



PROJECT DESIGN PHASE – DocSpot

Team Details

Field	Details
Team ID	LTVIP2025TMID30950
Team Size	2
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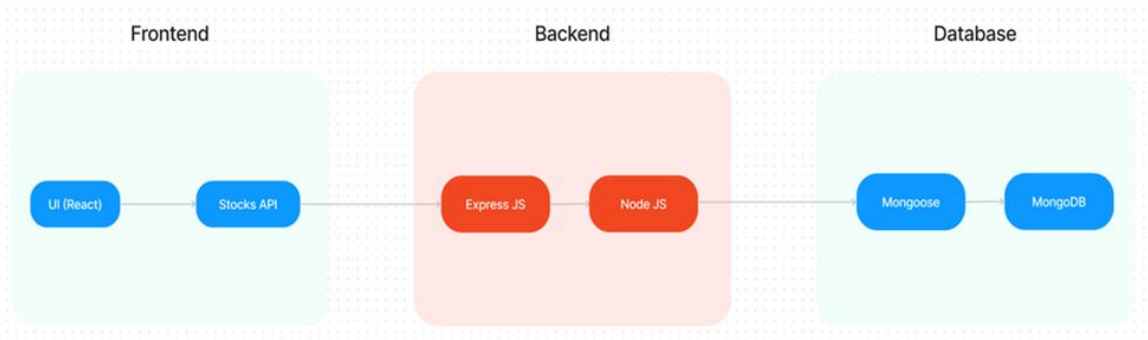
1 System Architecture Design

The architecture follows a **Modular Client-Server Model** for scalability and security.

Components:

- Frontend:** ReactJS (Single Page Application)
- Backend:** Node.js + Express.js
- Database:** MongoDB Atlas (NoSQL)
- Auth Layer:** JSON Web Token (JWT)
- Hosting:** Render / AWS EC2

TECHNICAL ARCHITECTURE



2 Database Design (MongoDB Collections)

1. Users

Field	Type
_id	ObjectId
name	String
email	String
passwordHash	String
role	String ("patient"/"doctor"/"admin")
isApproved	Boolean

2. Appointments

Field	Type
_id	ObjectId
patientId	ObjectId
doctorId	ObjectId
date	Date
timeSlot	String
status	String ("pending", "confirmed", "cancelled")

3. Doctors

Field	Type
_id	ObjectId
name	String
specialization	String
experience	Number
availableSlots	Array

3 User Interface Design (Wireframe Overview)

- Login/Register Page

- **Doctor Dashboard** (Availability + Bookings)
 - **Patient Dashboard** (History + Upcoming Appointments)
 - **Admin Panel** (Doctor Approvals)
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Module Design

✓ Authentication Module

Handles JWT-based login and session management.

✓ Appointment Module

Supports booking, cancellation, and status updates.

✓ Admin Module

Approves new doctor registrations.

✓ Notification Module

Sends email confirmations (future enhancement).

Technology Stack Summary

Layer	Tech Used
Frontend	React.js
Backend	Node.js + Express
Database	MongoDB (Atlas)
Authentication JWT	
Hosting	Render / AWS EC2
Tools	GitHub, Figma, Postman