**Project Design Phase**

**Solution Architecture**

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| **Date** | 26-06-2025 |
| **Team ID** | LTVIP2025TMID58987 |
| **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.

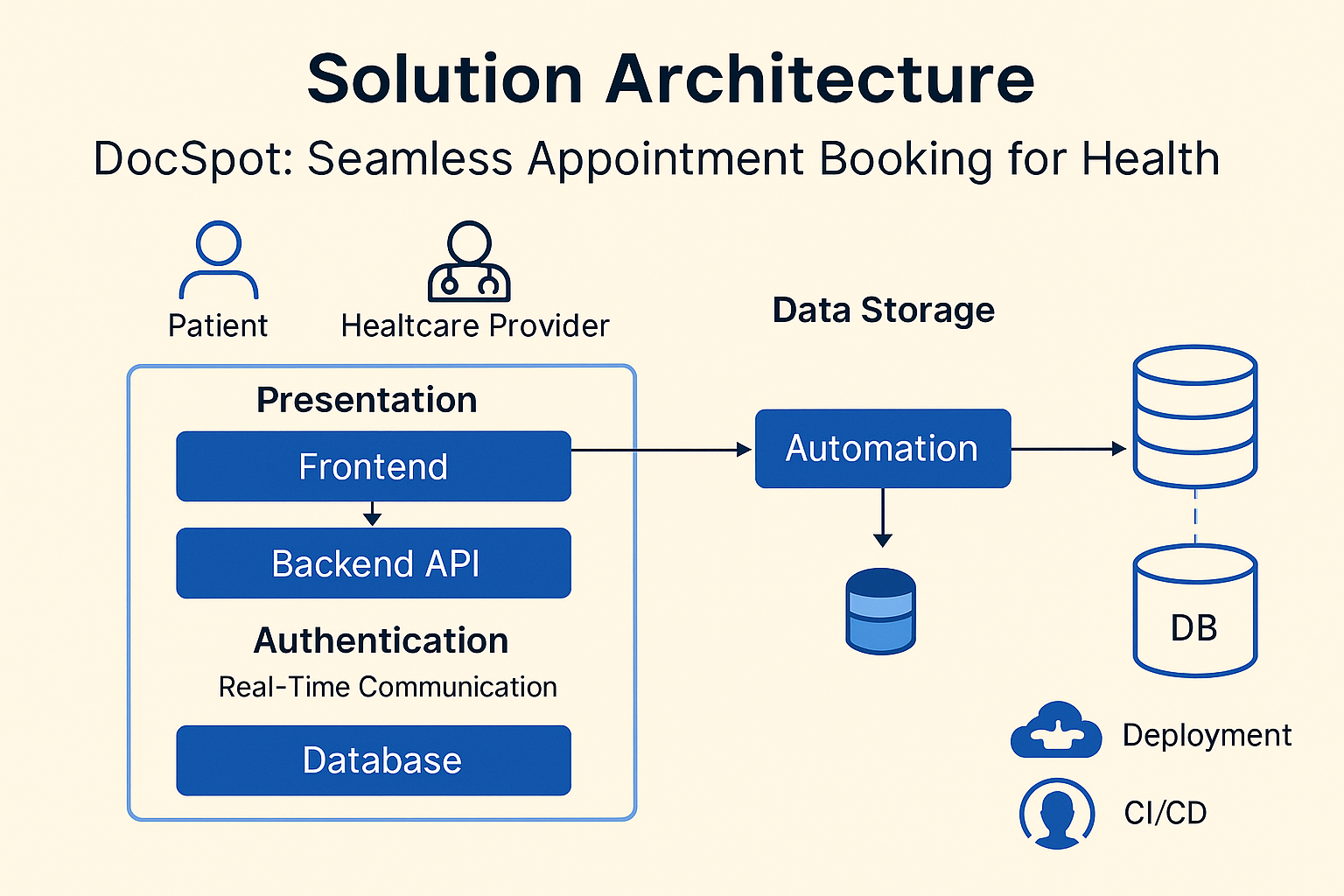
**Architecture Components:**

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:**

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