

USER MANUAL FOR HMS

Hospital Management System (HMS)

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Overview

The **Hospital Management System (HMS)** is a software solution designed to streamline the operations of healthcare facilities. It provides a **centralized platform** for managing various aspects of hospital administration, patient care, appointment scheduling and various hospital requirements.

Key Benefits:

- **Improves efficiency** by reducing paperwork and automating tasks
 - **Enhances communication** among healthcare providers
 - **Provides easy access** to medical records and hospital services
 - **Faster appointment scheduling** of patients.
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Purpose

The **main objective** of the HMS is to **automate and simplify hospital operations**, including:

- Patient registration
- Appointment scheduling
- Medical record management •
Doctor View Appointments.
- Admin managing Hospital users and Database.

By leveraging technology, the system offers a good experience for **healthcare professionals** and **patients** alike.

Target Users

The HMS is designed for various users in a healthcare setting:

- ◆ **Administrators** – Manage hospital operations and user access
 - ◆ **Doctors** – Access patient records, schedule appointments, and document treatments
 - ◆ **Receptionists** – Handle patient registrations, appointment scheduling, and billing
 - ◆ **Patients** – View medical records, book appointments, and communicate via a patient portal
-

Key Features

User Management

- Role-based access control ensures tailored access for different users

Appointment Scheduling

- Easy booking, rescheduling, and cancellation of appointments

Medical Record Management

- Centralized records of diagnoses, treatments, and prescriptions
-

Conclusion

The **Hospital Management System** is an **essential tool** for modern healthcare facilities. It **enhances hospital operations** and **improves patient care** through automation and better organization.

This user manual will guide you through **installation, usage, and troubleshooting**, ensuring you get the most out of the system.

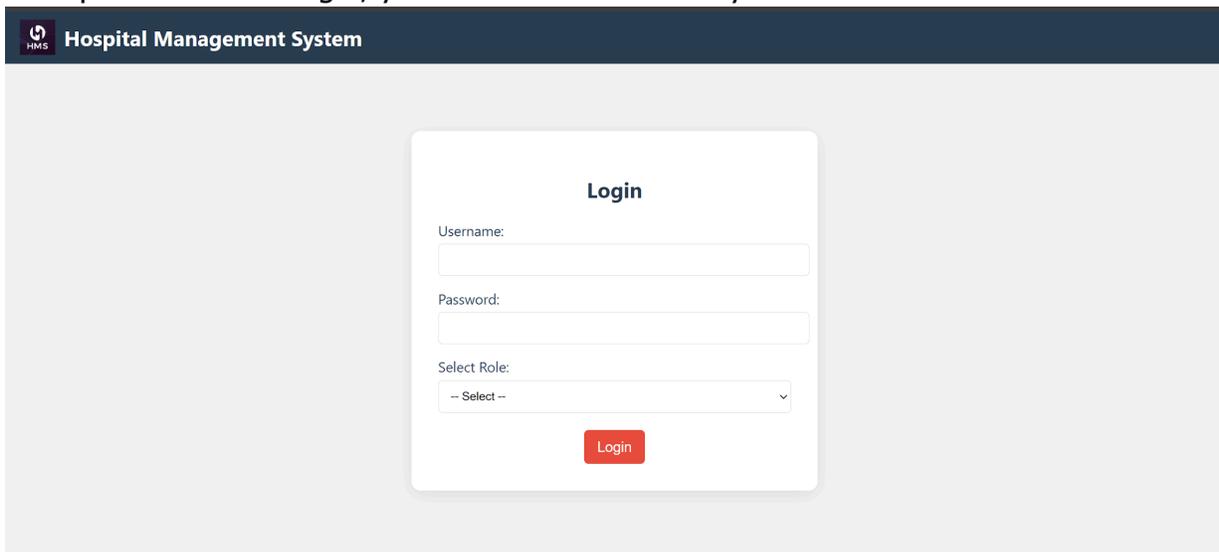
Usage Instructions for Hospital Management System

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Logging In

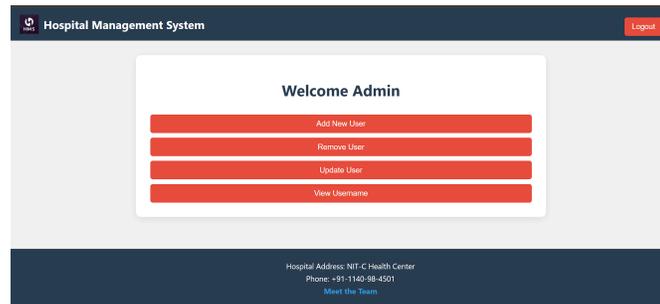
1. Open the **Hospital Management System** application.
 2. Enter your **username** and **password** in the respective fields.
 3. Select your role.
 4. Click on the **Login** button.
-
5. Upon successful login, you will be redirected to your **dashboard**.



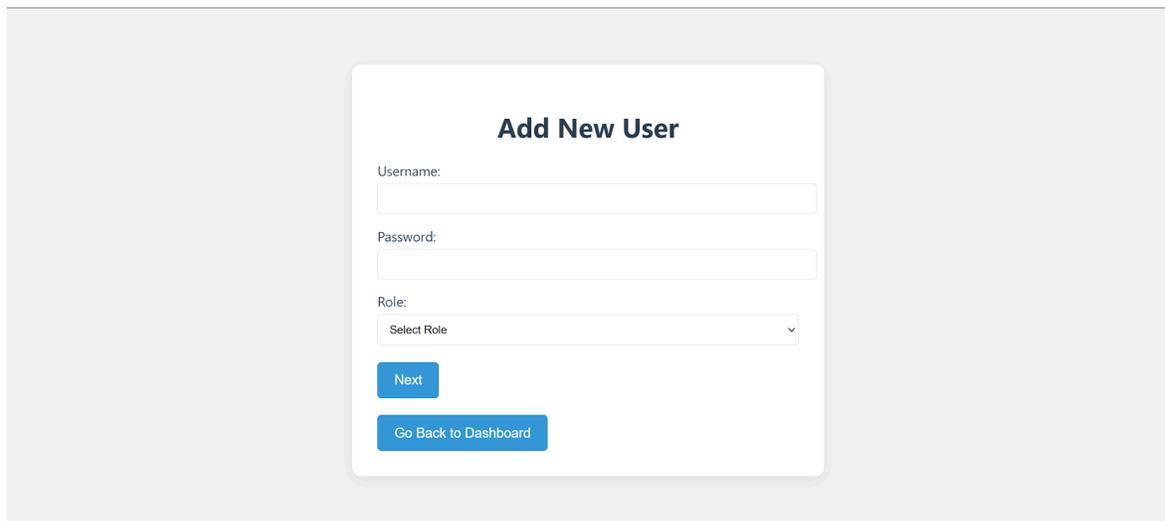
The screenshot shows the login interface of the Hospital Management System. At the top, there is a dark blue header with the HMS logo and the text "Hospital Management System". Below the header, the main content area is light gray. In the center, there is a white rounded rectangle containing the login form. The form is titled "Login" and includes three input fields: "Username:", "Password:", and "Select Role:". The "Select Role:" field is a dropdown menu with "-- Select --" and a downward arrow. Below the input fields is a red "Login" button.

1. Admin Dashboard

There is only admin in this HMS implementation who has the following functionalities.



- 1.1 **Add new user:** The admin can add the following users-



The screenshot shows the 'Add New User' form. It includes input fields for 'Username' and 'Password', a 'Role' dropdown menu with 'Select Role' as the current selection, and two buttons: 'Next' and 'Go Back to Dashboard'.

• Doctor

Add Doctor

Name:

Specialization:

Phone:

Email:

Availability:

• Patient

Add Patient

Name:

Date of Birth:

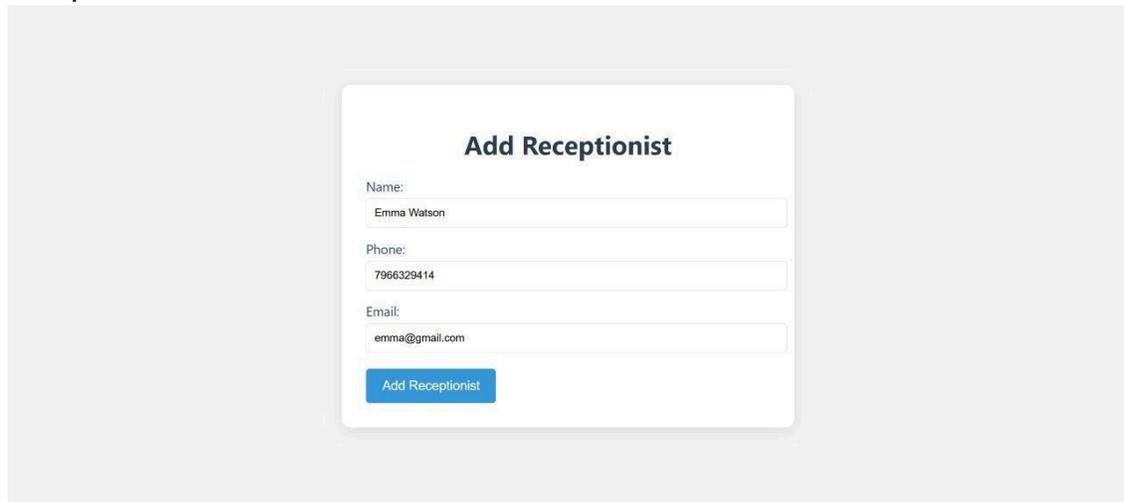
Gender:

Phone:

Email:

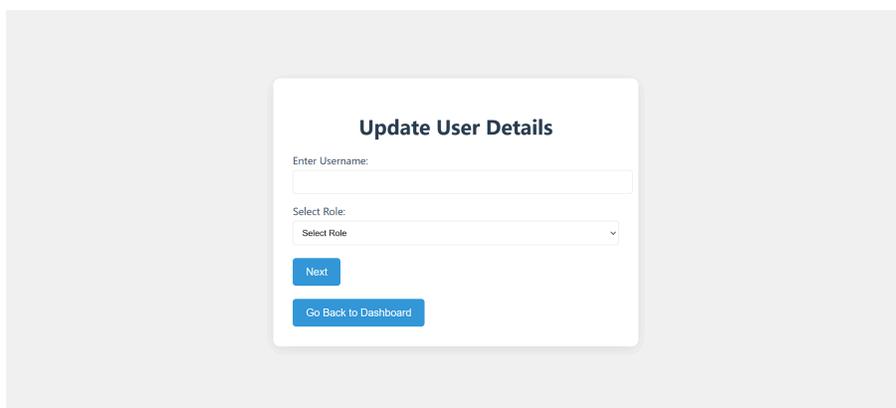
Address:

Receptionist



The screenshot shows a web form titled "Add Receptionist" centered on a light gray background. The form is white with a thin border and contains three input fields: "Name:" with the value "Emma Watson", "Phone:" with the value "7966329414", and "Email:" with the value "emma@gmail.com". Below the fields is a blue button labeled "Add Receptionist".

