Project Design Phase
Solution Architecture

Date	26-06-2025
Team ID	LTVIP2025TMID52550
Project Name	**DocSpot:** Seamless Appointment Booking for Health
Maximum Marks	4 Marks

Solution Architecture

DocSpot – Solution Architecture Overview

DocSpot provides a seamless system for booking healthcare appointments, connecting patients and healthcare providers through a structured, scalable platform.

Architecture Components:

1. **Users**

   o Patient: Books and manages appointments.

   o Healthcare Provider: Views schedules, manages availability, and communicates with patients.

---

2. **Presentation Layer**

   o Frontend: The user interface for patients and doctors to interact with the system.

   o Backend API: Connects the frontend to the backend services and handles data processing.

---

3. **Authentication & Communication**

   o Handles user authentication, authorization, and real-time messaging (e.g., chat or notifications).

---

4. **Internal Database**

   o Stores initial user session data, login info, and temporary booking states.

---

5. **Automation Module**

- Processes appointment logic, scheduling rules, reminders, and background tasks.

- Connects the presentation layer to the main data storage.

---

6. **Data Storage**

- Central database where all appointment records, patient info, provider details, and transaction logs are stored securely.

---

7. **DevOps Integration**

- CI/CD (Continuous Integration / Continuous Deployment): Ensures faster and safer updates to the system.

- Cloud Deployment: Enables scalable, online access to the platform.

 Benefits

- Quick and easy appointment scheduling.

- Real-time updates and communication.

- Secure data handling and user authentication.

- Scalable for growing users and providers.

Example - Solution Architecture Diagram: