive user interfaces, robust data management capabilities, and secure communication channels, the system seeks to empower healthcare institutions to deliver superior patient care, enhance operational efficiency, and elevate overall healthcare service standards.

By automating routine administrative tasks, medical professionals and staff can allocate more time to patient care and strategic decision-making. Patients will benefit from streamlined appointment scheduling, accurate medical record keeping, and improved access to their health information. Additionally, the system will enable hospital administrators to effectively manage resources, track performance metrics, and make informed decisions based on real-time data insights.

In the following sections of this report, we will delve into the specific objectives, features, architecture, and implementation details of the Hospital Management System. However, this particular version of the HMS introduces an additional layer of complexity by accommodating three distinct user roles: Patients, Doctors, and Administrators.

The inclusion of multiple user roles enhances the scope and versatility of the system, allowing each user category to access functionalities tailored to their responsibilities and needs. Patients can seamlessly schedule appointments, review medical records, and manage bills; Doctors can manage appointments, create prescriptions, and update medical histories; Administrators can oversee system operations, user management, and resource allocation.

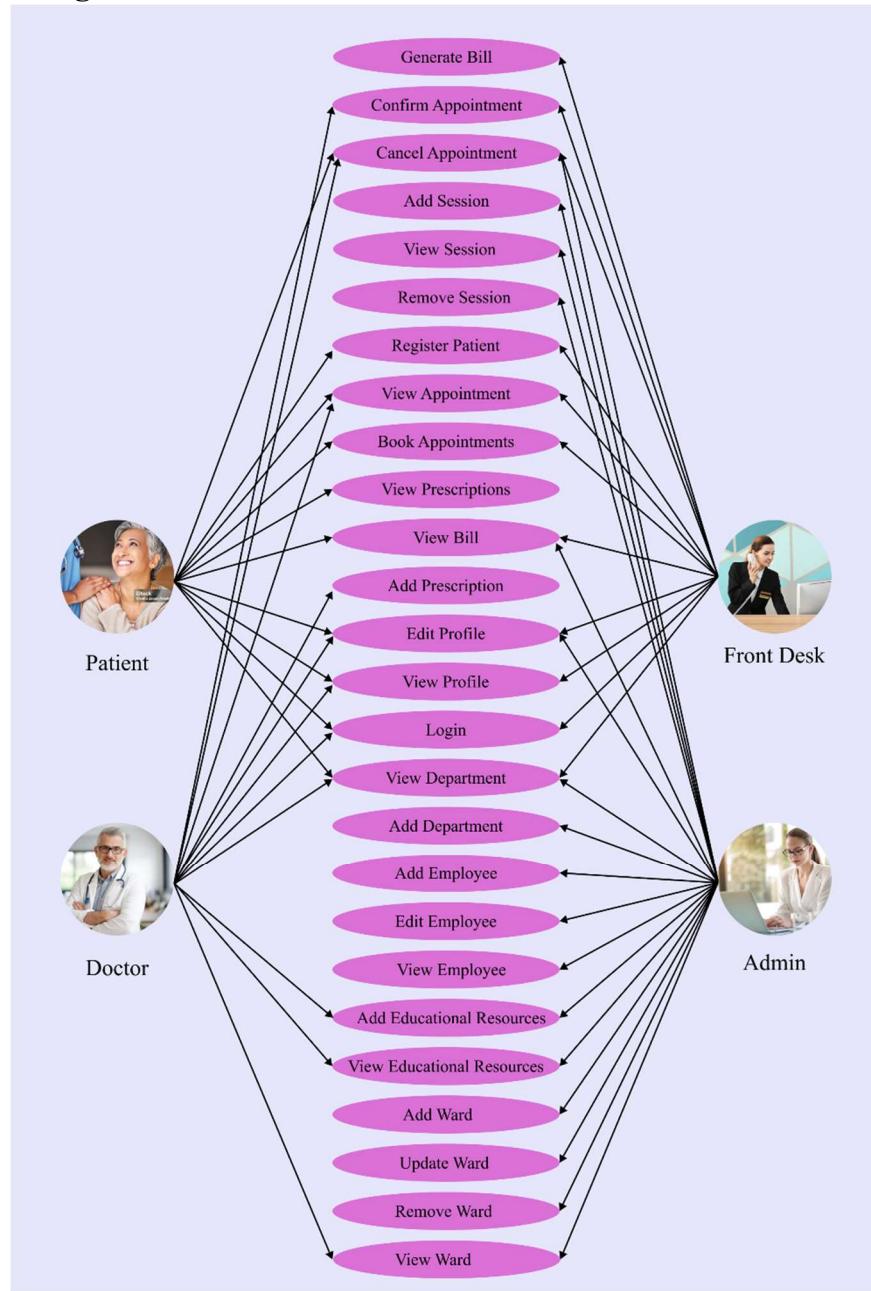
By catering to the unique requirements of each user category, this enhanced Hospital Management System aims to provide a more comprehensive and tailored experience for all stakeholders involved in healthcare delivery.

Through the development and implementation of the Hospital Management System, we endeavor to contribute to the evolution of healthcare management, ushering in a new era of efficiency, collaboration, and patient-centric care delivery.

2. REQUIREMENT

1.1 Functional Requirements:

Use Case Diagram:



1.1.1 User Account:

A user account description in a hospital management system typically includes information about the account holder and their role within the system. This description helps administrators and users understand the privileges, responsibilities, and access levels associated with the account. Here are the key components of a user account description in a hospital management system:

1. User Information:

- Full Name: The user's complete name.
- User ID: A unique identifier assigned to the user.
- Contact Information: Email address, phone number, and other relevant contact details.