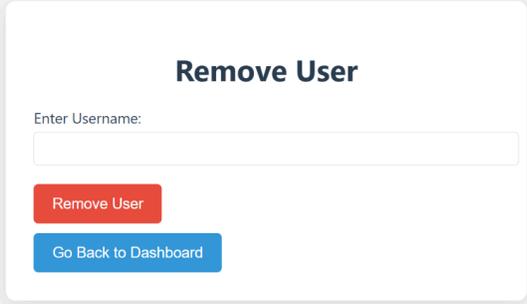
- 1.2 **Update new user:** The admin can update the following users-
 - Doctor
 - Patient
 - Receptionist



The screenshot shows a web form titled "Update User Details" centered on a light gray background. The form is white with a thin border and contains two input fields: "Enter Username:" and "Select Role:". The "Select Role:" field is a dropdown menu with "Select Role" visible. Below the fields are two blue buttons: "Next" and "Go Back to Dashboard".

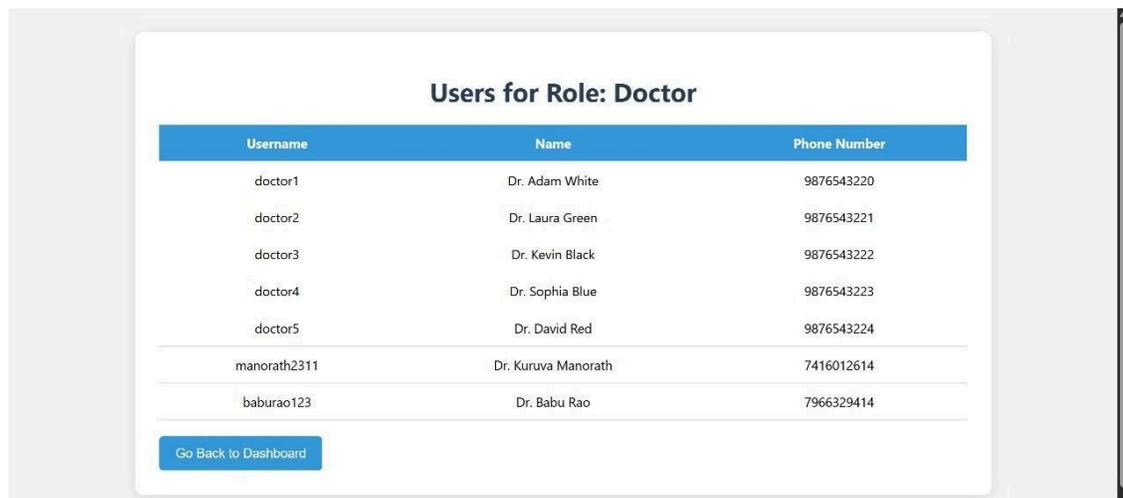
1.3 **Remove user:** The admin can remove the following users-

- Doctor
- Patient
- Receptionist



The image shows a screenshot of a web application interface for removing a user. The form is titled "Remove User" and is centered on a light gray background. It contains a text input field labeled "Enter Username:" with a white border and a light gray background. Below the input field are two buttons: a red button labeled "Remove User" and a blue button labeled "Go Back to Dashboard".

- 1.4 **View user name** : The admin can view the following users usernames-
 - Doctor
 - Patient
 - Receptionist

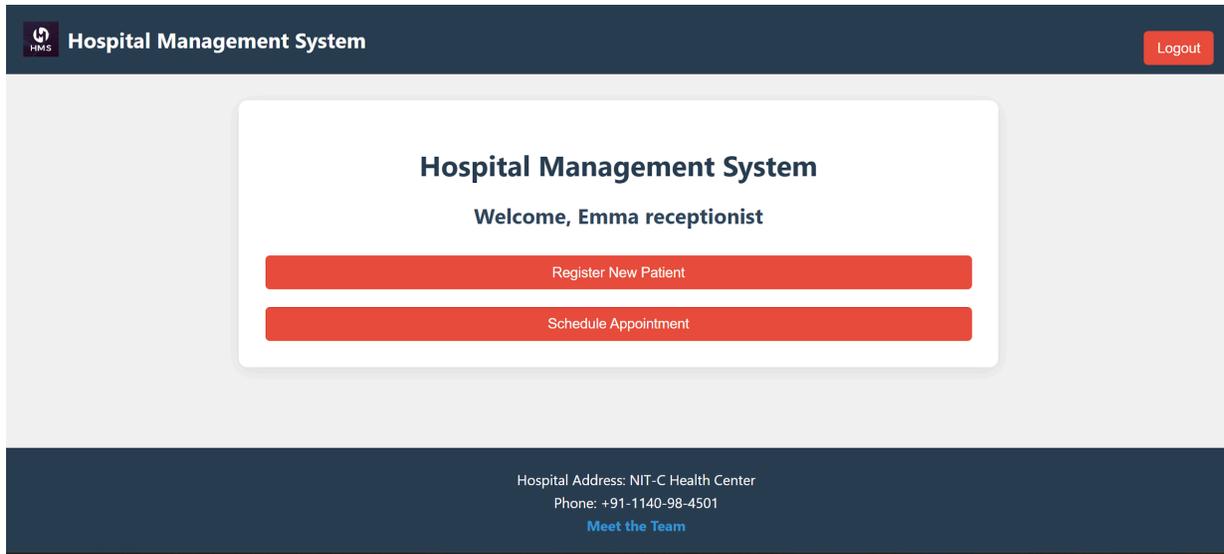


The screenshot displays a web interface with a table titled "Users for Role: Doctor". The table has three columns: "Username", "Name", and "Phone Number". There are seven rows of data. Below the table is a blue button labeled "Go Back to Dashboard".

Username	Name	Phone Number
doctor1	Dr. Adam White	9876543220
doctor2	Dr. Laura Green	9876543221
doctor3	Dr. Kevin Black	9876543222
doctor4	Dr. Sophia Blue	9876543223
doctor5	Dr. David Red	9876543224
manorath2311	Dr. Kuruva Manorath	7416012614
baburao123	Dr. Babu Rao	7966329414

[Go Back to Dashboard](#)

2. Receptionist Dashboard



- 2.1 Register NewPatient
 - Takes the followings :
 - Name of the user.
 - Date of Birth of the user.
 - Gender of the user.
 - Phone number of the user.
 - Email of the user.
 - Address of the user.
 - Blood Group of the user.
 - Medical history of the user.

In their respective formats.

- If there is no username conflict, creates new patient,

Add Patient

Name:

Date of Birth:

Gender:

Phone:

Email:

Address:

Gender:

Phone:

Email:

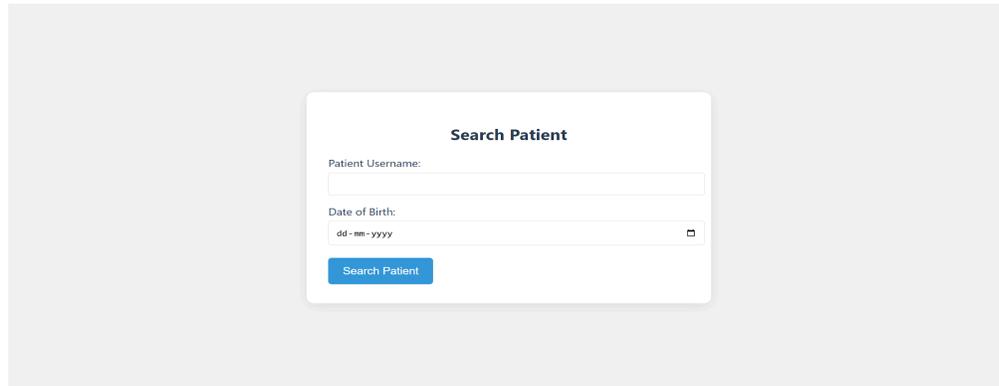
Address:

Blood Group:

Medical History:

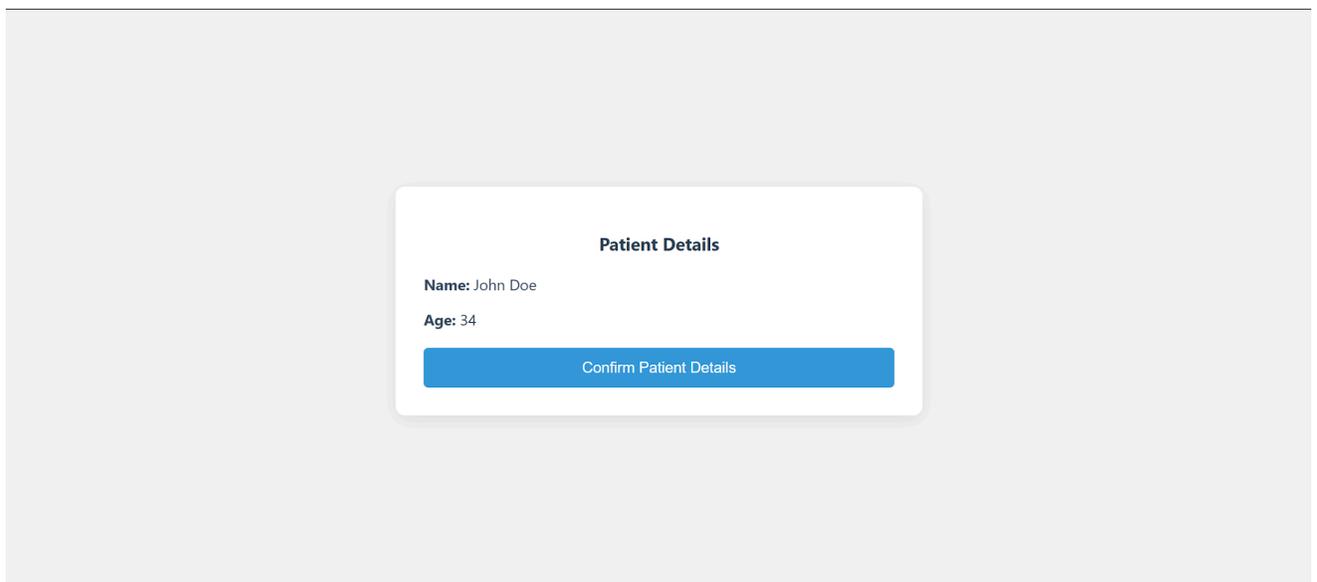
User Successfully Added!

