

**Project Design Phase-II**  
**Technology Stack (Architecture & Stack)**

Date	27-06-2025
Team ID	LTVIP2025TMID58589
Project Name	Docspot: Seamless Appointment Booking For Health
Maximum Marks	4 Marks

**Technical Architecture:**

Docspot: Seamless Appointment Booking For Health is designed with a scalable 3-tier architecture consisting of:

- **Presentation Layer (Frontend):**

Provides an intuitive and responsive interface for patients, doctors, and administrators to schedule appointments, view availability, and manage profiles. The web UI adapts across devices for ease of use.

- **Business Logic Layer (Backend):**

Manages appointment booking, doctor-patient communication, user registration, medical specialization filters, and admin actions. RESTful APIs handle data exchanges between frontend and backend services.

- **Data Storage Layer:**

Securely stores user profiles, appointment schedules, health inquiries, medical specialization data, and communication logs using a NoSQL database.

The system supports real-time interactions and implements secure access control using token-based authentication (JWT).

**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	Responsive UI for patients, doctors, and admin	React.js, HTML, CSS, Bootstrap, MUI
2.	Application Logic-1	Appointment booking, health inquiry submission, doctor search & filters	Node.js, Express.js
3.	Application Logic-2	Admin dashboard, doctor verification, schedule and profile management	React.js, Node.js
4.	Database	Stores appointment data, user info, messages, doctor specializations	MongoDB

**Table-2: Application Characteristics:**

S.No	Characteristics	Description	Technology
5.	Open-Source Frameworks	Modular frontend/backend development using popular frameworks	React.js, Node.js, Bootstrap, Tailwind
6.	Scalable Architecture	REST API integration with dynamic component handling	MERN Stack with JWT

## References:

- [React.js Official Documentation](#)
- [Node.js Best Practices](#)
- [MongoDB Data Modeling](#)
- [JWT Authentication](#)