

# Full Stack Development with MERN

## Project Documentation

### 1. Introduction

- Project Title: DocSpot - Seamless Appointment Booking for Health
- Team Members:
  - Sri Geetha Akshaya Gunthapalli(Team leader)
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### 2. Project Overview

- Purpose: To eliminate manual hospital booking by providing a real-time online appointment system.
- Features: Role-based login, doctor management, appointment scheduling, and admin controls.

### 3. Architecture

- Frontend: Developed using React and Material UI.
- Backend: Node.js with Express handles API and server-side logic.
- Database: MongoDB stores all application data securely.

### 4. Setup Instructions

- Prerequisites: Node.js, NPM, and MongoDB installed.
- Installation: Clone the repository and run 'npm install' in both '/client' and '/server' directories.

### 5. Folder Structure

- Client: Contains the complete React frontend source code.
- Server: Contains the backend server implemented with Express.

### 6. Running the Application

To start the application:

- Frontend: Run 'npm start' inside the client directory.
- Backend: Run 'npm start' inside the server directory.

### 7. API Documentation

Backend exposes REST APIs for essential operations:

- POST /api/users/register - User registration
- POST /api/users/login - User login

- GET /api/users/doctors - Retrieve doctor list
- POST /api/appointments - Book an appointment

## **8. Authentication**

- Email and password-based login for Users, Doctors, and Admins.
- Future enhancement may include JWT for enhanced security.

## **9. User Interface**

Screens provided in the system include:

- Login Page
- Doctor Listing Page
- Appointment Booking Page
- User Dashboard
- Doctor Dashboard
- Admin Approval Page

## **10. Testing**

- Backend tested using Postman for API validation.
- Frontend tested using Chrome DevTools.

## **11. Screenshots or Demo**

Screenshots and demo videos are provided separately in the project folder.