

Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	15 JUNE 2025
Team ID	LTVIP2025TMID46139
Project Name	DOC SPOT
Maximum Marks	4 Marks

Technical Architecture:

The DocSpot project follows a MERN Stack (MongoDB, Express.js, React.js, Node.js) architecture that enables a full-stack, scalable, and efficient web application for healthcare appointment booking. Example: Order processing during pandemics for offline mode.

Frontend (Client-Side):

React.js is used to build a dynamic, single-page application (SPA) for a smooth user experience.

Axios handles HTTP requests to communicate with the backend.

Material UI / Bootstrap provides responsive and modern UI components.

Backend (Server-Side):

Node.js with Express.js manages API routing, user authentication, appointment scheduling, and data validation.

Role-based access control is implemented for patients, doctors, and admins.

Table-1 : Components & Technologies:

S.No	Component	Description
1.	User Interface	Web and mobile-friendly interface for patients and providers
2.	Application Logic-1	Appointment booking, calendar management, reminders
3.	Application Logic-2	Admin panel, provider management, reporting
5.	Database	Stores user profiles, appointments, provider data

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Frontend frameworks	React.js, Node.js, Bootstrap, Tailwind CSS
3.	Scalable Architecture	3-tier architecture with RESTful APIs	Microservices