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# Bachelor of Computer Application

# Project Certificate

This is to certify that Mr. MUKUND NILESHBHAI JAGANExam

No: (Roll No: 662) has successfully completed his Minor

Project Work on the Title: Hospital Management Systemfor

the Subject: Advance Web Design of the 5<sup>th</sup> Semester during

the academic year 2024-25.

Internal Guide:

Ms. Sanskruti Ramani

Signature:

Date:

External Examiner:

good.

Dr. Mukesh R. Goyani
Principal

Prof.V.B.Shah Institute of Management & R.V.Patel College of Commerce (Eng.Med.) & V.L.Shah College of Commerce (Guj.Med.)

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# Sutex Bank College of Computer Applications & Science, Amroli

(Accredited 'B' (CGPA 2.55) by NAAC Dec.-2009)

#### **VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT**



#### **PROJECT REPORT ON**

**Hospital Management System** 

SUBMITTED BY: GUIDED BY:

Jagani Mukund N. Prof. Sanskruti Ramani

**Exam No:** 

**Roll No:** 662

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#### **Introduction:**

#### Chapter 1: Introduction

- 1.1 Project Description
  - Hospital Management System (HMS) is a designed for use a hospital facitily after know about the hospital.
  - The Medanta The Medicity Hospital Management System (HMS) is designed to streamline and automate the day-to-day operations of the hospital. This documentation provides a comprehensive guide to usingthe system, managing patient information, scheduling appointments, billing, and maintaining medical records.
  - The system ensures improved healthcare services, enhanced operational efficiency, and a secure environment for patient data.
  - o In The **Medanta The Medicity** Contain Three Panels:
    - Admin Panel
    - Patient Panel (User Panel )
    - Doctor Panel

#### ❖ About Panels:

#### Admin Panel:

- ✓ Check The Count Of Total Patient Visit
- ✓ Doctor Avaliblity Or Manage Doctors
- ✓ Can See Doctor Login Session
- ✓ Can See User Login Session
- ✓ Hadle Slot For Check The Patient
- ✓ Update A Time And About Us Content
- ✓ Know In Detail About The Patient
- ✓ Manage About The Appoinment
- ✓ Can See Doctor Specializaion
- ✓ Full Hanled By The Admin
- ✓ And Only Admin Can Add New Admin
- ✓ And Also Replay A Query Ask By The User

#### > Patient Panel:

- ✓ Patient Can Handle A Their Own Profile
- ✓ Patient Can Create Appoinment & edit
- ✓ Patient See Their Own Appoinment History
- ✓ Patient Can see Their Medical History
- ✓ By Using Forget Password Can Change Password
- ✓ Limited access to view personal medical history
- ✓ Schedule appointments and view billing information
- ✓ Patient can Book Their Appoinment And Book Their Slot

#### > Doctor Panel:

- ✓ Schedule and manage appointments
- ✓ Can See Appoinment Histroy
- ✓ Add & Manage Patient Data
- ✓ Also Can Cancelled a Patient Appoinment
- ✓ Access to assigned patient medical records
- ✓ By Using Forget Password Can Change Password
- ✓ Can create, update, and view medical history
- ✓ Can Manage Patient bill Create And Delete

#### **Objective:**

#### Chapter 2: Objective

At **Medanta - The Medicity**, we strive to provide world-class healthcare services with cutting-edge technology and compassionate care. Our Hospital Management System is designed to streamline hospital operations, ensuring seamless management of patient data, appointments, medical records, and billing.

Whether you're a patient, doctor, or staff member, this platform provides an intuitive interface for managing all hospital-related tasks efficiently. With a focus on security andease of use, Medanta's digital infrastructure is built to ensure a smooth experience for all users, enhancing the quality of care and operational efficiency.

#### 2.1 Needs of Hospital Management System

This system will help administration to work easily. Because of its easy access and lesstime consuming administration can get the information of the Users, Doctor, Payments, etc. They do not have search in the paper file for the log time. Members an easily handle the system.

#### **User Roles and Permissions:**

#### Chapter 3: User Roles and Permissions

#### Admin:

- Full access to all system features
- Can manage users, hospital departments, and configure system settings
- Manage appointments and billing

#### Doctor:

- Access to assigned patient medical records
- Can create, update, and view medical history
- Access to patient data for operational tasks
- Manage appointments and billing
- Schedule and manage appointments

#### Patient:

- Limited access to view personal medical history
- Schedule appointments and view billing information

#### **System Modules:**

#### Chapter 4: System Modules

#### Start To End Process Of HMS( Hospital Management System )

#### **4.1** Patient Management

- Register new patients with complete personal and medical information.
- Search, update, and delete patient profiles.
- Link patient records with hospital visits.

#### **4.2** Appointment Scheduling

- Allow patients to book appointments with available doctors.
- View doctor availability and schedule follow-ups.
- Automated reminders for patients via SMS or email.

