

DocSpot:

Full Stack Development with MERN

Project Documentation - DocSpot

1. Introduction

- **Project Title:** *DocSpot - Seamless Appointment Booking for Health*
- **Team Members:**
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 - Hema Satya Nikhil Ainavilli

2. Project Overview

- **Purpose:**

DocSpot simplifies the process of booking appointments with healthcare professionals. It enables users to find doctors, schedule appointments, and conduct teleconsultations online.
- **Features:**
 - Doctor and Patient Login
 - Real-Time Appointment Booking
 - Teleconsultation (Video)
 - Admin Dashboard
 - Notifications & Reminders
 - Doctor Availability Management

3. Architecture

- **Frontend:**

Built with React.js, React Router for navigation, Axios for API requests, and Tailwind CSS for styling.
- **Backend:**

Node.js with Express.js for REST APIs. JSON Web Tokens (JWT) for authentication and authorization.
- **Database:**

MongoDB is used for storing user data, appointment schedules, and doctor profiles. Mongoose is used for schema design and queries.

4. Setup Instructions

- **Prerequisites:**
 - Node.js >= 14
 - MongoDB
 - Git

- **Installation:**
- git clone https://github.com/Nikhil-193/DOCSPOT-DOCTOR_APPOINTMENT-NIKHIL.git
- cd DOCSPOT-DOCTOR_APPOINTMENT-NIKHIL
- cd client
- npm install
- cd ../server
- npm install
- Create a .env file in the server directory with:
- PORT=5000
- MONGO_URI=your_mongodb_connection_string
- JWT_SECRET=your_jwt_secret

5. Folder Structure

- **Client** (React):
- /client
 - |—— public/
 - |—— src/
 - | |—— components/
 - | |—— pages/
 - | |—— context/
 - | |—— App.js
 - | |—— index.js
- **Server** (Node.js):
- /server
 - |—— controllers/
 - |—— models/
 - |—— routes/
 - |—— middleware/
 - |—— config/
 - |—— server.js

6. Running the Application

Frontend

cd client

npm start

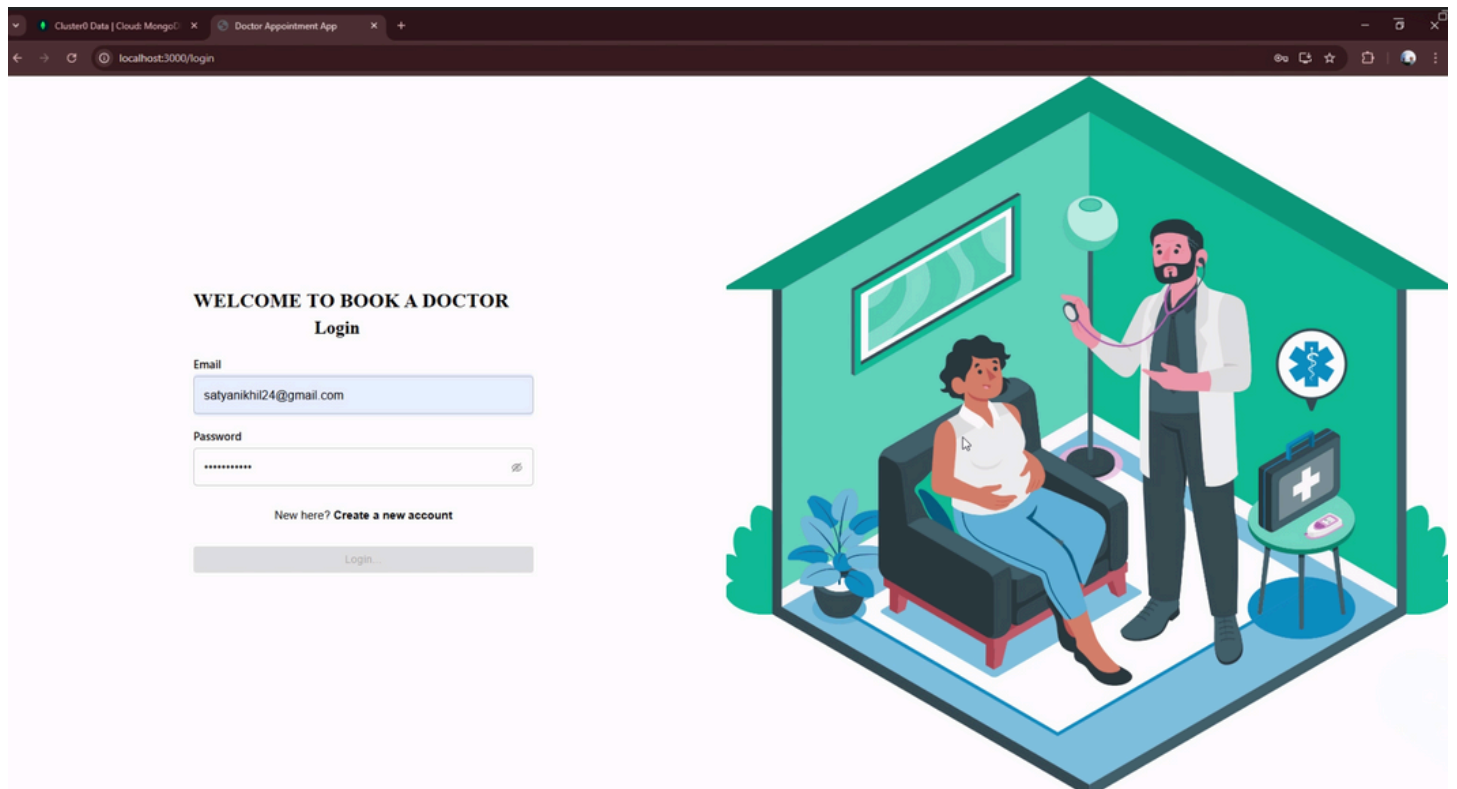
Backend

cd server

npm start

7. API Documentation

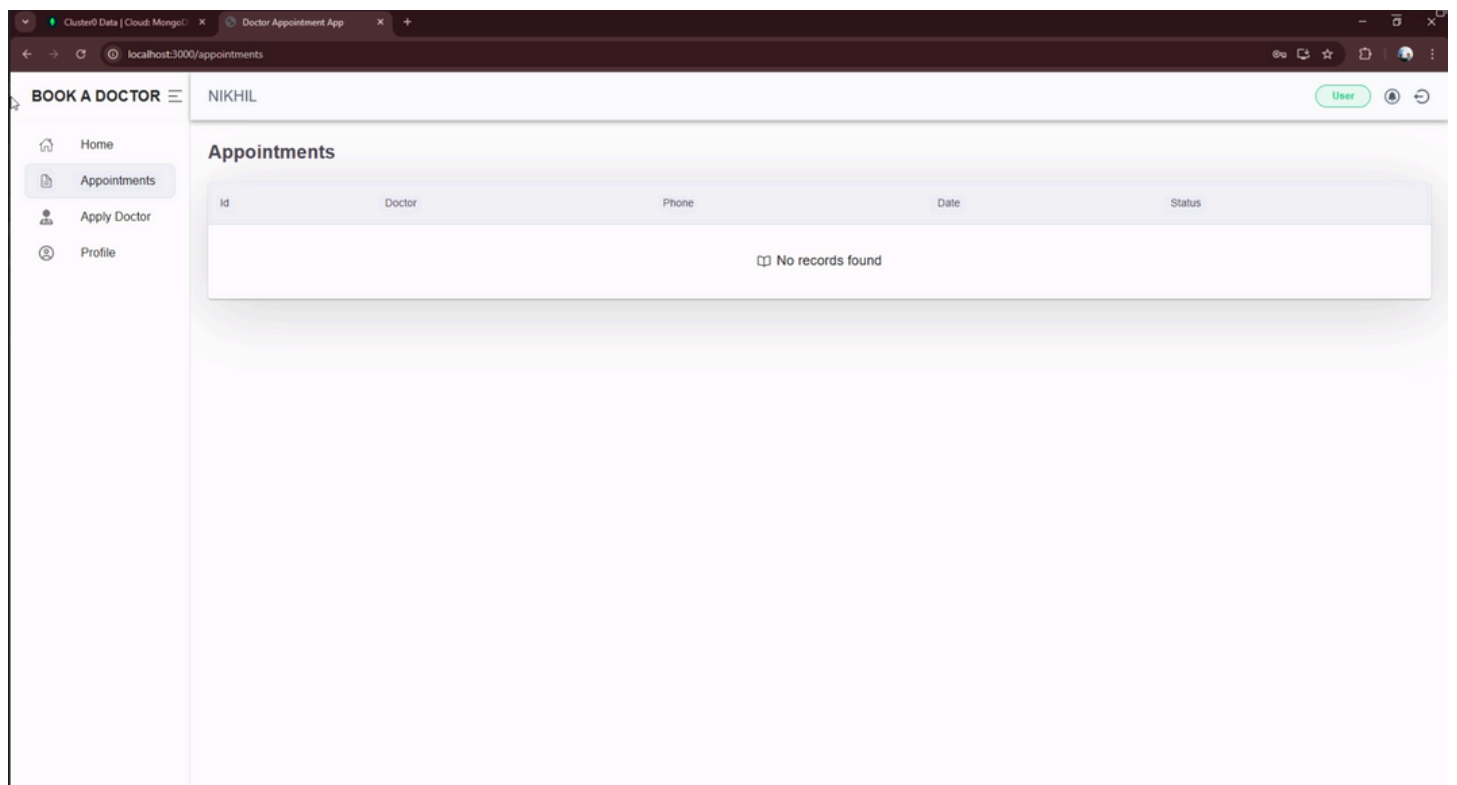
- **POST /api/users/login** – User login



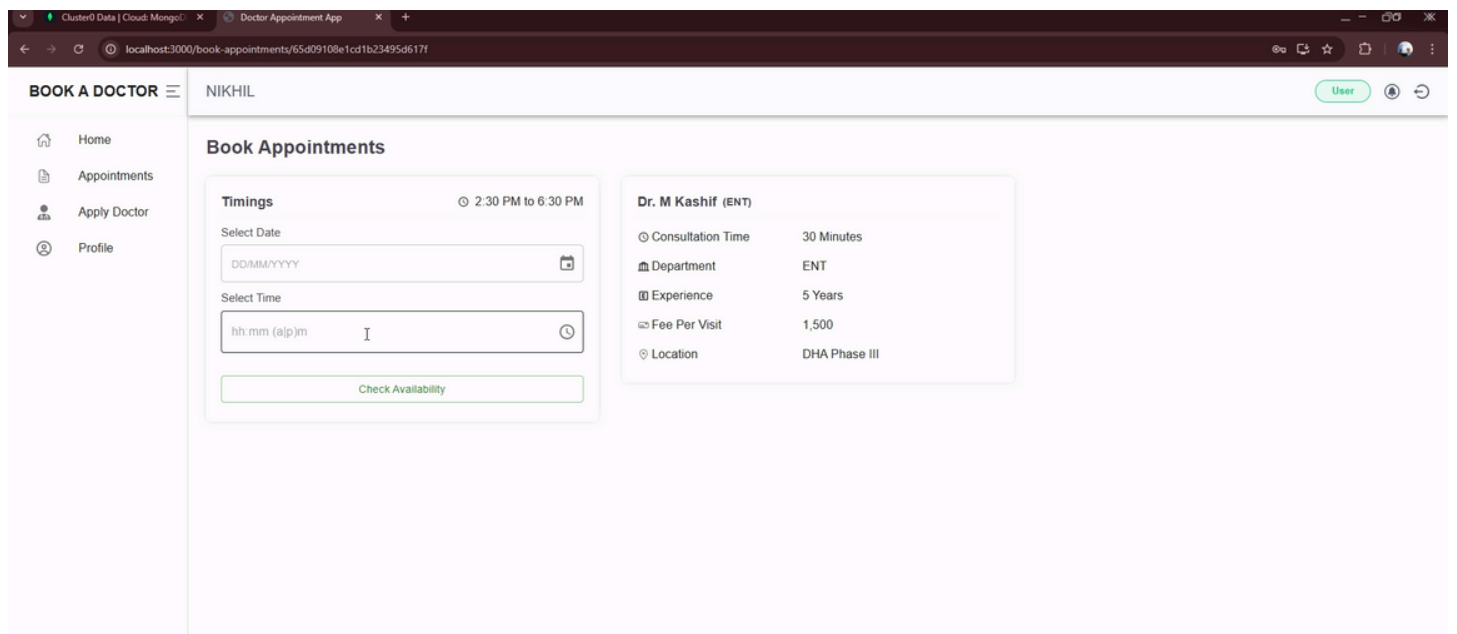
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- **POST /api/doctors/add** – Add new doctor

A screenshot of the 'Apply For Doctor' form in the 'Doctor Appointment App'. The browser's address bar shows 'localhost:3000/apply-doctor'. The page has a light green header with the text 'BOOK A DOCTOR' and a user profile 'NIKHIL' with a 'User' button. A sidebar on the left contains links for 'Home', 'Appointments', 'Apply Doctor' (which is highlighted), and 'Profile'. The main form is titled 'Apply For Doctor' and is divided into two sections: '1 Basic Information' and '2 Professional Information'. The 'Basic Information' section includes fields for 'Prefix' (Dr.), 'Full Name' (NIKHIL), 'Mobile Number' (+91 95151-76193), 'Website' (na), and 'Address' (Srinagar). The 'Professional Information' section includes fields for 'Specialization' (ortho), 'Experience' (1), 'Fee Per Consultation' (500), 'Start Time' (12:30 PM), and 'End Time' (04:30 PM). An 'Apply' button is located at the bottom right of the form.

