Project Report – DocSpot

Date:	28 July 2025
Team ID:	LTVIP2025TMID52293
Project Name:	DocSpot – Seamless Doctor Appointment Booking for Health

1. INTRODUCTION

1.1 Project Overview

DocSpot is a full-stack MERN web application built to streamline doctor appointment booking by offering patients an easy-to-use platform and giving doctors/admins powerful management dashboards.

1.2 Purpose

To eliminate delays, confusion, and manual processes in booking doctor appointments by providing a centralized, digital, and real-time scheduling platform.

2. IDEATION PHASE

2.1 Problem Statement

Patients face delays and uncertainty while booking appointments. Existing platforms lack local doctor integration and a user-friendly interface.

2.2 Empathy Map Canvas

Patients: Seek convenience and verified listings.
Doctors: Need manageable schedules.
Emotions before: Frustration and delay.
After: Confidence and satisfaction.

2.3 Brainstorming

Ideas considered: mobile app, hospital kiosk, web app.
Selected: MERN web app (scalable, mobile-friendly, real-time).

3. REQUIREMENT ANALYSIS

3.1 Customer Journey map

Discover → Register → Book → Visit → Review
Opportunities: quick filters, clear booking confirmation, rating system

3.2 Solution Requirement

Functional: Login/Register, Book Appointments, Manage Availability
Non-Functional: Usability, performance, security (JWT), availability

3.3 Data Flow Diagram

Level 0 DFD:
Patients → React Frontend → Node.js Server ←→ MongoDB
Doctors/Admins → manage availability, appointments, users

3.4 Technology Stack

Frontend: React.js + Bootstrap
Backend: Node.js + Express.js
Database: MongoDB Atlas
Auth: JWT & bcrypt
APIs: RESTful, secured

4. PROJECT DESIGN

4.1 Problem Solution Fit

Defined user frustrations, available alternatives, triggers, behaviors. Validated the need for a specialized doctor booking system.

4.2 Proposed Solution

A responsive web app with login, search filters, dashboard management, and admin control over users and doctors.

4.3 Solution Architecture

Frontend ←→ Backend ←→ MongoDB
All secured using JWT; hosted via Netlify & Render

5. PROJECT PLANNING & SCHEDULING

5.1 Project Planning

Planned across 4 sprints (Registration, Booking, Dashboards, Admin).
Each story was assigned priorities and estimated using story points.
Velocity = 5.5 points/sprint.

