**Project Design Phase**

**Solution Architecture**

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| Date | 6 March 2025 |
| Team ID | SWTID1741257108149874 |
| Project Name | FitFlex |
| Maximum Marks | 4 Marks |

### **Solution Architecture for FitFlex**

The **solution architecture** for **FitFlex** ensures a **scalable, efficient, and real-time** chat platform for seamless user communication.

#### **Goals of the Solution Architecture:**

* **Identify the Best Tech Solution:** Utilize modern front-end frameworks (**React.js**) and real-time database solutions (**Convex**) to enable instant messaging and smooth data synchronization.
* **Define Structure & Characteristics:** Ensure a **modular, scalable, and maintainable** chat system that can handle real-time communication efficiently.
* **Outline Features & Development Phases:** Clearly structure **project milestones**, covering **real-time messaging, chat history retrieval, user status indicators, and search functionalities**.
* **Establish Specifications for Development & Delivery:** Provide **well-defined architecture, API integration, and data flow** guidelines to ensure **efficient message handling, seamless UI updates, and optimized performance**.