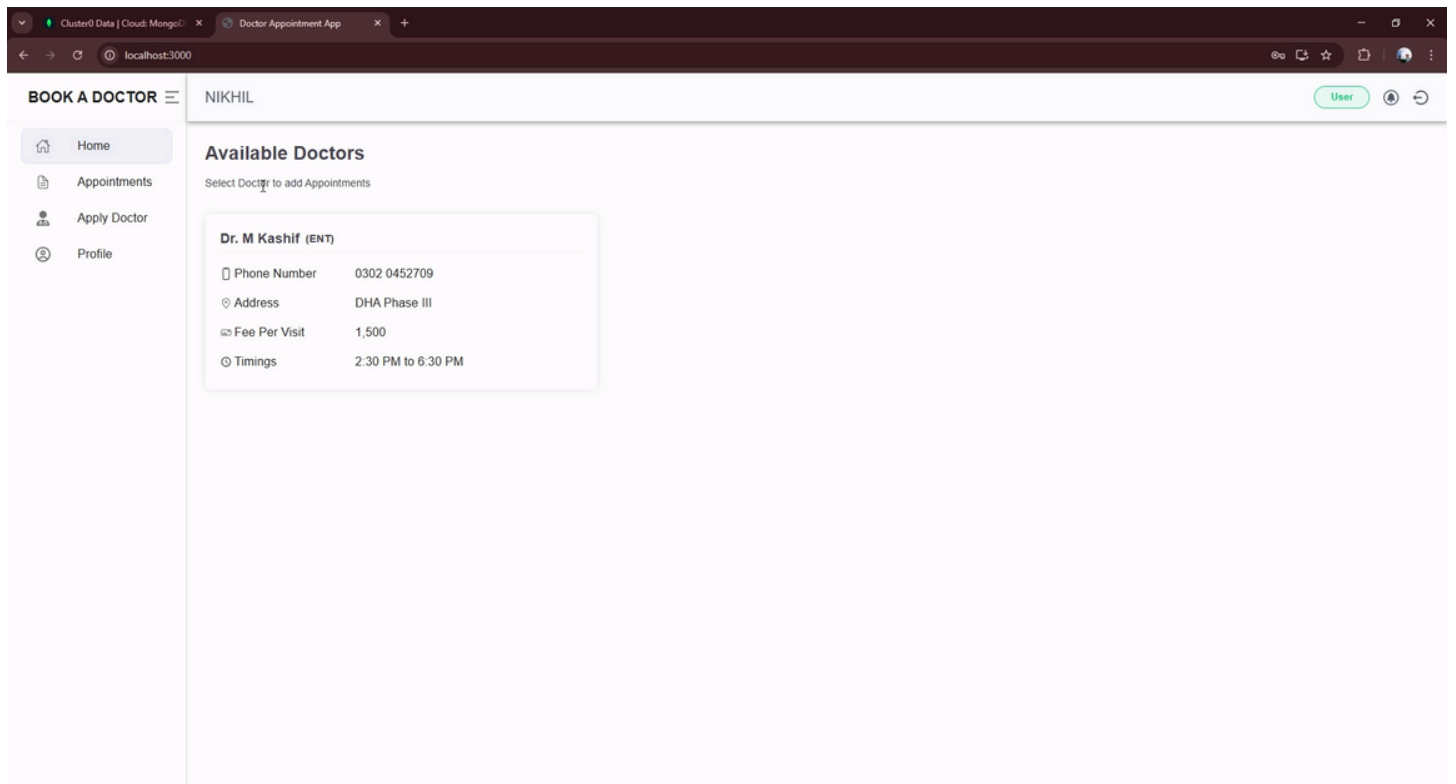
- **GET /api/appointments/:userId** – Fetch user appointments