#### **4.3** Medical Records Management

- Store and manage patient history, diagnoses, prescriptions, and treatment plans.
- Integration with lab reports and radiology images.
- Ensure data privacy with role-based access.

#### **4.4** Billing and Payments

- Automated billing based on treatments, tests, and medications.
- Invoice generation and payment tracking.
- Integration with insurance providers for claim submissions.

#### 4.5 Doctor Management

- Manage doctor schedules, patient assignments, and workload distribution.
- Track staff attendance and performance.

#### **4.7** Reports and Analytics

- Generate detailed reports on patient admissions, discharges, financial summaries, etc.
- Real-time analytics for better decision-making.

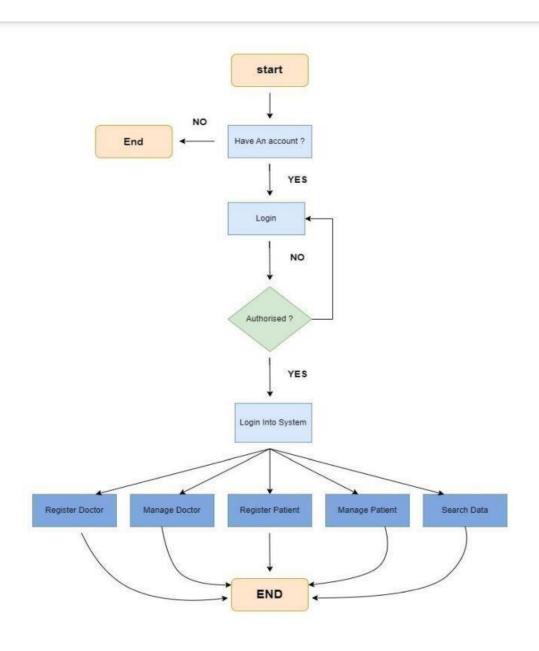
#### **4.8** Security and Data Privacy

- Role-based access control to prevent unauthorized data access.
- Encryption of patient data both at rest and in transit.
- Regular audits to maintain data integrity.

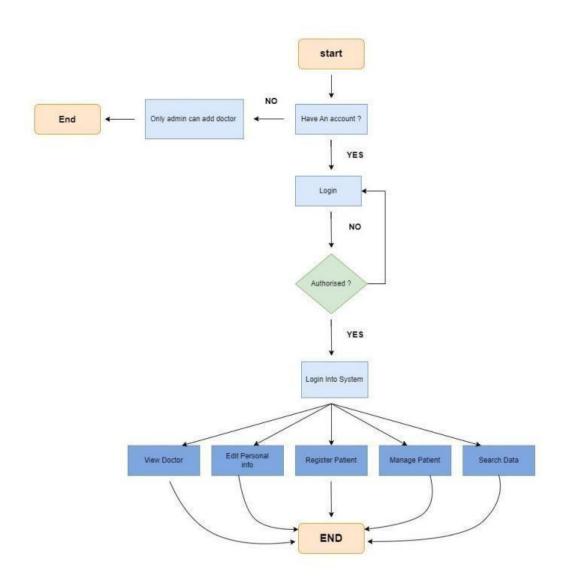
# **System Flow Diagram:**

Chapter 5 : System Flow Diagram

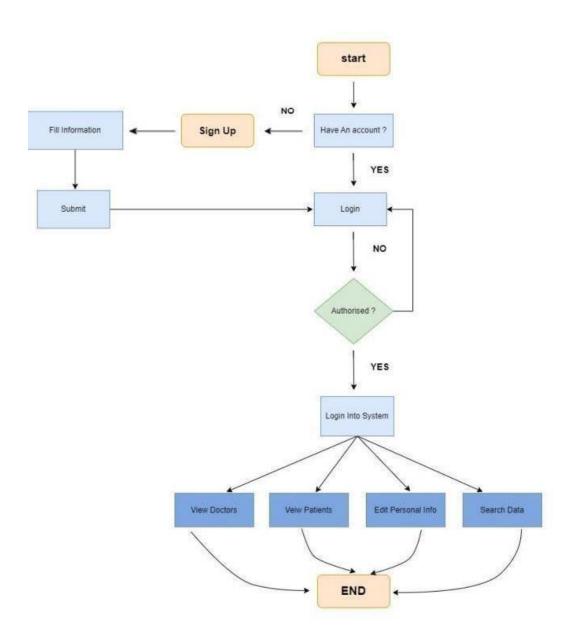
#### 5.1 Admin Process Flow Diagram:



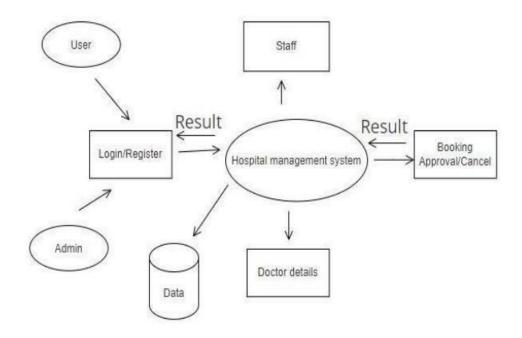
#### **5.1** Doctor Process Flow Diagram :