2. User Role and Permissions:

- Role: The specific role or position the user holds within the hospital system (e.g., doctor, patient, administrator).
 - Permissions: List of actions and features the user can access and perform within the system. This can include viewing patient records, updating medical information, scheduling appointments, etc.
 - Access Level: The extent of access the user has to different parts of the system. For example, an administrator might have higher access levels than a doctor and patient.

3. Responsibilities:

- Description of Duties: A brief overview of the tasks and responsibilities associated with the user's role. This can help other users understand what the account holder is responsible for.
- Interactions: How the user interacts with other roles and stakeholders in the hospital. For instance, a doctor might interact with nurses, patients, and other medical staff.

4. Access Control:

- Data Access: The types of data the user can access, such as patient records, medical history, test results, etc.
- Data Modification: Whether the user is allowed to update or modify patient records and other system data.
- Data Security: Information about how the user's account and the data they handle are protected to ensure patient privacy and system security.

5. Credentials:

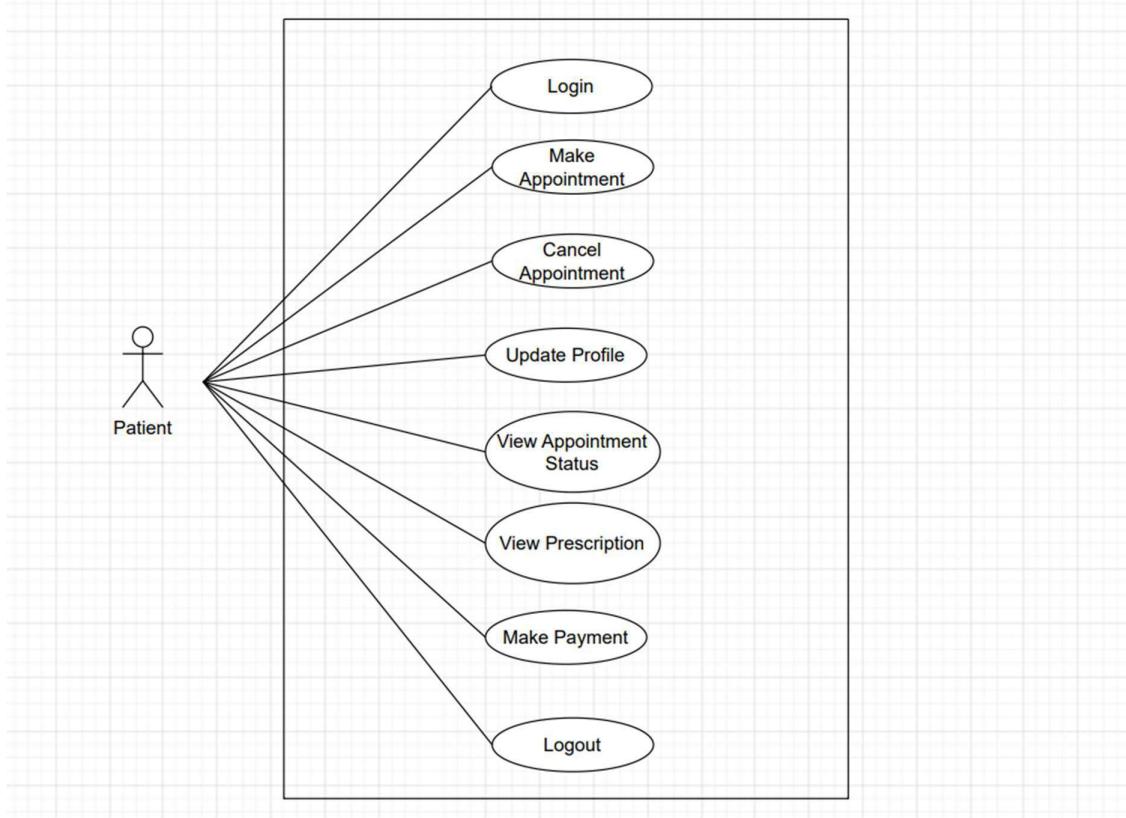
- Username and Password: The login credentials for accessing the hospital management system.
- Two-Factor Authentication (2FA): If applicable, information about whether 2FA is required for account security.

6. Support:

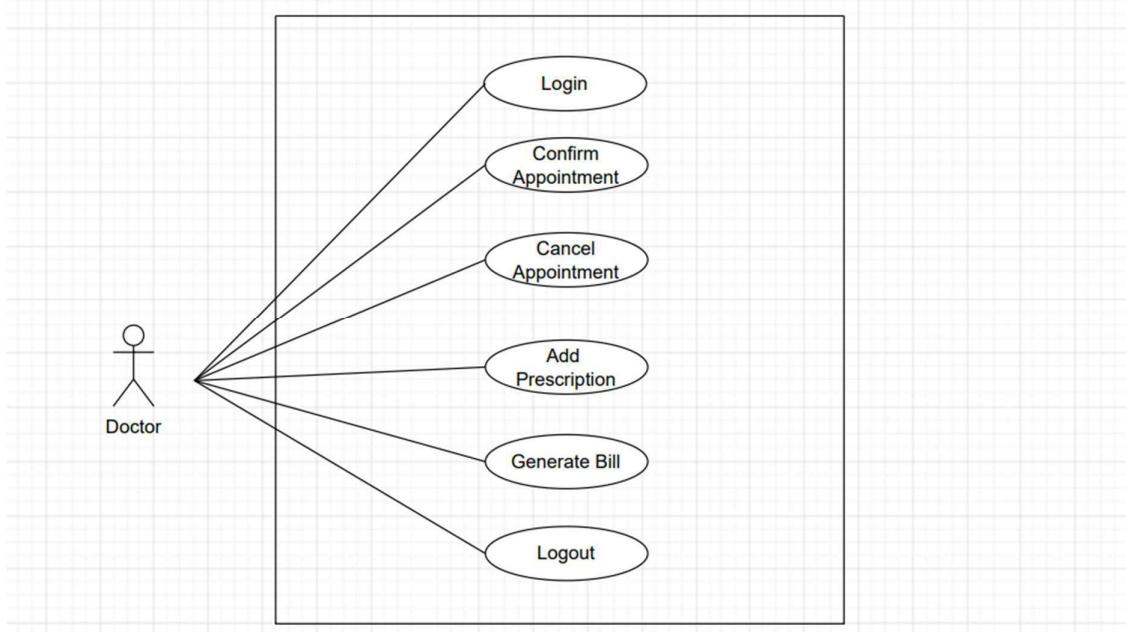
- Support Contact: Information about who the user can contact for technical support or assistance related to the hospital.