- **POST /api/appointments/book** – Book an appointment



- **GET /api/doctors/list** – List available doctors

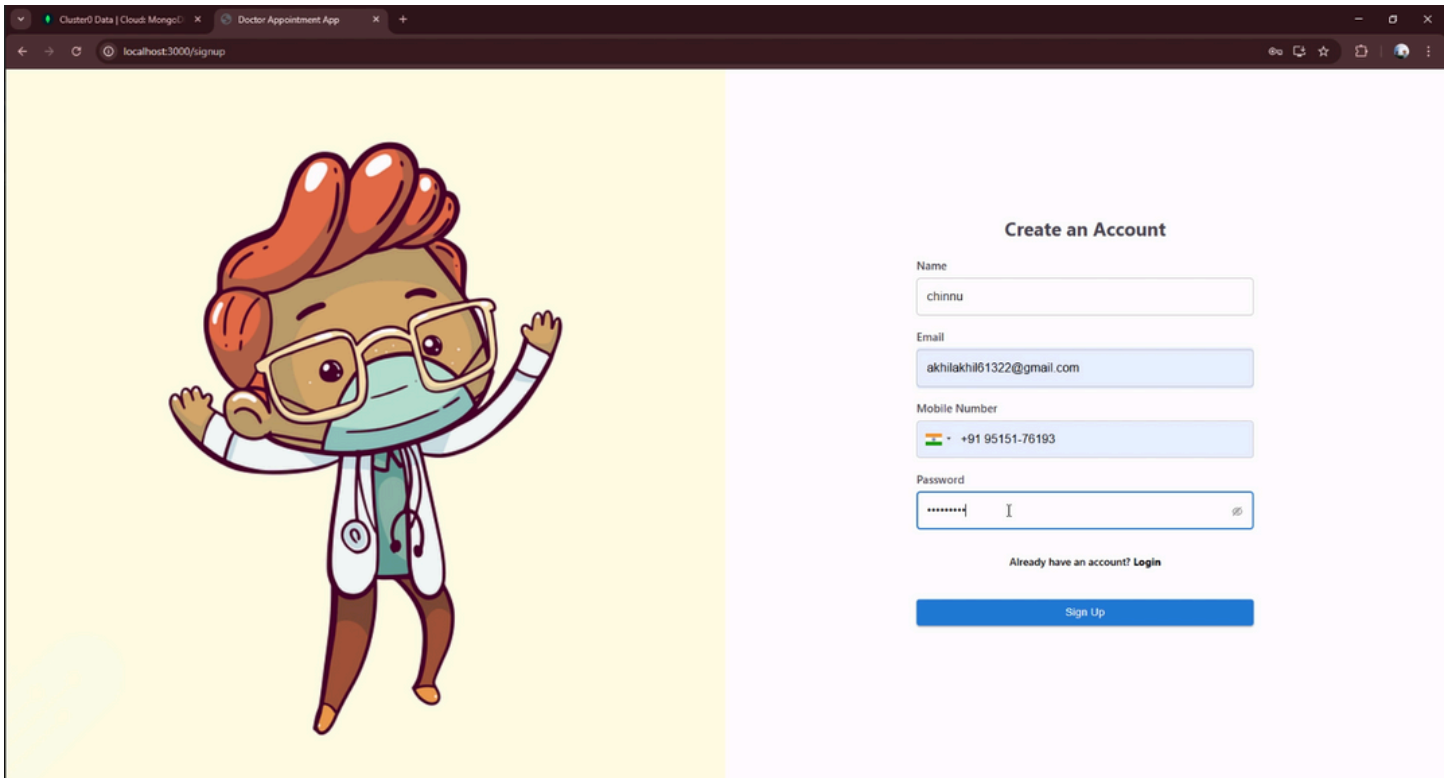


8. Authentication

- Handled using JWT.
- On login, users receive a token stored in localStorage.
- Protected routes validated using middleware on the server.

9. User Interface

- Simple and intuitive interface with:
 - Doctor search page



- Booking calendar
- Dashboard for users and doctors
- Admin panel for managing users/doctors

(Screenshots can be added here or links to demo video.)

10. Testing

- **Tools Used:**
 - Postman (API testing)
 - Manual testing for UI
 - Jest for unit testing (planned)
- **Strategy:**
 - Unit tests for backend
 - End-to-end tests for major flows

11. Screenshots or Demo

- [Live Demo](#) :
Cluster0 Data _ Cloud_ MongoDB Cloud - Google Chrome 2025-06-26 18-57-49.mp4
- Screenshots: UPLOADED IN GIT HUB LINK

12. Known Issues

- Teleconsultation may fail on weak networks.
- Admin panel needs role-based access restrictions.

13. Future Enhancements

- Push Notifications
- SMS/Email Appointment Reminders
- Payment Gateway Integration
- Multi-language Support
- Prescription Uploads