**Full Stack Development with MERN**

**Project Documentation**

# Introduction

* Project Title: DocSpot - Seamless Appointment Booking for Health
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# 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.

# 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.

# Setup Instructions

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

# Folder Structure

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

# Running the Application

To start the application:

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

# 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

# Authentication

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

# User Interface

Screens provided in the system include:

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

# Testing

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

# Screenshots or Demo

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