The specifics of a user account description may vary based on the complexity of the hospital management system, the user's role, and the organization's policies. It's essential to have clear and comprehensive user account descriptions to maintain smooth operations and data security within the hospital management system.

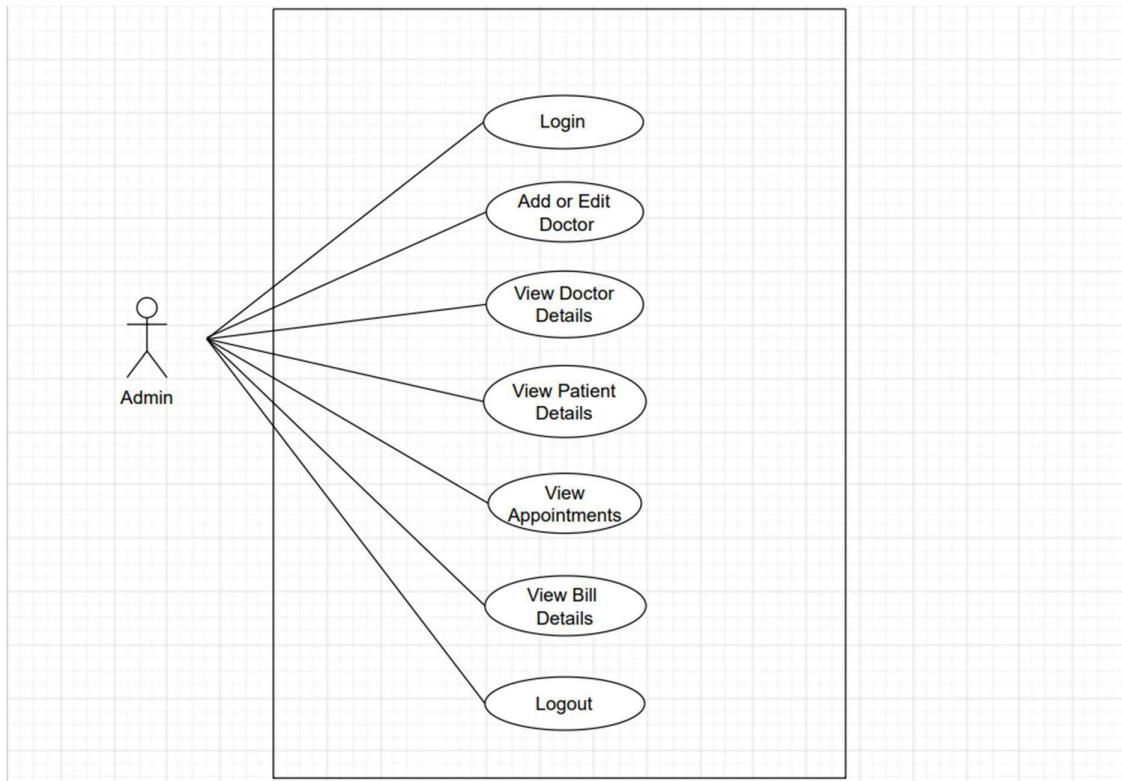
Patient Use Case Diagram:



Doctor Use Case Diagram:



Admin Use Case Diagram:



1.1.2 Registration and creation of profile:

The registration and profile creation process in the hospital management system serves as a foundational step for effectively managing patients and staff within the healthcare facility. This process ensures accurate data collection, secure account creation, and streamlined access to critical information. Below is an overview of the registration and profile creation process:

Patient Registration:

1. Initial Information Gathering:
 - Patients provide essential personal details such as full name, date of birth, gender, contact information, and address.
2. Medical History and Allergies:
 - Patients disclose medical history, existing conditions, allergies, medications, and past surgeries to facilitate tailored medical care.
3. Profile Creation and Medical Record Number (MRN) Assignment:
 - A unique patient profile is created in the hospital management system, and a distinct Medical Record Number (MRN) is assigned for efficient record-keeping.

Doctor Registration:

1. Personal and Professional Information:

- Staff members submit personal details, contact information, date of birth, and address for identification.

2. Credentials and Qualifications:

- Professional qualifications, certifications, and licenses held by staff members are documented for validation.

3. Responsibilities:

- Responsibilities within the hospital are outlined to ensure appropriate access and accountability.

4. Profile Creation and Credentials Setup:

- Unique profiles are created in the system, along with the assignment of a distinctive Staff ID. Initial login credentials (username and password) are established.

Admin Account Activation:

1. Activation Notification:

- An activation email is sent to users containing login credentials and instructions for accessing the hospital management system.

2. Login and Profile Update:

- Users access the system using provided credentials and are prompted to review and update their profiles as needed.