#### **5.1** Patient Process Flow Diagram :

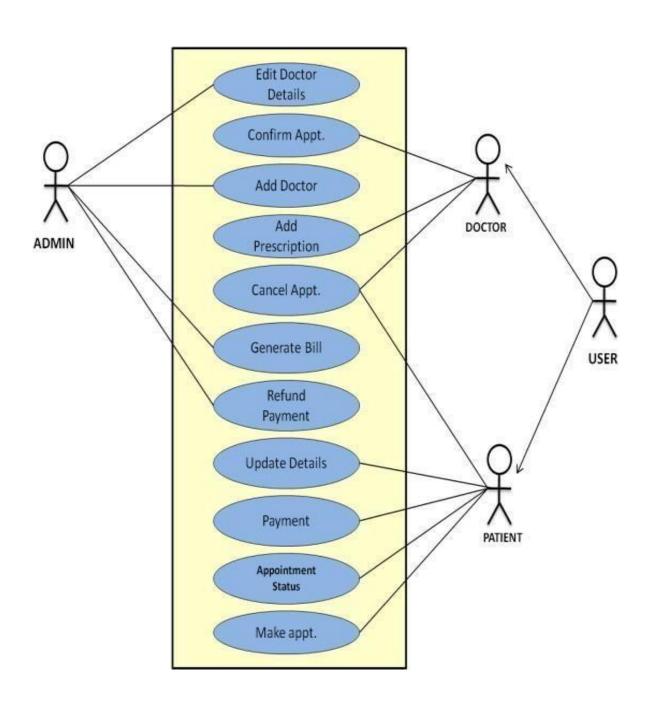


### **5.1** Architectural Diagram:



# **Use Case Diagram**

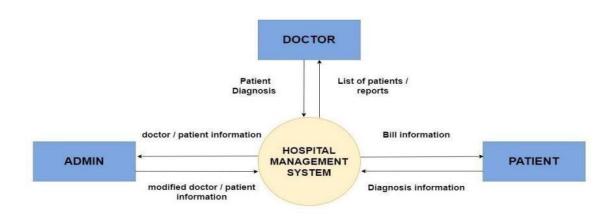
Chapter 6: Use Case Diagram



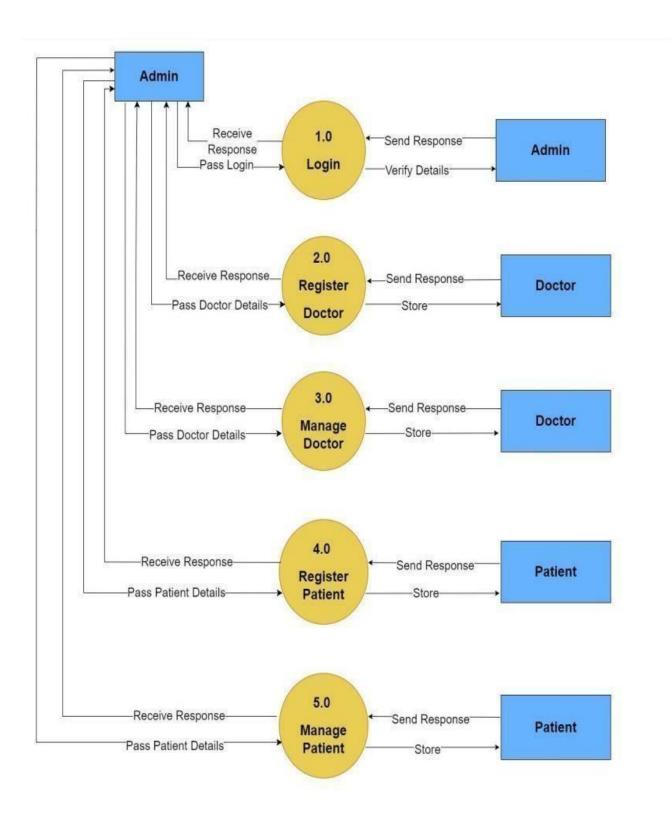
# **DFD And UML Diagram:**

### Chapter 7: DFD And UML Diagram

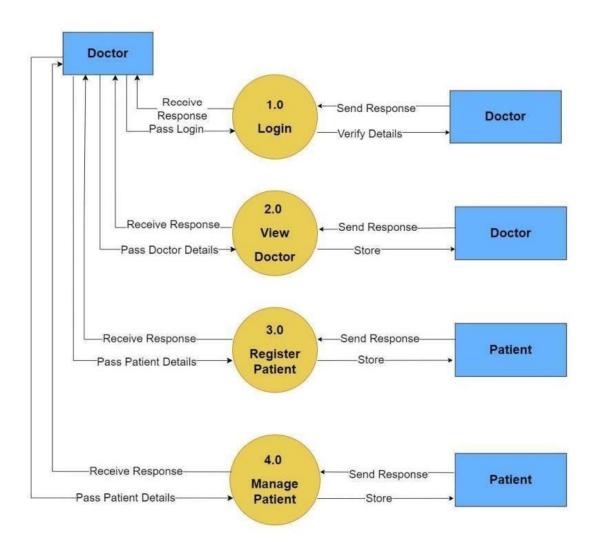
O Level Diagram ( Context Diagram)



