

Project Documentation: Book A Doctor (MERN Stack)

Project Title:

Book A Doctor

Technology Stack:

- Frontend: React.js
- Backend: Node.js, Express.js
- Database: MongoDB
- Package Manager: npm
- Version Control: Git & GitHub

1. Objective

- Build an online platform for booking doctor appointments.
- Streamline patient-doctor interactions.
- Dashboard for doctors to manage appointments.

2. Key Features

For Patients:

- User Registration & Login
- Browse Available Doctors
- Book Appointments with date & time
- View My Appointments
- Cancel Bookings
- Notifications on booking updates

For Doctors:

- Doctor Registration & Login
- View Appointments
- Approve/Reject Appointments
- Set Availability

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Admin Panel (Optional):

- Manage Users & Doctors
- View Analytics
- Handle Reports

3. System Architecture

- Frontend (React.js):
 - UI components & API communication
 - Protected routes
- Backend (Node.js + Express.js):
 - REST APIs
 - JWT-based Authentication
 - Role-based access
- Database (MongoDB):
 - Collections: Users, Doctors, Appointments, Notifications

4. Modules

- Auth Module: Signup/Login, JWT, bcrypt
- Doctor Module: Profile, Schedule mgmt
- Appointment Module: Book/manage appointments
- Notification Module: In-app/email alerts

5. Tools & Libraries Used

- React Bootstrap / Ant Design
- Axios
- Mongoose
- dotenv
- bcrypt.js

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- jsonwebtoken

6. Future Enhancements

- Video consultations
- Payment gateway
- Ratings & Reviews
- Calendar sync
- Admin dashboard

7. Conclusion

This MERN stack project offers a scalable solution for managing doctor bookings online. It supports patients and doctors with key features and has room for many digital health integrations.