Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	01 NOVEMBER 2025
Team ID	NM2025TMID07834
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

The system is designed to maintain supplier details, manage product inventory, process purchase orders, track expiry, and provide reporting dashboards. The architecture follows a cloud-based Salesforce solution with Apex logic, Flows, and Lightning UI components integrated with relational data stored in Salesforce objects
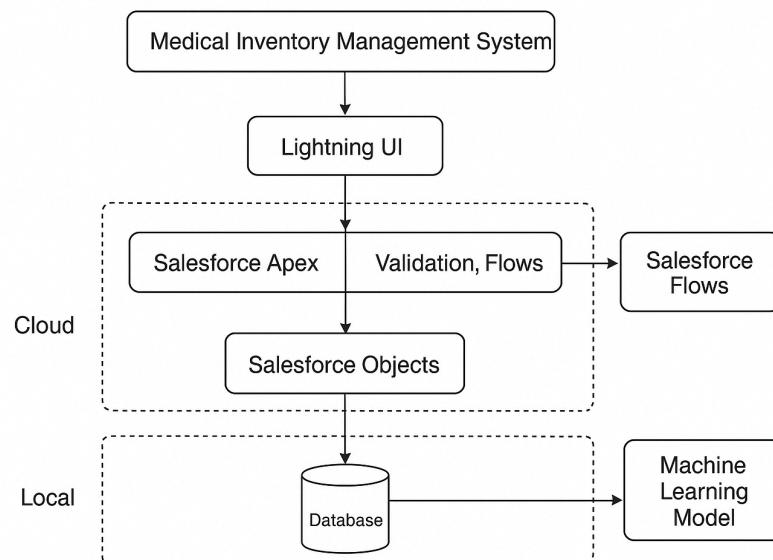
Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Admin & Inventory Manager interact via Salesforce Lightning App Dashboard	Salesforce Lightning UI
2.	Application Logic-1	Handles supplier & product management	Apex, Flows
3.	Application Logic-2	Validates stock and expiry before consumption/purchase	Validation Rules, Apex
4.	Application Logic-3	Sends alerts when expiry threshold reached	Flows, Email Alerts
5.	Database	Stores supplier, product, inventory, purchase order & expiry data	Salesforce Custom Objects
6.	Cloud Database	Managed by Salesforce cloud backend	Salesforce Data Cloud
7.	File Storage	Used for product documents if required	Salesforce Files
8.	External API-1	Integration with supplier catalog	REST API
9.	External API-2	Not applicable	-
10.	Machine Learning Model	Not applicable for current scope	-
11.	Infrastructure (Server / Cloud)	Hosted and managed on Salesforce Cloud	Salesforce SaaS

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable (ServiceNow is proprietary)	-
2.	Security Implementations	Role-based access, Permission sets, Profiles	Profiles, Roles, ACL
3.	Scalable Architecture	SaaS-based, scalable based on usage	Salesforce Cloud
4.	Availability	Highly available via Salesforce Cloud	Multi-zone cloud infrastructure
5.	Performance	Optimized via caching and indexed DB; Lightning UI components	Apex, Flows, SOQL, Indexed Objects