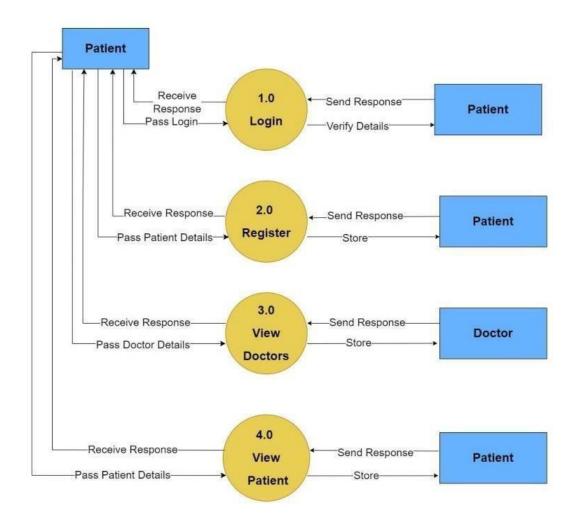
#### 1 Level Admin Diagram:



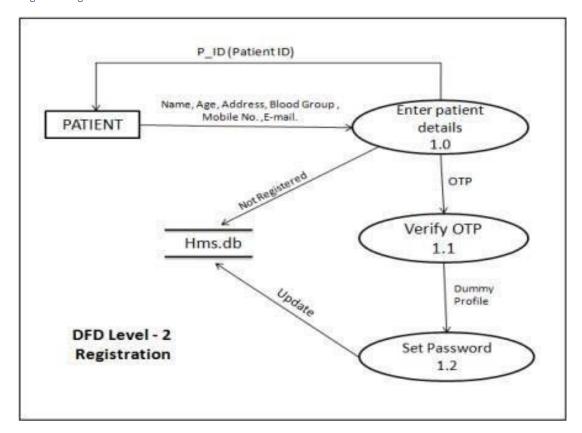
#### 1 Level Doctor Diagram:



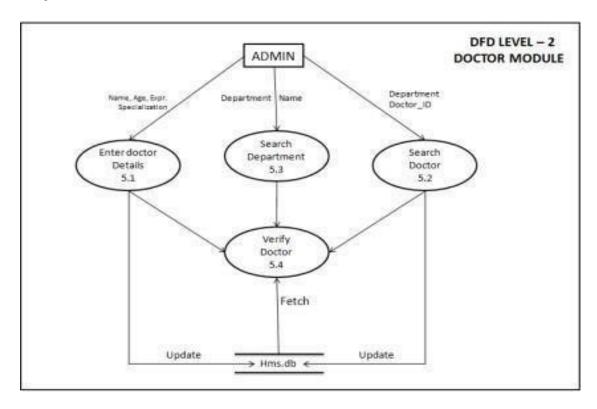
#### Level Patient Diagram :



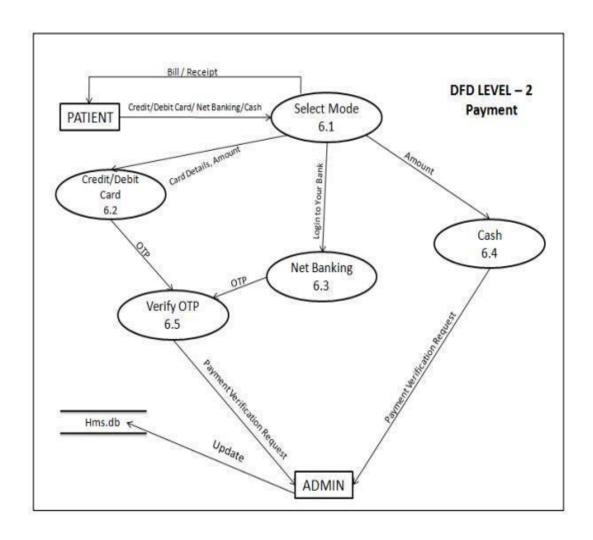
#### **1** Level Register Diagram:



#### 2 Level Doctor Diagram:

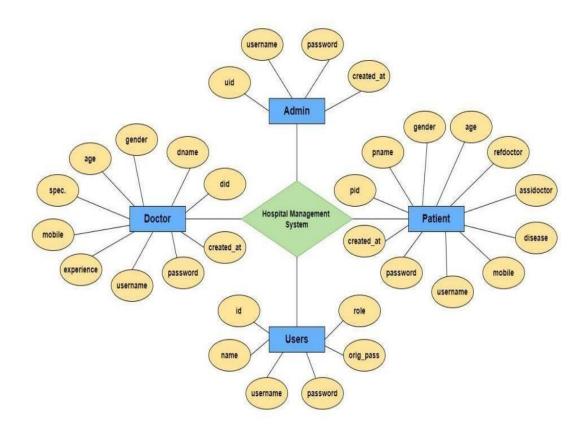


#### 2 Level Payment Diagram:



# **ER Diagram:**

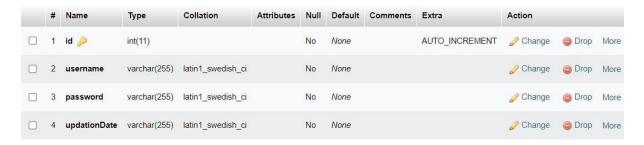
# Chapter 8: ER Diagram



#### **Database Design:**

#### Chapter 9: Database Design

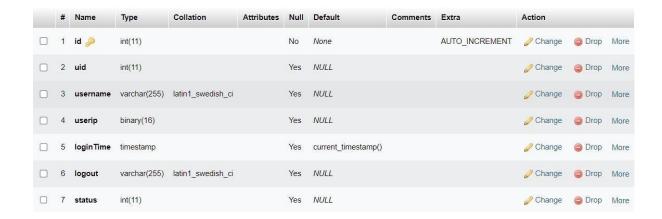
#### Admin Table :



#### Appoinment Table :



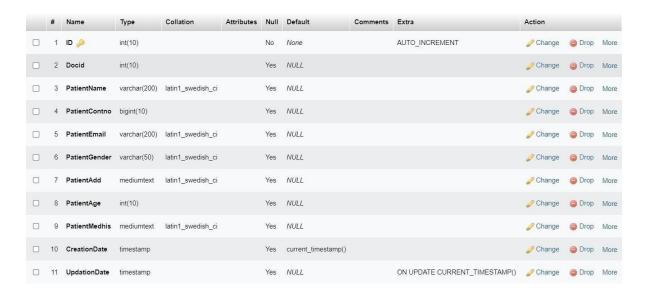
#### Doctor Login/Logout Record Table :



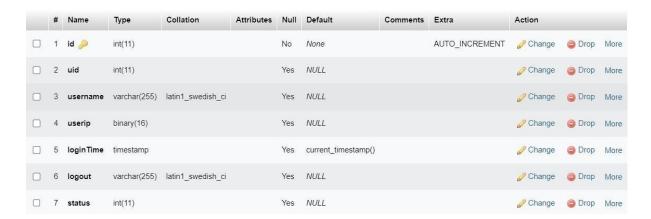
#### Patient Medical History Table:



#### Patient Data Table :



#### User Login Table :



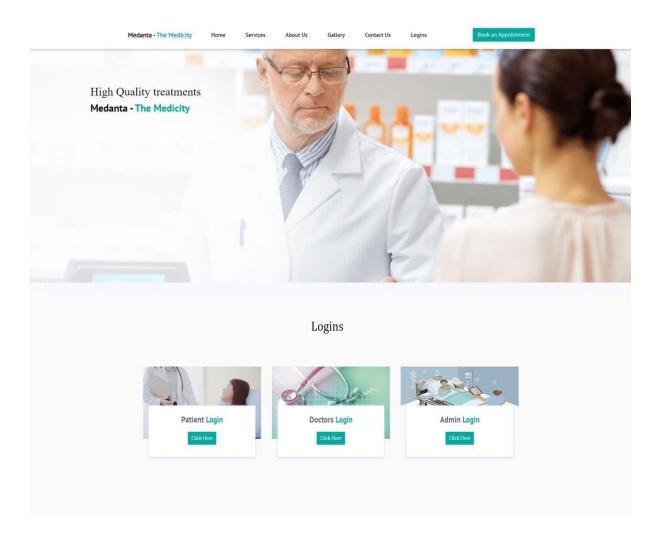
#### User Login Data Table:

#	Name	Туре	Collation	Attributes	Null	Default	Comments	Extra	Action		
1	id 🔑	int(11)			No	None		AUTO_INCREMENT	Change	Drop	More
2	fullName	varchar(255)	latin1_swedish_ci		Yes	NULL			Change	Drop	More
3	address	longtext	latin1_swedish_ci		Yes	NULL			Change	Drop	More
4	city	varchar(255)	latin1_swedish_ci		Yes	NULL			Change	Drop	More
5	gender	varchar(255)	latin1_swedish_ci		Yes	NULL			Change	Drop	More
6	email 🔑	varchar(255)	latin1_swedish_ci		Yes	NULL			Change	Drop	More
7	password	varchar(255)	latin1_swedish_ci		Yes	NULL			Change	Drop	More
8	regDate	timestamp			Yes	current_timestamp()			Change	Drop	More
9	updationDate	timestamp			Yes	NULL		ON UPDATE CURRENT_TIMESTAMP()	Change	Drop	More