- Else returns an error.
- 2.2 Schedule Appointment



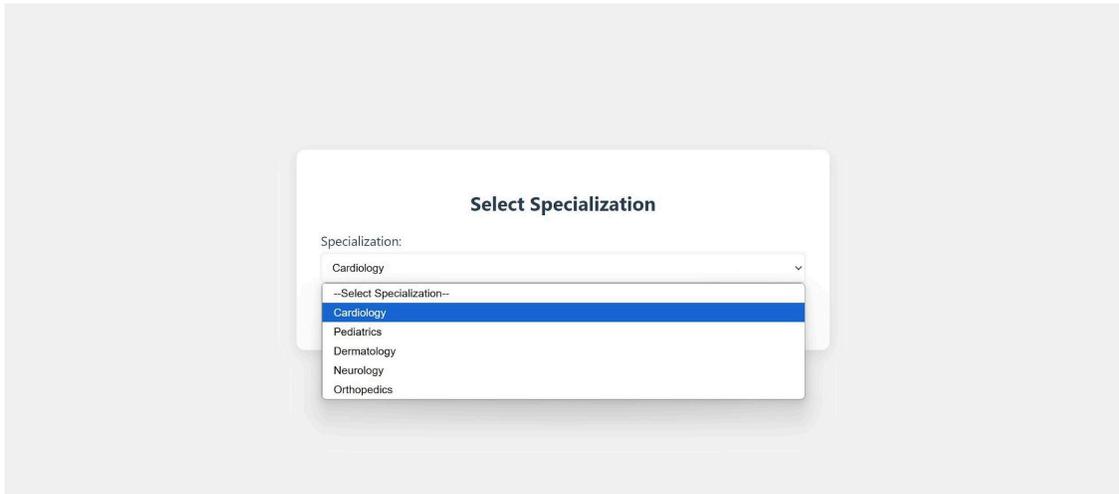
A screenshot of a web form titled "Search Patient". The form is centered on a light gray background. It contains two input fields: "Patient Username:" and "Date of Birth:". The "Date of Birth:" field has a placeholder "dd-mm-yyyy" and a small calendar icon on the right. Below the input fields is a blue button labeled "Search Patient".

- First takes the patient's username and DOB as input. ◦
- Confirms Patient Pages.

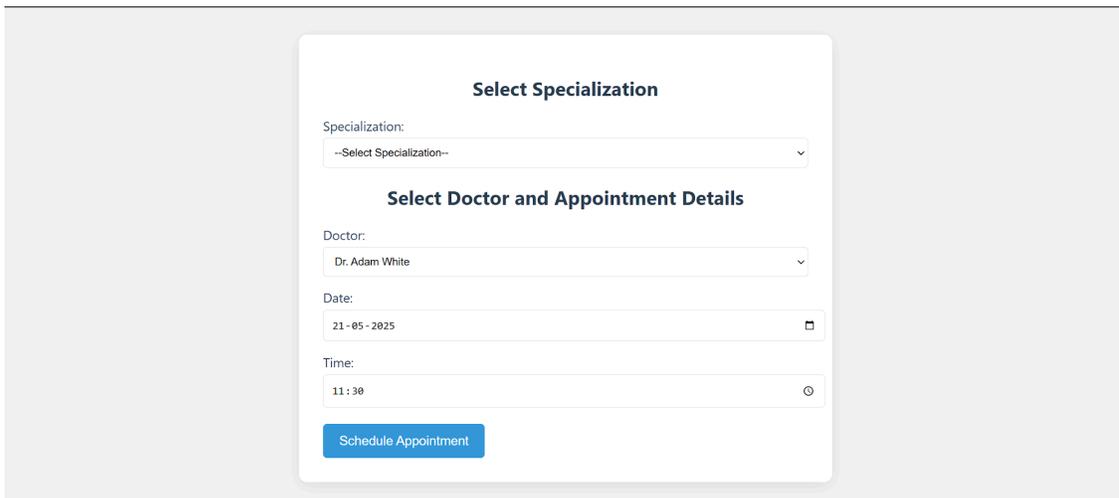


A screenshot of a web form titled "Patient Details". The form is centered on a light gray background. It displays two lines of text: "Name: John Doe" and "Age: 34". Below the text is a wide blue button labeled "Confirm Patient Details".

- ◊ Asks the user to select specialization.

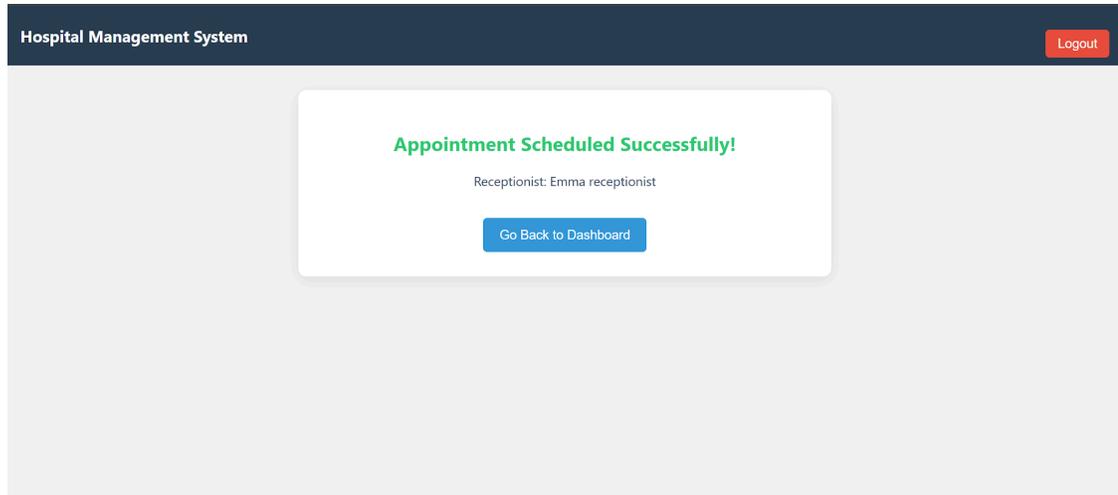


A screenshot of a web form titled "Select Specialization". It features a dropdown menu labeled "Specialization:" with a list of options: Cardiology, --Select Specialization--, Cardiology (highlighted in blue), Pediatrics, Dermatology, Neurology, and Orthopedics.