The registration and profile creation process plays a pivotal role in maintaining accurate patient records and enabling staff members to fulfill their roles effectively. By adhering to robust data collection practices and ensuring secure user account creation, the hospital management system contributes to streamlined operations and high-quality healthcare services.

2.1.3 Appointments:

This feature offers patients and healthcare providers a streamlined way to schedule appointments, enhancing patient experience and optimizing healthcare delivery. The "Appointment" functionality is a crucial component of modern healthcare systems, ensuring efficient patient-doctor coordination and minimizing appointment-related challenges. This report elaborates on how the Hospital Management System seamlessly integrated this feature to elevate patient care and operational efficiency.

Components of the "Book Appointment" Functionality in HMS:

Detail the fundamental components that constitute the "Appointments" feature in the HMS:

- a. Department Selection: Patients choose the medical department or specialty they require.
- b. Doctor Selection: Patients select a preferred doctor or consultant based on availability.
- c. Date and Time Selection: Patients pick a suitable date and time from the available slots.
- d. Appointment Status: Doctor can confirm or cancel the appointment depending on availability. Patients receive appointment confirmation.
- e. Cancellations: Patients can cancel appointments as needed.

- f. Records: Appointment details are linked with patient records.
- g. Payment: Patients can make payments, after visit to doctor.

Benefits:

- a. Enhanced Patient Experience: Seamless appointment scheduling process.
- b. Efficient Resource Utilization: Optimal allocation of doctor's time and resources.
- c. Improved Clinic Workflow: Streamlined patient flow and reduced waiting times.
- d. Enhanced Data Accuracy: Integration with patient records and history.
- e. Patient Engagement and Satisfaction: Easy interaction with healthcare services.

By this, Hospital Management System has significantly improved patient-doctor interaction, leading to more efficient healthcare services and a higher level of patient satisfaction and overall healthcare delivery.

2.1.4 Prescriptions:

The "Prescription" feature allows doctors to generate and manage medical prescriptions electronically. This feature revolutionizes the way medical prescriptions are generated and managed, offering a streamlined and paperless approach to patient care. This integration enhances patient care, optimizes medical workflows, and contributes to the modernization of healthcare services.

Components of "Prescription" Functionality:

- a. Patient Information: Basic patient details including name, age, and medical history.
- b. Medication Details: List of prescribed medications with dosage, frequency, and instructions.
- c. Patient Records: Linkage with the patient's electronic health record.

Detail the step-by-step journey for both patients and doctors in utilizing the integrated functionalities:

- a. Patients:
 - i. Receive prescriptions digitally via secure channels.
 - ii. Access clear medication instructions and dosage details.
- b. Doctors:
 - i. Effortlessly generate prescriptions with automated dosage calculations.
 - ii. Add instructions to individual patient needs.
 - iii. Maintain an organized digital record of prescribed medications.
 - iv. Enhance patient safety by minimizing prescription errors.

Benefits:

Highlight the advantages resulting from the integration of "Book Appointment" and "Prescription" functionalities:

- a. Enhanced Patient Experience: Conveniently receiving digital prescriptions.
- b. Accurate Record-Keeping: Electronically stored prescription records for a holistic view of patient health.
- c. Real-time Data Accessibility: Instant access to patient information for medical professionals.
- d. Enhanced Patient Safety: Reduction in prescription errors and adverse reactions.
- e. Improved Workflow Efficiency: Streamlined prescription generation and management.
- f. Paperless Approach: Reduced reliance on physical prescriptions and paperwork.

Future Directions:

There are potential future directions, such as integration with pharmacy systems, telemedicine expansion, or additional electronic health record features.

By incorporating this, the hospital demonstrates its commitment to leveraging technology for optimized patient care and medical efficiency. This digital approach to prescription management aligns with the contemporary standards of healthcare and paves the way for continued improvements in patient outcomes and medical workflows.

2.2 Non-Functional Requirements:

Performance

- Number of Concurrent Users:**

HMS shall be able to handle at least 1000 transactions/inquiries per second

- Booking of Tickets:**

The system is susceptible to any temporary server failure since it uses the strong feature of Struts 2 and Hibernate. Hence the examination will be continued even if the sever gets disconnected in between the examination.

Constraint

HMS shall be able to handle at least 1000 transactions/inquiries per second

Other Requirements:

- Hardware Interfaces**

The SPMS is expected to function on Intel PIII 900 MHz Processor equivalent or above, 128 MB RAM, 20 GB HDD.

- Software Interfaces**

The SPMS shall work on MS Windows operating systems family (MS Windows 98, MS Windows NT Workstation, MS Windows 2000, MS Windows XP). It configures to work with Oracle database. This System works on Apache Tomcat server. It uses browser IE 5.0 & above. It uses IIS 5.0 server.

DESIGN

Database Design:

The following table structure shows the database design:

Table 1: Appointment :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
doctor_id	bigint	NO	MUL	NULL	
status	varchar(50)	NO		NULL	
scheduled_at	datetime(6)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 2: User :

Field	Type	Null	Key	Default	Extra
id	bigint	No	PRI	NULL	Auto_increm ent
created_at	datetime(6)	YES		NULL	
extra1	varchar(255)	YES		NULL	
extra2	varchar(255)	YES		NULL	
updated_at	datetime(6)	YES		NULL	
birth_date	date	YES		NULL	
email	varchar(100)	NO	UNI	NULL	
first_name	varchar(50)	NO		NULL	
gender	varchar(255)	YES		NULL	
is_deleted	Bit(1)	NO		NULL	
Last_name	varchar(50)	NO		NULL	
password	varchar(255)	NO		NULL	
phone	varchar(15)	YES		NULL	
profile_photo	varchar(255)	YES		NULL	
address_id	bigint	YES	MUL	NULL	
role_id	bigint	YES	MUL	NULL	