# **System Design:**

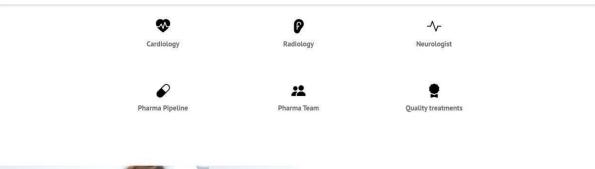
# Chapter 10: System Design

10.0 User Panel



Our Key Features

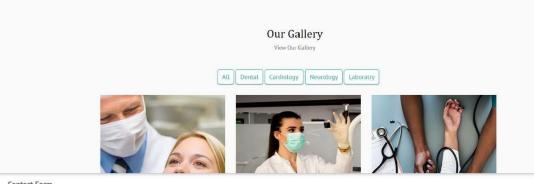
Take a look at some of our key features





#### About Our Hospital

The Medanta - The Medicity is designed Hospital to replace their existing manual, paper based system. 
The new system is to control the following information; patient information, room availability, staff and operating room schedules, and patient involces. These services are to be provided in an efficient, cost effective manner, with the goal of reducing the time and resources currently required for such tasks. A significant part of the operation of any hospital involves the acquisition, management and timely retrieval of great volumes of information. This information typically involves; patient personal, information streeduring, start information, room and ward screeduring, start screeduring, operating theater scheduling and various facilities waiting lists. All of this information must be managed in an efficient and cost wise fashion so that an institution's resources may be effectively utilized HMS will automate the management of the hospital making it more efficient and correct fee. It aims at standardizing data, consolidating data ensuring data integrity and reducing inconsistencies.



Contact Form	
Enter Name :	Enter Name
Email Address :	Erece Email Address
Mobile Number:	Enter Mobilie Number
Enter Message:	Einter Your Message
	A

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Medanta - The Medicity @ 2024 by mukund jagani

Contact Us

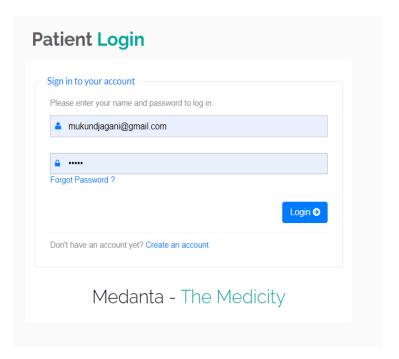
Lazamni chowk, mota vrachha "surat
Phone: 999999999

Email: medantainfo@gmail.com
Timing: 9 am To 8 Pm

Medanta - The Medicity @ 2024 by mukund jagani

#### **10.1** Patient Panel:

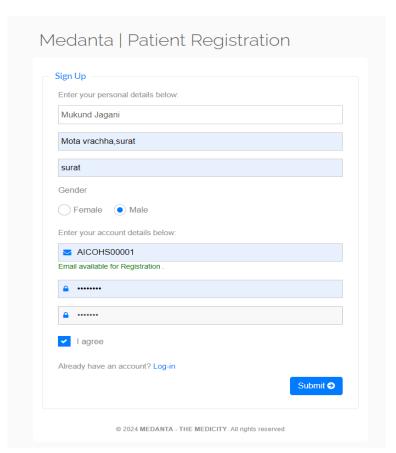
#### LogIn:



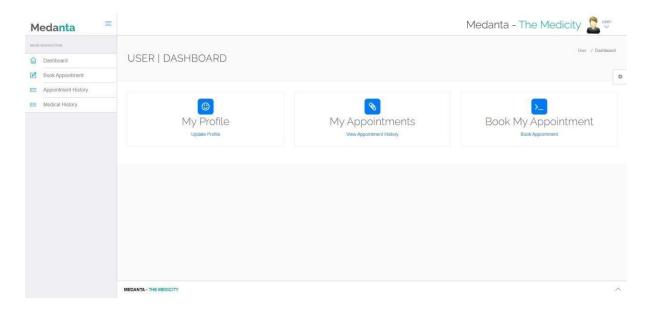
#### Forget Password:



#### Register Form :

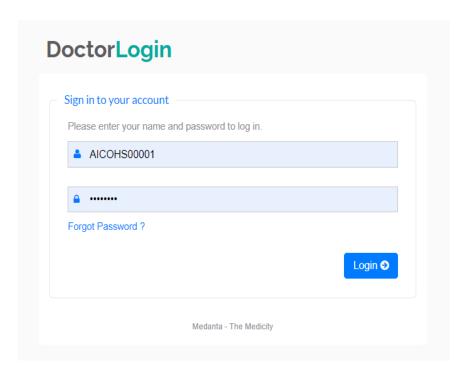


#### Patient Dashboard / Inter face :

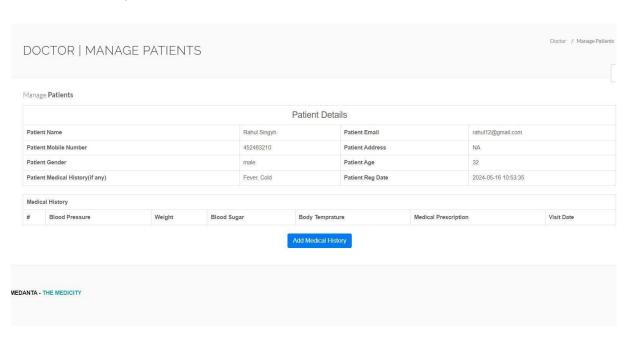


#### 10.1 Doctor Panel

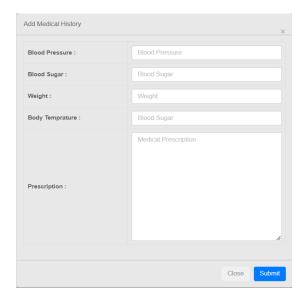
#### LogIn:



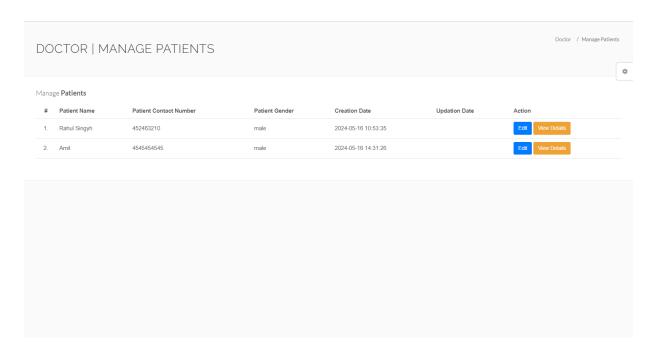
#### Manage Patient Medical History :



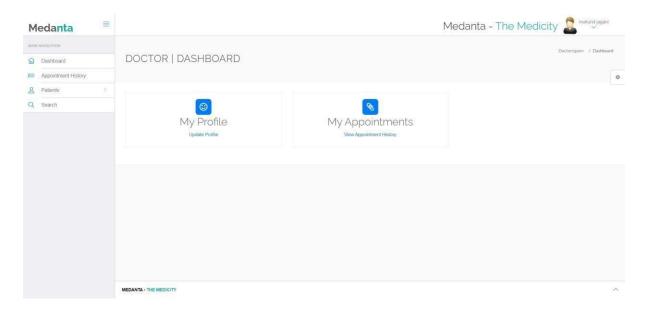
#### Manage By Fill Form:



#### Manage Patient By Doctor:

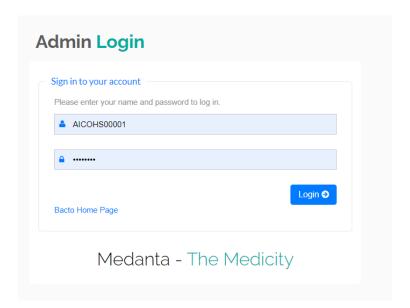


#### Doctor Dashboard / Inter face :

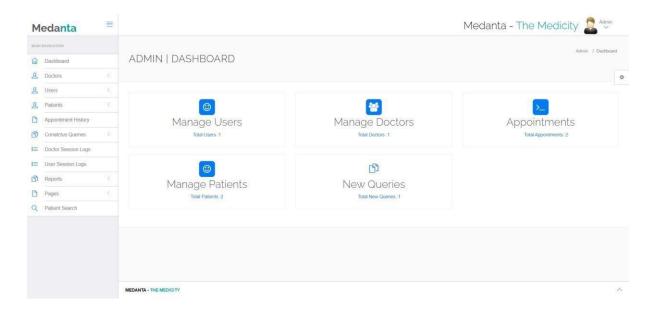


✓ Doctor Search Patient Or Add Patient By Filling A Detail Form

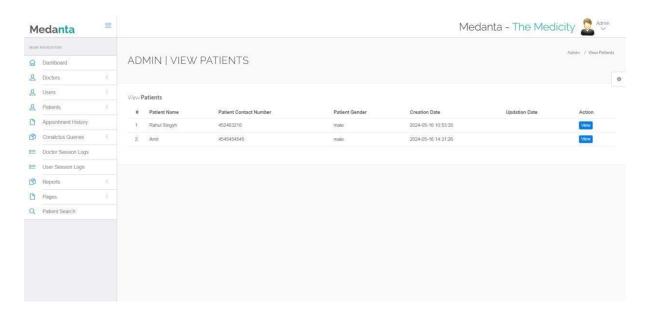
#### 9.3 Admin Panel:LogIn:



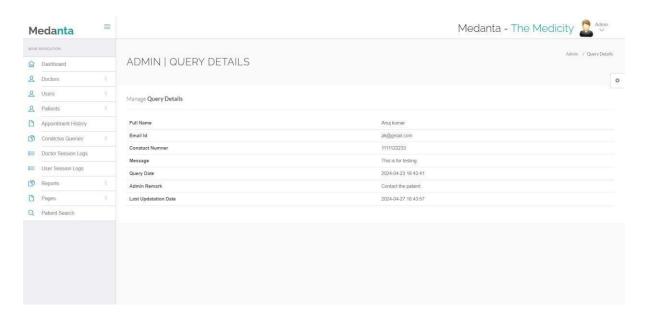
#### Admin Dashboard / Inter face :



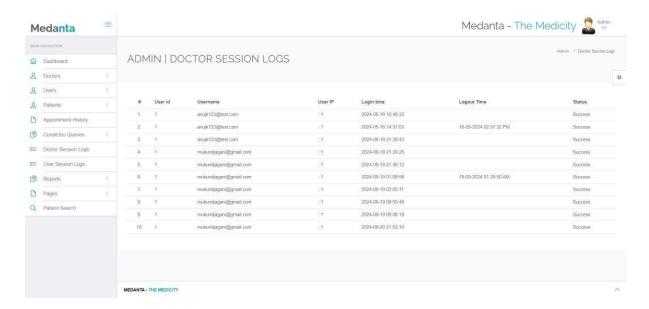
#### Admin Can View Patient:



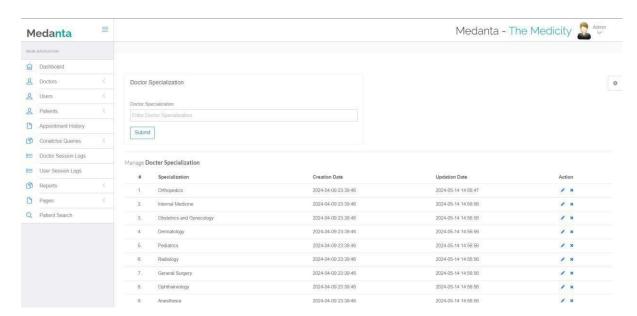
#### Read Query Get Frome The User:



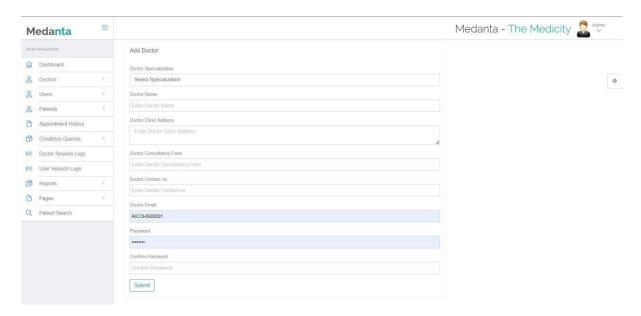
#### Can View Doctor Session Log:



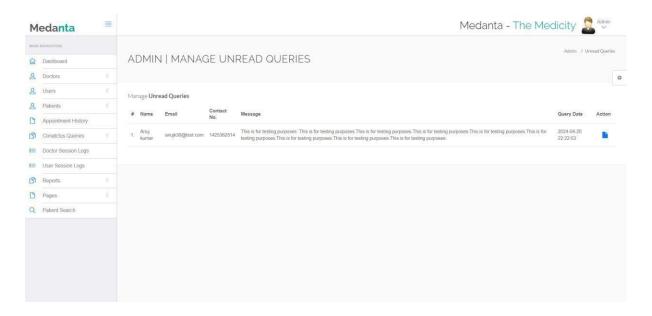
#### Manage Doctor:



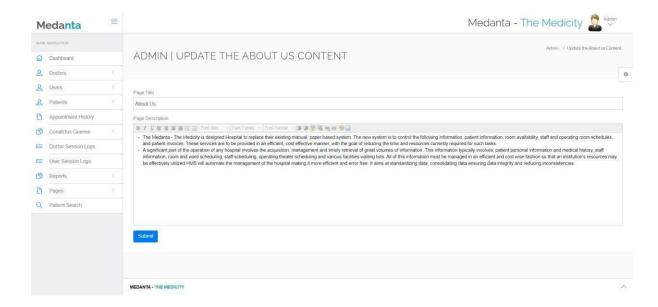
#### Add Doctor:



#### Admin Sort Query Read / Unread :



#### Admin Can Manage Content Of Contect Us / About Us Page:



#### Refrences

- https://www.w3schools.com/
- https://www.mindluster.com/
- https://stackoverflow.com/
- https://www.codecademy.com/