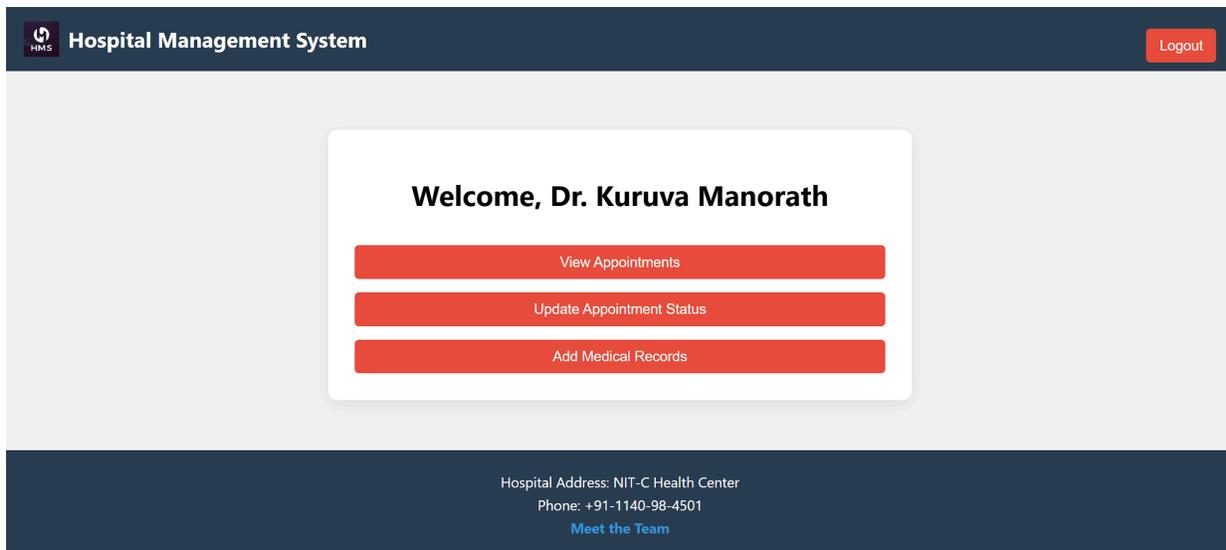


A screenshot of a web form titled "Select Doctor and Appointment Details". It contains several input fields: "Specialization:" with a dropdown menu showing "--Select Specialization--"; "Doctor:" with a dropdown menu showing "Dr. Adam White"; "Date:" with a date picker showing "21-05-2025"; and "Time:" with a time picker showing "11:30". A blue "Schedule Appointment" button is located at the bottom of the form.

- ◊ Displays the list of doctors available and the date and time for the appointment.
- ◊ If no clashes, then a successful appointment is displayed.

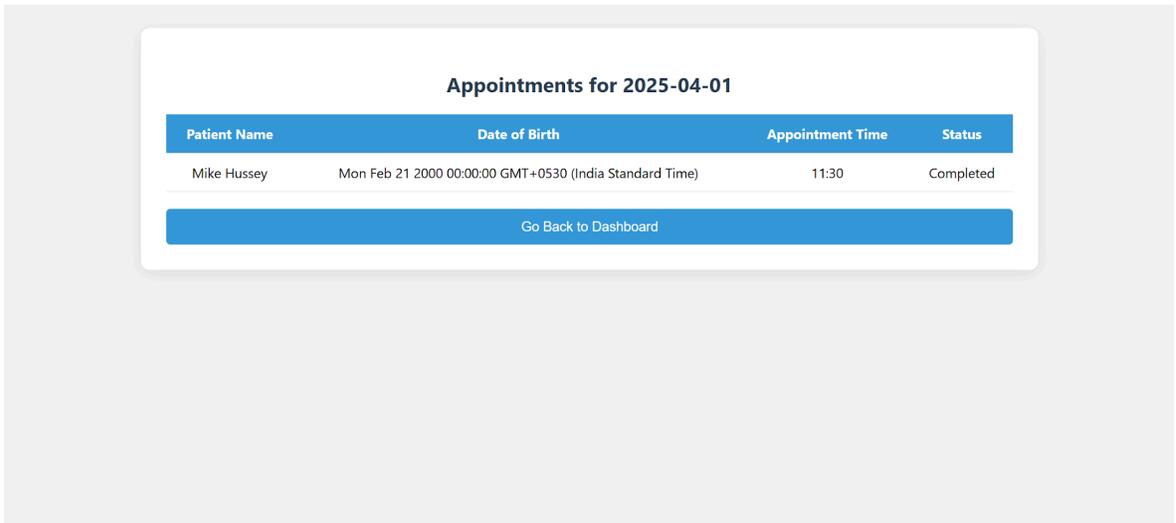


3. Doctor Dashboard



- 3.1 **View appointment:** The doctor can view his scheduled appointments as follows

- First select date.
- Then he views the appointment details, patient name, and time of appointment in that particular date

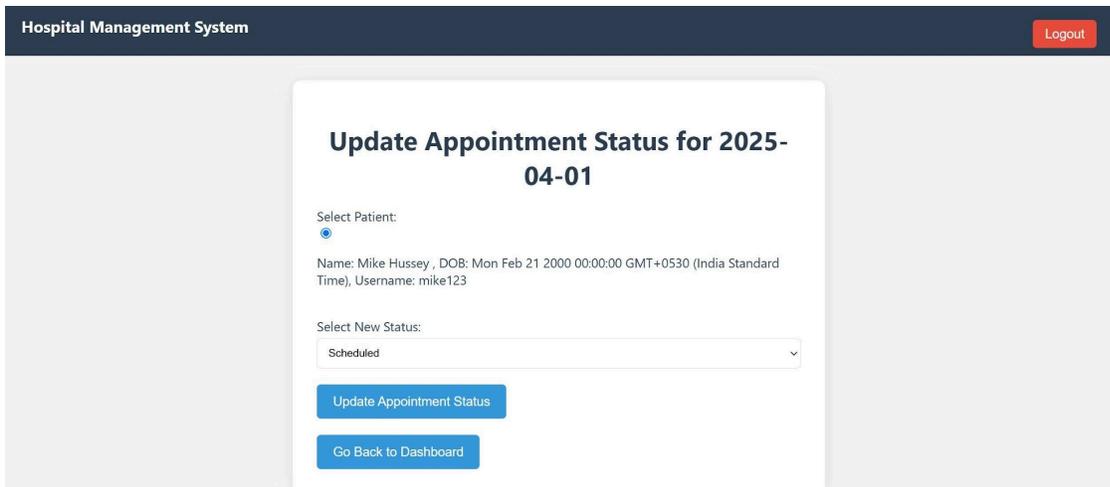


- **3.2 Update appointment status:** The doctor can update the status of the appointment:-

- Select a date and it shows appointments on that day. ◦

The doctor can do the following operations:

- Scheduled
- Completed
- Cancelled



- Select a patient from the list and update the status to

3.3 Add Medical Record :

- Select a date, and appointments on that day are displayed.
- Select a patient and update diagnosis and prescription info.

Add Medical Record

Select Patient:

Name: Mike Hussey , DOB: Mon Feb 21 2000 00:00:00 GMT+0530 (India Standard Time), Username: mike123, Appointment ID: 3

Name: John Doe, DOB: Mon May 14 1990 00:00:00 GMT+0530 (India Standard Time), Username: patient1, Appointment ID: 5

Name: Jane Smith, DOB: Sun Sep 22 1985 00:00:00 GMT+0530 (India Standard Time), Username: patient2, Appointment ID: 6

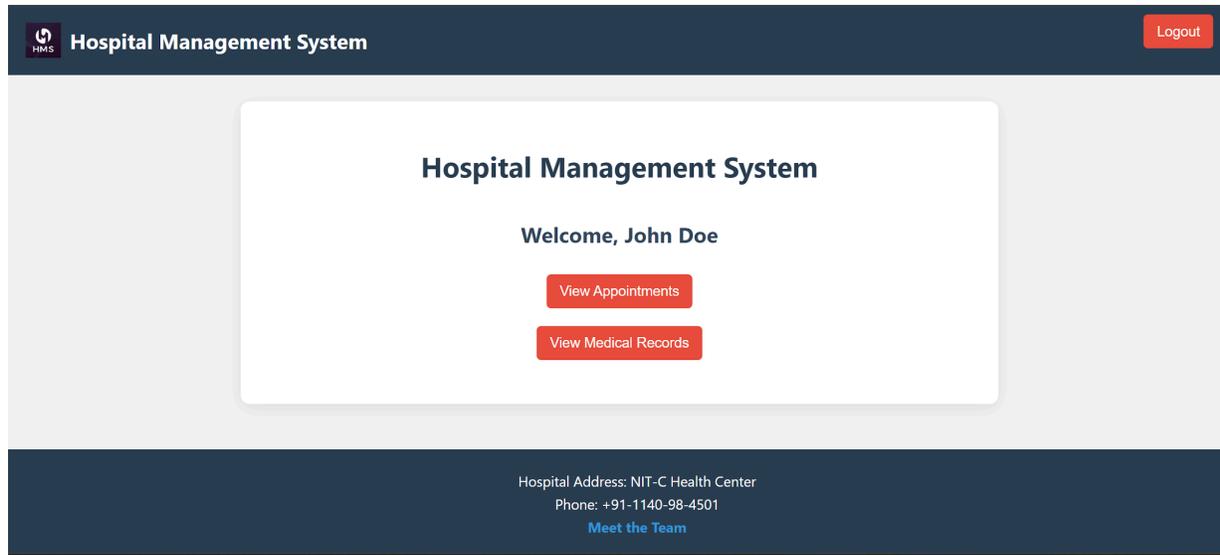
Diagnosis:

Prescription:

[Add Medical Record](#)

[Go Back to Dashboard](#)

4. Patient Dashboard



- 4.1 **View Appointments-** Displays the list of appointments with the following details :
 - Date
 - Time
 - Doctor name
 - Specialization
 - <> Status

HMS Hospital Management System Logout

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Your Appointments

Appointment Date	Time	Doctor Name	Specialization	Status
2025-05-12	04:25:00	Dr. Kevin Black	Neurology	Scheduled
2025-04-01	11:30:00	Dr. Kuruva Manorath	Cardiology	Scheduled
2025-03-31	10:30:00	Dr. Adam White	Cardiology	Scheduled

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- **4.2 View Medical Record:** Displays medical records prescribed by doctors of previous appointments of that particular patient .

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Medical Records

Date	Doctor	Diagnosis	Prescription
2025-03-31	Dr. Adam White	Broken Bone in knee	pain killer paracetamol
2025-03-31	Dr. Kevin Black	No Diagnosis	No Prescription

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[Meet the Team](#)

User Roles and Permissions

Role	Permissions
Admin	Full access to all features, including user management and system settings.
Doctor	Can view and manage patient records, create appointments, and generate reports.
Receptionist	Can create appointments and manage patient records but has limited access to sensitive information.
Patient	Can view their own records and appointments but cannot modify other users' data.

For any additional assistance.

Database Schema

Overview

The database schema for the **Hospital Management System** is designed to efficiently manage and store data related to patients, doctors, appointments, medical records, and users. This document provides a detailed description of each table, their relationships, and the purpose of each field within the tables.

Tables

1. User Table

Table Name: `user`

Description: Stores information about all users of the system, including patients, doctors, receptionists, and admins.

Fields:

- `user_id` (**SERIAL PRIMARY KEY**) – Unique identifier for each user
 - `username` (**VARCHAR(50) UNIQUE NOT NULL**) – Unique username for login
 - `password` (**VARCHAR(255) NOT NULL**) – Password for user authentication
 - `role` (**user_role NOT NULL**) – Role of the user (admin, doctor, receptionist, patient)
-

2. Patient Table

Table Name: `patient`

Description: Contains personal and medical information about patients.

Fields:

- `patient_id` (**SERIAL PRIMARY KEY**) – Unique identifier for each patient
- `user_id` (**INT UNIQUE NOT NULL**) – References the user table
- `name` (**VARCHAR(100) NOT NULL**) – Full name of the patient

- `dob` (**DATE NOT NULL**) – Date of birth
 - `gender` (**gender_type NOT NULL**) – Gender
 - `phone` (**VARCHAR(15) NOT NULL**) – Contact number
 - `email` (**VARCHAR(100) NOT NULL**) – Email address
 - `address` (**TEXT NOT NULL**) – Residential address
 - `blood_group` (**VARCHAR(5)**) – Blood group
 - `medical_history` (**TEXT**) – Medical history
-

3. Doctor Table

Table Name: `doctor`

Description: Stores information about doctors in the hospital.

Fields:

- `doctor_id` (**SERIAL PRIMARY KEY**) – Unique identifier for each doctor
 - `user_id` (**INT UNIQUE NOT NULL**) – References the user table
 - `name` (**VARCHAR(100) NOT NULL**) – Full name
 - `specialization` (**VARCHAR(100) NOT NULL**) – Area of specialization
 - `phone` (**VARCHAR(15) NOT NULL**) – Contact number
 - `email` (**VARCHAR(100) NOT NULL**) – Email address
 - `availability` (**VARCHAR(50) NOT NULL**) – Availability hours
-

4. Receptionist Table

Table Name: `receptionist`

Description: Contains information about receptionists managing appointments and patient interactions.

Fields:

- `receptionist_id` (**SERIAL PRIMARY KEY**) – Unique identifier

- `user_id` (**INT UNIQUE NOT NULL**) – References the user table
 - `name` (**VARCHAR(100) NOT NULL**) – Full name
 - `email` (**VARCHAR(100) NOT NULL**) – Email address
 - `phone` (**VARCHAR(15) NOT NULL**) – Contact number
-

5. Admin Table

Table Name: `admin`

Description: Stores information about administrators who manage the system.

Fields:

- `admin_id` (**SERIAL PRIMARY KEY**) – Unique identifier
 - `user_id` (**INT UNIQUE NOT NULL**) – References the user table
 - `name` (**VARCHAR(100) NOT NULL**) – Full name
 - `email` (**VARCHAR(100) NOT NULL**) – Email address
 - `phone` (**VARCHAR(15) NOT NULL**) – Contact number
-

6. Appointment Table

Table Name: `appointment`

Description: Manages appointment scheduling between patients and doctors.

Fields:

- `appointment_id` (**SERIAL PRIMARY KEY**) – Unique
 - `patient_id` identifier (**INT NOT NULL**) – References the
 - `doctor_id` patient table (**INT NOT NULL**) – References the
doctor table
 - `date` (**DATE NOT NULL**) – Date of the appointment
 - `time` (**TIME NOT NULL DEFAULT '00:00:00'**) – Time of the appointment
 - `status` (**appointment_status NOT NULL DEFAULT 'Scheduled'**) – Current status
-

7. Medical Records Table

Table Name: `medicalrecords`

Description: Stores medical records associated with patient visits.

Fields:

- `record_id` (**SERIAL PRIMARY KEY**) – Unique identifier
 - `patient_id` (**INT NOT NULL**) – References the patient table
 - `doctor_id` (**INT**) – References the doctor table (nullable)
 - `appointment_id` (**INT**) – References the appointment table (nullable)
 - `diagnosis` (**TEXT NOT NULL DEFAULT 'No Diagnosis'**) – Diagnosis provided during the visit
 - `prescription` (**TEXT DEFAULT 'No Prescription'**) – Prescription given
 - `visit_date` (**TIMESTAMP DEFAULT CURRENT_TIMESTAMP**) – Date and time of the visit
 - `created_at` (**TIMESTAMP DEFAULT CURRENT_TIMESTAMP**) – Record creation timestamp
-

Relationships

- The `user` table is the **central table**, linking to `patient`, `doctor`, `receptionist`, and `admin` tables through the `user_id` field.
- The `patient` and `doctor` tables are linked to the `appointment` table through `patient_id` and `doctor_id`, respectively.
- The `medicalrecords` table references the `patient`, `doctor`, and `appointment` tables to maintain a **comprehensive record** of patient visits.

Conclusion

This **database schema** is designed to ensure **data integrity** and facilitate **efficient management** of hospital operations. Each table is structured to support the functionalities of the Hospital Management System, providing a robust foundation for data handling and retrieval.