Table 3: Address:

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
street	varchar(255)	YES		NULL	
city	varchar(255)	YES		NULL	
state	varchar(255)	YES		NULL	
country	varchar(255)	YES		NULL	
zip_code	varchar(10)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 4: Admin :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	
manager_id	bigint	YES	MUL	NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 5: Admission :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
room_id	bigint	NO	MUL	NULL	
admitted_at	datetime(6)	YES		NULL	
discharged_at	datetime(6)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 6: Allergy :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 7: Bill :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
amount	decimal(10,2)	NO		NULL	
paid_at	datetime(6)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 8: Branch :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
address_id	bigint	YES	MUL	NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 9: Chronic Condition :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 10: Current Medication :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
dosage	varchar(255)	YES		NULL	
frequency	varchar(255)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 11: Department :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCR EMENT
name	varchar(255)	NO		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 12: Doctor :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCRE MENT
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
specialization	varchar(255)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 13: Educational Resource :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCRE MENT
title	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 14: Educational Resource Image :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCRE MENT
resource_id	bigint	NO	MUL	NULL	
image_path	varchar(255)	NO		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 15: Employee :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
email	varchar(100)	NO	UNI	NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 16: Employee Language :

Field	Type	Null	Key	Default	Extra
employee_id	bigint	NO	MUL	NULL	
language_id	bigint	NO	MUL	NULL	

Table 17: Medicine :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 18: Past Surgery

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 19 : Patient :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
email	varchar(100)	NO	UNI	NULL	
phone	varchar(15)	YES		NULL	
birth_date	date	YES		NULL	
gender	varchar(255)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 20 : Patient Allergies :

Field	Type	Null	Key	Default	Extra
patient_id	bigint	NO	MUL	NULL	
allergies_id	bigint	NO	MUL	NULL	

Table 21 : Patient Chronic Condition :

Field	Type	Null	Key	Default	Extra
patient_id	bigint	NO	MUL	NULL	
chronic_conditions_id	bigint	NO	MUL	NULL	

Table 22 : Prescription :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
doctor_id	bigint	NO	MUL	NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 23 : Prescription Medicine :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
prescription_id	bigint	NO	MUL	NULL	
medicine_id	bigint	NO	MUL	NULL	
dosage	varchar(255)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 24 : Rating And Review :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
doctor_id	bigint	NO	MUL	NULL	
rating	int	NO		NULL	
review	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 25 : Role :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO	UNI	NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 26 : Room :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
capacity	int	NO		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 27 : Schedule :

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
doctor_id	bigint	NO	MUL	NULL	
day	varchar(50)	NO		NULL	
start_time	time	NO		NULL	
end_time	time	NO		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 28 : Signed Form

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
patient_id	bigint	NO	MUL	NULL	
form_path	varchar(255)	NO		NULL	
signed_at	datetime(6)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 29 : Staff

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
department_id	bigint	NO	MUL	NULL	
first_name	varchar(50)	NO		NULL	
last_name	varchar(50)	NO		NULL	
role	varchar(255)	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 30 : Treatment

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	AUTO_INCREMENT
name	varchar(255)	NO		NULL	
description	text	YES		NULL	
created_at	datetime(6)	YES		NULL	
updated_at	datetime(6)	YES		NULL	

Table 31 : Front Desk

Field	Type	Null	Key	Default	Extra
id	bigint	NO	PRI	NULL	
department_id	bigint	NO	MUL	NULL	
manager_id	bigint	YES	MUL	NULL	

CODING STANDARDS IMPLEMENTED

Naming and Capitalization

Below summarizes the naming recommendations for identifiers in Pascal casing is used mainly (i.e. capitalize first letter of each word) with camel casing (capitalize each word except for the first one) being used in certain circumstances.

Identifier	Case	Examples	Additional Notes
Class	Pascal	User, BookAppointment AddPrescription	Class names should be based on "objects" or "real things" and should generally be nouns . No ‘_’ signs allowed. Do not use type prefixes like 'C' for class.
Method	Camel	getpatient_id	Methods should use verbs or verb phrases.
Parameter	Camel	userName, editProfile	Use descriptive parameter names. Parameter names should be descriptive enough that the name of the parameter and its type can be used to determine its meaning in most scenarios.
Interface	Pascal with "I" prefix	Disposable	Do not use the ‘_’ sign
Property	Pascal	ForeColor, BackColor	Use a noun or noun phrase to name properties.
Associated private member variable	_camelCase	_foreColor, _backColor	Use underscore camel casing for the private member variables
Exception Class	Pascal with "Exception" suffix	WebException,	

Comments:

- Comment each type, each non-public type member, and each region declaration.
- Use end-line comments only on variable declaration lines. End-line comments are comments that follow code on a single line.
- Separate comments from comment delimiters (apostrophe) or // with one space.
- Begin the comment text with an uppercase letter.
- End the comment with a period.
- Explain the code; do not repeat it.