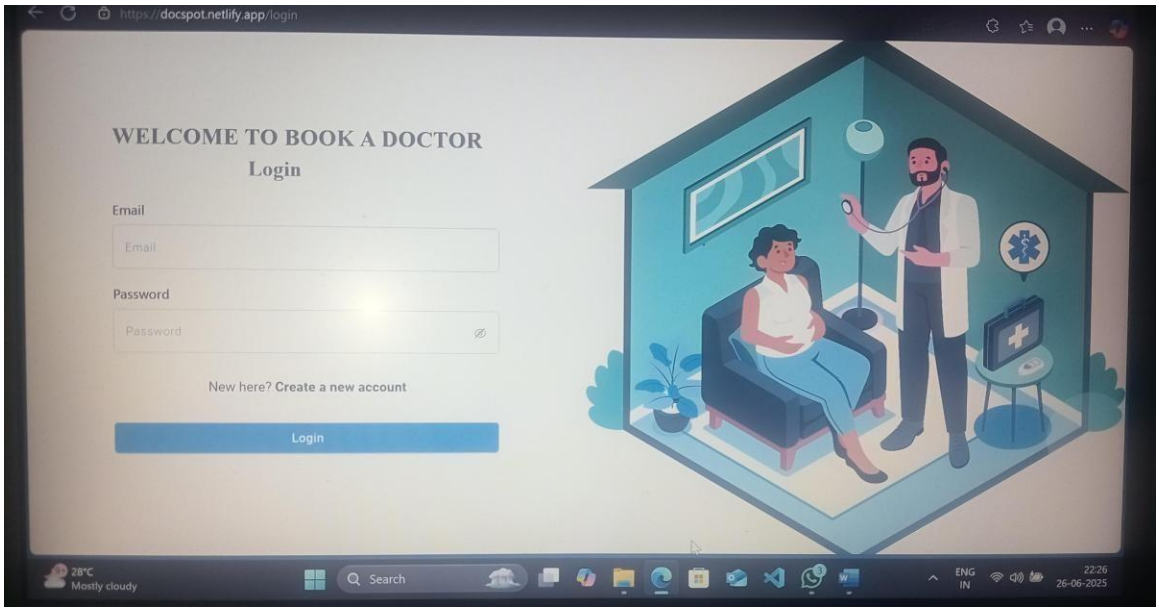
6. FUNCTIONAL AND PERFORMANCE TESTING

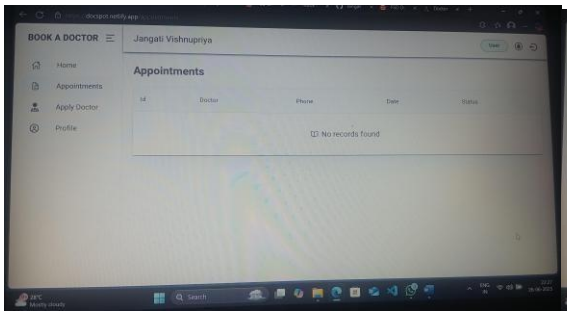
6.1 Performance Testing

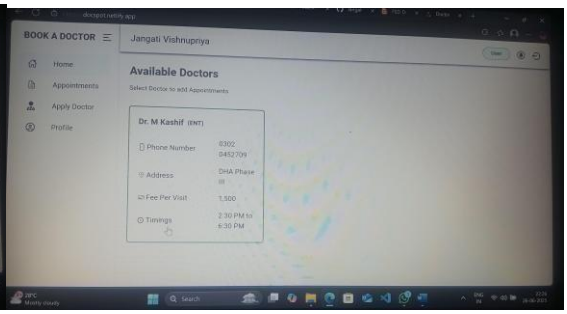
Load tested with multiple users.
Verified appointment API response times under 300ms.
Tested on Chrome, Firefox, and mobile browsers.

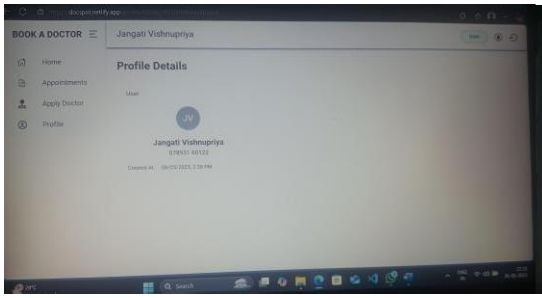
7. RESULTS

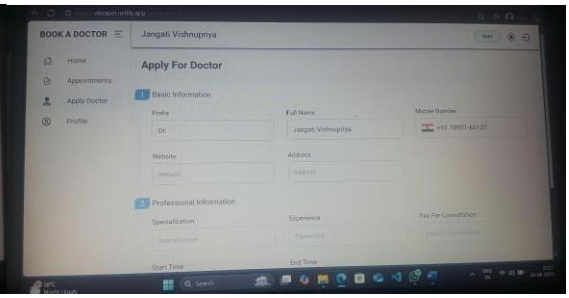
7.1 Output Screenshots











8. ADVANTAGES & DISADVANTAGES

Advantages:
- Fast booking
- Admin control
-DoctorpatientCommunication

Disadvantages:
- Requires internet access
- No real-time chat implemented yet

9. CONCLUSION

DocSpot successfully delivers a robust doctor appointment platform with role-based functionalities, real-time scheduling, and admin control.

10.FUTURE SCOPE

- Mobile App Version (React Native)
- Google Calendar sync
- E-prescriptions
- In-app payments
- Doctor ratings & reviews

11.APPENDIX

- Source Code: https://github.com/Chandrika2365/DocSpot-Seamless-Appointment-Booking-for-Health
- Demo Link:https://youtu.be/uNFZ47NE328?si=4X10zMkXyf8rciJx

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