**Project Design Phase-II**

**Technology Stack (Architecture & Stack)**

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| **Date** | 30-06-2025 |
| **Team ID** | LTVIP2025TMID53914 |
| **Project Name** | **DocSpot:** Seamless Appointment Booking for Health |

**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.

**Table 1: Components & Technologies**

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| **S. No** | **Component** | **Description** | **Technology** |
| 1 | User Interface | Web and mobile-  friendly interface for patients and providers | HTML, CSS,  JavaScript / React.js |
| 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 data | MongoDB |

**Table 2: Application Characteristics**

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| --- | --- | --- | --- |
| **S. No** | **Characteristics** | **Description** | **Technology** |
| 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**](https://react.dev/)

[**Node js Best Practice**](https://nodejs.org/en/learn/getting-started/introduction-to-nodejs) [**JSON Web Server Referance**](https://www.npmjs.com/package/json-server)

[**https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecturediagrams-2d20c9fda90d**](https://medium.com/the-internal-startup/how-to-draw-useful-technical-architecture-diagrams-2d20c9fda90d)