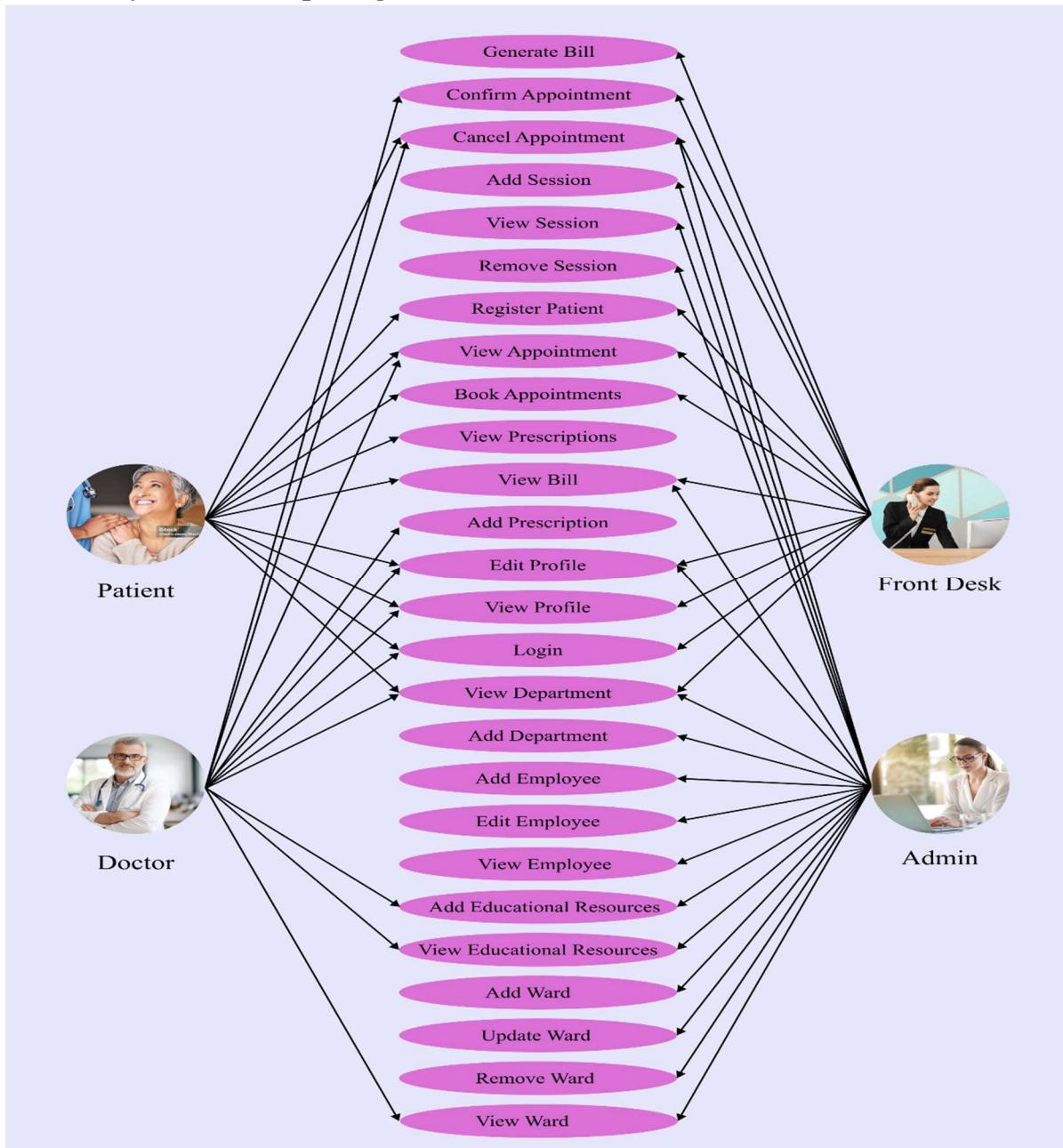
TEST REPORT

GENERAL TESTING:

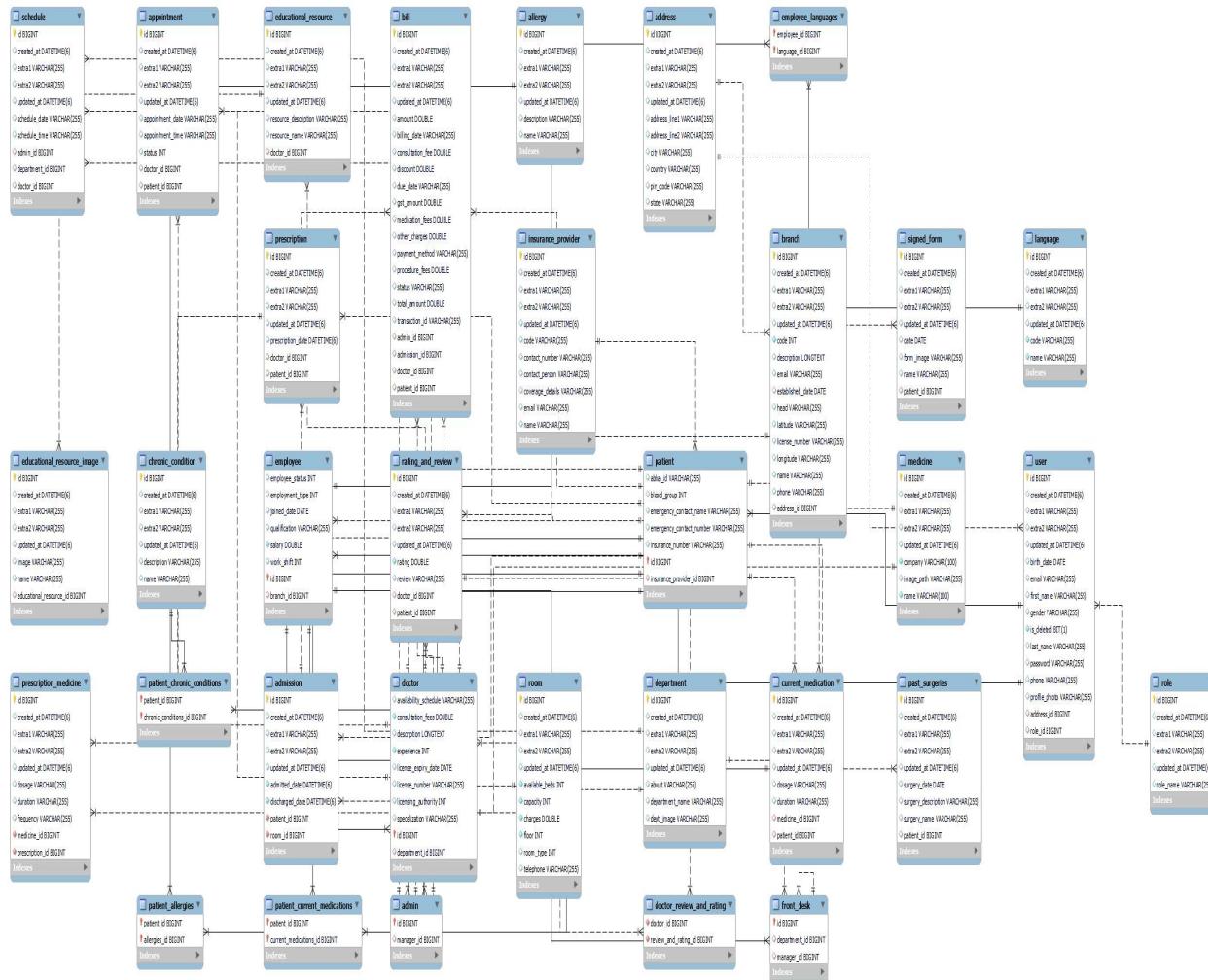
SR-NO	TEST CASE	EXPECTED RESULT	ACTUAL RESULT	ERROR MESSAGE
1	Register Page	Redirected to Next page	OK	Nothing
2	Login Page	Pop-up will come	Ok	Please enter username and password again .
3	Reset login	Only users password will be reseted	Ok	Nothing
4	View Profile	Gives all profile details	Ok	Nothing
5	Book Apointment	All the fields should be filled for submission	Ok	Nothing
6	Checking login or not	User is logged in or not	Ok	Nothing
7	Add patient details for registration	Add informations according to required parameters	Ok	Nothing
8	Goto appointment page	Set added information about appointnemt	Ok	Nothing
9	Add information in appointment table	Save this all data into appointment table	Ok	Nothing
10	Transaction	On back it should be reverted to previous page	Ok	Nothing
11	View transaction done	It shows you all transactions done previously	Ok	Nothing
12	Logout	It will logout from user profile.	Ok	Nothing

PROJECT MANAGEMENT RELATED STATISTICS

DATE	WORK PERFORMED	SLC Phase	Additional Notes
JULY 27,2024	Project Allotment and User Requirements Gathering	Feasibility Study	Our team met the client Mr. Nitinkudale (CEO, SIIT Pune) to know his requirements
JULY 30,2024	Initial SRS Document Validation And Team Structure Decided	Requirement Analysis (Elicitation)	The initial SRS was presented to the client to understand his requirements better
AUGUST 2,2024	Designing the use-cases, Class Diagram, Collaboration Diagram, E-R Diagram and User Interfaces	Requirement Analysis & Design Phase	Database Design completed
AUGUST 4,2024	Business Logic Component design Started	Design Phase	-----
AUGUST 6,2024	Coding Phase Started	Coding Phase	70% of Class Library implemented.
AUGUST 8,2024	Implementation of Web Application and Window Application Started	Coding Phase	Class Library Development going on.
AUGUST 9,2024	Implementation of Web Application and Window Application Continued	Coding Phase and Unit Testing	Class Library Modified as per the need.
AUGUST 10,2024	Implementation of Web Application and Window Application Continued	Coding Phase and Unit Testing	----
AUGUST 12,2024	After Ensuring Proper Functioning the Required Validations were Implemented	Coding Phase and Unit Testing	Module Integration was done by the Project Manager
AUGUST 13,2024	The Project was Tested by the respective Team Leaders and the Project Manager	Testing Phase (Module Testing)	----
AUGUST 14,2024	The Project was Submitted to Other Project Leader of Other Project Group For Testing	Testing Phase (Acceptance Testing)	The Project of Other Team was Taken up by the Team for Testing
AUGUST 15,2024	The Errors Found were Removed	Debugging	The Project was complete for submission
AUGUST 16,2024	Final Submission of Project Hospital Management System		

Entity Relationship Diagram:

Class Diagram:



Appendix B USER INTERFACE

Home Page:

Home Page

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Patients Dashboard

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Select Doctor ▼

Select Date & Time ▼

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Bill

Bill

The page displays a "MEDICAL INVOICE" section with "Patient Information" (Apple Song, address) and "Prescribing Physician's information" (Dr. Anna Bride, address). Below is a table of bills:

Bill Id	Bill Date & Time	Description	Status	
1			Paid	View Invoice
2			Paid	View Invoice
3			Paid	View Invoice

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Patient Appointment

Patient Appointment

The page shows a table titled "My Appointments" with columns: ID, Doctor's Name, Appointment Date & Time, Status, and Actions.

