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

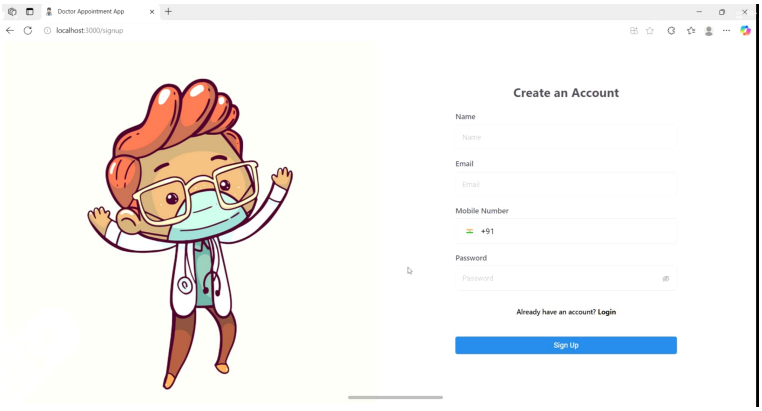
Week	Task
1	Requirements
2	UI Design
3	Frontend
4	Backend
5	Testing
6	Submission

6. Functional and Performance Testing

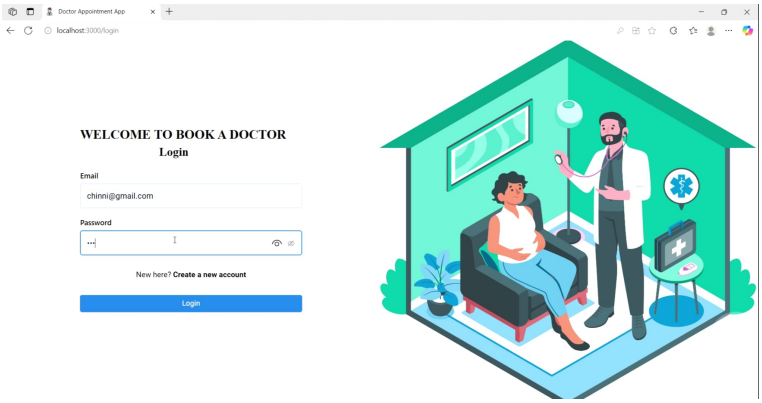
Performance Testing Tools: Postman, Browser Dev Tools
API Response Time: Less than 150ms
Database Query Time: Optimized

7. Results

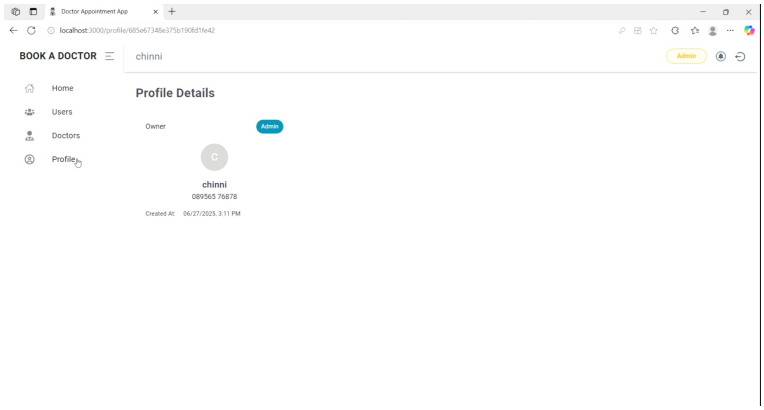
User Registration



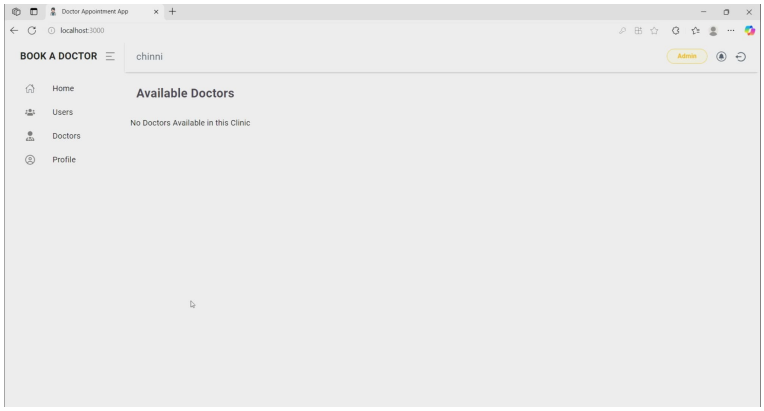
Login



Booking Form



Doctor List



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