

# Full Stack Development with MERN

## DocSpot: Seamless Appointment Booking for Health

### 1. Introduction

DocSpot is a MERN Stack doctor appointment booking system allowing patients to book online appointments easily.

#### 1.1 Purpose

The purpose is to eliminate manual hospital booking and provide real-time scheduling.

### 2. Ideation Phase

#### 2.1 Problem Statement

Manual hospital bookings cause delays and frustration for both patients and doctors.

#### 2.2 Empathy Map Canvas

- Patients: Frustrated with waiting times.
- Doctors: Difficulty managing schedules.
- Admin: Needs streamlined control.

#### 2.3 Brainstorming

- Real-time booking
- Doctor approval
- Role-based access

### 3. Requirement Analysis

#### 3.1 Customer Journey Map

Registration -> Login -> Browse Doctors -> Book -> Manage Appointment

#### 3.2 Solution Requirements

- User registration
- Doctor approval
- Appointment management

#### 3.3 Technology Stack

- Frontend: React
- Backend: Node.js/Express
- Database: MongoDB

## 4. Project Design

### 4.1 Problem Solution Fit

Provides digital, real-time doctor booking.

### 4.2 Proposed Solution

A role-based web application for users, doctors, and admin.

### 4.3 Solution Architecture

Frontend -> Backend API -> MongoDB

## 5. Project Planning & Scheduling

Week	Task
1	Requirements
2	UI Design
3	Frontend
4	Backend
5	Testing
6	Submission

## 6. Functional and Performance Testing

Performance Testing Tools: Postman, Browser Dev Tools

API Response Time: Less than 150ms

Database Query Time: Optimized

## 7. Results

### User Registration

The screenshot shows a web browser window titled "User Registration". The page features a cartoon doctor character on the left. The main form has a title "Create an Account" and four input fields: "Name" (manikanta karuparthi), "Email" (manikantakaruparthi789@gmail.com), "Mobile Number" (+91 98765-43210), and "Password" (\*\*\*\*\*). Below the form is a link "Already have an account? Login" and a blue "Sign Up" button.

# Login



WELCOME TO BOOK A DOCTOR

Login

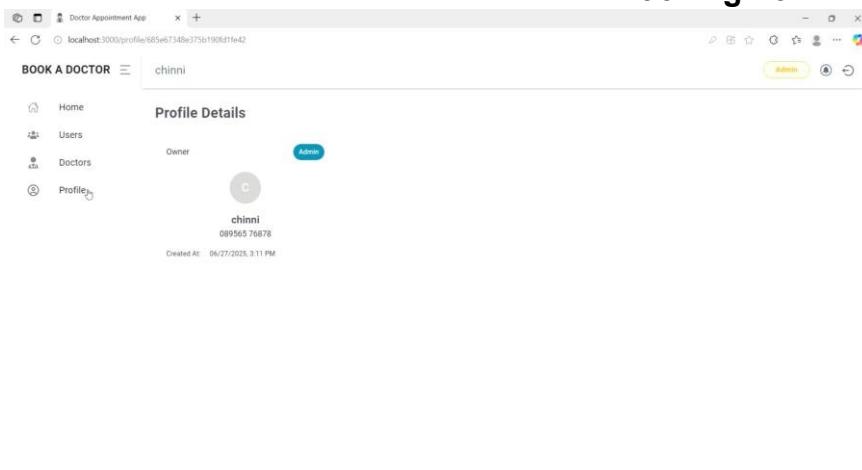
Email  
manikantakaruparthi789@gmail.com

Password  
\*\*\*\*\*

New here? [Create a new account](#)

[Login](#)

## Booking Form



BOOK A DOCTOR chinni

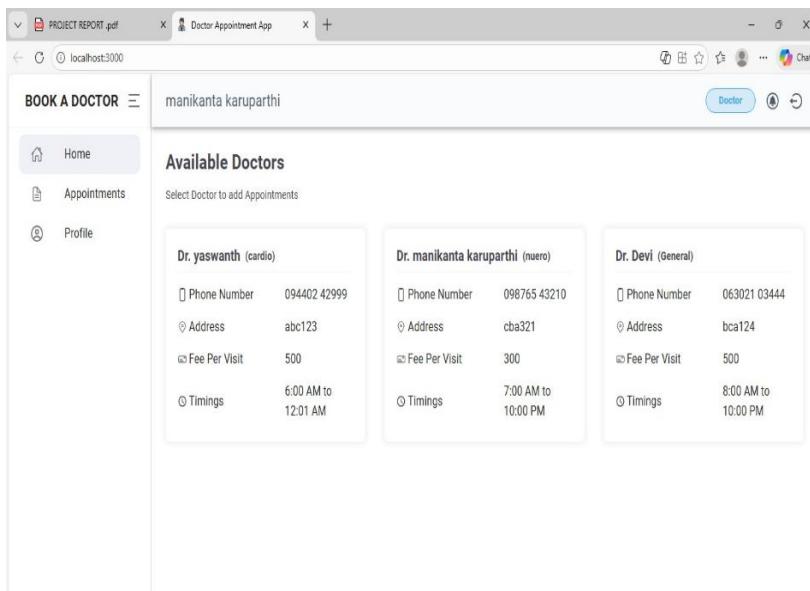
Profile Details

Owner Admin

chinni 089565 76878

Created At: 06/27/2025, 3:11 PM

## Doctor List



Dr. yaswanth (cardio)	Dr. manikanta karuparthi (neuro)	Dr. Devi (General)
<input type="checkbox"/> Phone Number 094402 42999	<input type="checkbox"/> Phone Number 098765 43210	<input type="checkbox"/> Phone Number 063021 03444
<input type="checkbox"/> Address abc123	<input type="checkbox"/> Address cba321	<input type="checkbox"/> Address bca124
<input type="checkbox"/> Fee Per Visit 500	<input type="checkbox"/> Fee Per Visit 300	<input type="checkbox"/> Fee Per Visit 500
<input type="checkbox"/> Timings 6:00 AM to 12:01 AM	<input type="checkbox"/> Timings 7:00 AM to 10:00 PM	<input type="checkbox"/> Timings 8:00 AM to 10:00 PM

## **8. Advantages & Disadvantages**

Advantages:

- Real-time booking
- Scalable
- Simple UI

Disadvantages:

- No payment gateway- Basic UI design

## **9. Conclusion**

DocSpot provides an efficient online doctor appointment booking system connecting patients, doctors, and admins.

## **10. Future Scope**

- JWT Authentication
- Payment gateway
- Cloud Deployment
- Mobile App
- SMS/Email Notifications