ID	Doctor's Name	Appointment Date & Time	Status	
1	Dr.Vaibhav Vasukar	Friday, 6 Aug 2024 10:20AM	Pending	Cancel
2	Dr.Vedant Pawar	Friday, 6 Aug 2024 10:20AM	Confirmed	Cancel
3	Dr.Ashwini Thakur	Friday, 6 Aug 2024 10:20AM	Cancelled	-
4	Dr.Rohit Bagal	Friday, 6 Aug 2024 10:20AM	Attended	Details

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Prescription

Prescription



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Prescriptions

Medicine: xyz

Dosage: 1 - 1 - 1

Duration: 5 days

Medicine: xyz

Dosage: 1 - 0 - 1

Duration: 5 days

Medicine: xyz

Dosage: 1 - 0 - 1

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Doctor Dashboard

Doctor's Dashboard



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10
Today's Appointments

5
Pending Appointments

73
My Articles

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Appointments

Search

ID	Patient Name	Appointment Date & Time	Status	
1	Vaibhav Vasurkar	Friday, 6 Aug 2024 10:20AM	Not Confirm	Confirmed Cancel
2	Vedant Pawar	Friday, 6 Aug 2024 10:20AM	Confirmed	Attend -
3	Ashwini Thakur	Friday, 6 Aug 2024 10:20AM	Attended	Prescript -
4	Rohit Bagal	Friday, 6 Aug 2024 10:20AM	Attended and Prescribed	Bill -
5	Rohit Bagal	Friday, 6 Aug 2024 10:20AM	Bill generated	- -

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Pending Appointment

Doctor/PendingAppointments

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Pending Appointments

ID	Patient Name	Appointment Date & Time	
1	Vaibhav Vasurkar	Friday, 6 Aug 2024 10:20AM	Pending Cancel
2	Vedant Pawar	Friday, 6 Aug 2024 10:20AM	Pending Cancel
3	Ashwini Thakur	Friday, 6 Aug 2024 10:20AM	Pending Cancel
4	Rohit Bagal	Friday, 6 Aug 2024 10:20AM	Pending Cancel

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Doctor/Prescription

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Prescription

Medicine Select Medicine ▼

Dosage Select Dosage ▼

Duration Select Duration ▼

Add Submit

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Add Resource

Hematology



Our hematology team stays up-to-date and works together with other medical staff to provide world-class care. Moreover, we use cutting-edge technologies to treat hemophilias, clotting disorders, blood cancers, etc. We understand that blood disorders can affect different organs in the body. Hence, with the aid of the latest medical devices and the expertise of qualified healthcare professionals, we offer premium-quality care to patients.

Our hematology lab offers various support services such as coagulation studies, thrombophilic workup, cytogenetics, etc. Routine investigations are also done here.

Special care of Hematological Malignancies
At Sahyadri Hospitals, our Hematology department treats a wide range of hematological malignancies. Under this broad spectrum, we have various types of leukemia, myeloma, and lymphoma. We integrate cutting-edge technology and ensure that the treatments are available in affordable packages. The different hematological malignancies that we treat here include-

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28
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19285
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30
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300
Beds

10
Ambulance

Infra & others

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Add Employee +

ID	Employee Name	Email	Role	Events
1	Vaibhav Vasurkar	vaibhav@vasurkar	Doctor	Edit View Delete
2	Rohit Bagal	rohit@bagal	Doctor	Edit View Delete
3	Vedant Pawar	vedant@pawar	Doctor	Edit View Delete
4	Ashwini Thakur	ashwini@thakur	Doctor	Edit View Delete

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First name	<input type="text" value="First Name"/>	Last name	<input type="text" value="Last Name"/>
Email	<input type="text" value="Email"/>	Confirm Email	<input type="text" value="Confirm Email"/>
Date of Birth	<input type="text" value="mm/yyyy"/>	Blood Group	<input type="button" value="Select Blood Group"/>
Address	<input type="text" value="Address"/>	Phone Number	<input type="text" value="Confirm mail"/>
State	<input type="button" value="Select State"/>	City	<input type="button" value="Select City"/>
Password	<input type="password" value="Password"/>	Confirm Password	<input type="password" value="Confirm password"/>

Admin/Department Details



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- [Ward](#)
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Add Department +

ID	Department Name	Department Head	Floor	Events
1	Neurology	Vaibhav Vasurkar	1st	Edit View Delete
2	Cardiology	Rohit Bagal	2nd	Edit View Delete
3	Ear, Nose, Throat	Vedant Pawar	3rd	Edit View Delete
4	Haematology	Ashwini Thakur	4th	Edit View Delete

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Dept Name	<input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>	Dept Head	<input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>
Email	<input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>	Dept Phone	<input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>
Date of creation	<input style="width: 100px; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/> / <input style="width: 100px; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/> / <input style="width: 100px; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>	Receptionist	<input style="width: 100%; height: 25px; border: 1px solid #ccc; padding: 2px;" type="text"/>
Doctors	<input style="width: 100px; height: 25px; border: 1px solid #ccc; padding: 2px;" type="button" value="Select State"/>		
About	<div style="border: 1px solid #ccc; width: 100%; height: 40px; margin-top: 5px;"></div>		

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Schedule :**Admin/Schedule Details**



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Add Session +
Search
Search By Date

ID	Department Name	Doctor Name	Schedule Date & Time	Events
1	Neurology	Vaibhav Vasurkar	6 Aug 2024 10:30 AM	View Delete
2	Cardiology	Rohit Bagal	6 Aug 2024 10:30 AM	View Delete
3	Ear, Nose, Throat	Vedant Pawar	6 Aug 2024 10:30 AM	View Delete
4	Haematology	Ashwini Thakur	6 Aug 2024 10:30 AM	View Delete

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ID	Ward Name	Charges	Available beds/ Total Beds	Events
1	General	500	100/650	Edit View Delete
2	ICU	2000	15/55	Edit View Delete
3	First Class	1500	30/150	Edit View Delete
4	Second Class	1000	75/300	Edit View Delete

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Add Ward

Ward Name Ward Name Charges
Total Beds Total Beds Ward Phone
Date of creation Ward number
Ward Employees Ward floor
About


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- www.wikipedia.com
- www.w3school.com
- www.openai.com
- www.youtube.com