

Project Design Phase

Solution Architecture

Date	26-06-2025
Team ID	LTVIP2025TMID58986
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**
 - Patient: Books and manages appointments.
 - Healthcare Provider: Views schedules, manages availability, and communicates with patients.

- 2. Presentation Layer**
 - Frontend: The user interface for patients and doctors to interact with the system.
 - Backend API: Connects the frontend to the backend services and handles data processing.

- 3. Authentication & Communication**
 - Handles user authentication, authorization, and real-time messaging (e.g., chat or notifications).

- 4. Internal Database**
 - 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:



