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

| Date | 26-05-2025 |
|---------------|--------------------|
| Team ID | LTVIP2025TMID58558 |
| Project Name | DocSpot |
| Maximum Marks | 4 Marks |

Technical Architecture:

DocSpot is designed with a scalable 3-tier architecture consisting of:

- **Presentation Layer (Frontend):** User-friendly interface for patients and healthcare providers to book and manage appointments.
- **Business Logic Layer (Backend):** Handles appointment scheduling, notifications, user management, and telehealth integration.
- **Data Storage Layer:** Secure storage of user profiles, appointment records, and healthcare provider details.

The platform integrates with third-party APIs for notifications (SMS/email) and telehealth services to enhance usability.

Table-1: Components & Technologies:

| S.N o | Component | Description | Technology |
|----------|---------------------|--------------------------------------------------------------|---------------------------------------|
| 1. | User Interface | Web and mobile-friendly interface for patients and providers | HTML, CSS, JavaScript / React Js etc. |
| 2. | Application Logic-1 | Appointment booking, calendar management, reminders | Node.js, Express.js |
| 3. | Application Logic-2 | Admin panel, provider management, reporting | React js, Node js |
| 4. | Database | Stores user profiles, appointments, provider datas | MongoDB |

Table-2: Application Characteristics:

| S.N | Characteristics | Description | Technology |
|-----|------------------------|---------------------------------------|-----------------------------------------------|
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| 5. | Open-Source Frameworks | Frontend frameworks | React.js, Node.js, BootStrap, Tailwind CSS |
| 6. | Scalable Architecture | 3-tier architecture with RESTful APIs | Microservices |

References:

React.js Documentation

Node js Best Practice

JSON Web Server Referance

 $\frac{https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d}{}$