

Project Design Phase-5

Technology Stack (Architecture & Stack)

Date: 2nd November 2025

Project Name: Medical Inventory Management

Platform: Salesforce

Technical Architecture:

This deliverable includes the architectural diagram and the details listed in Table 1 & Table 2 below.

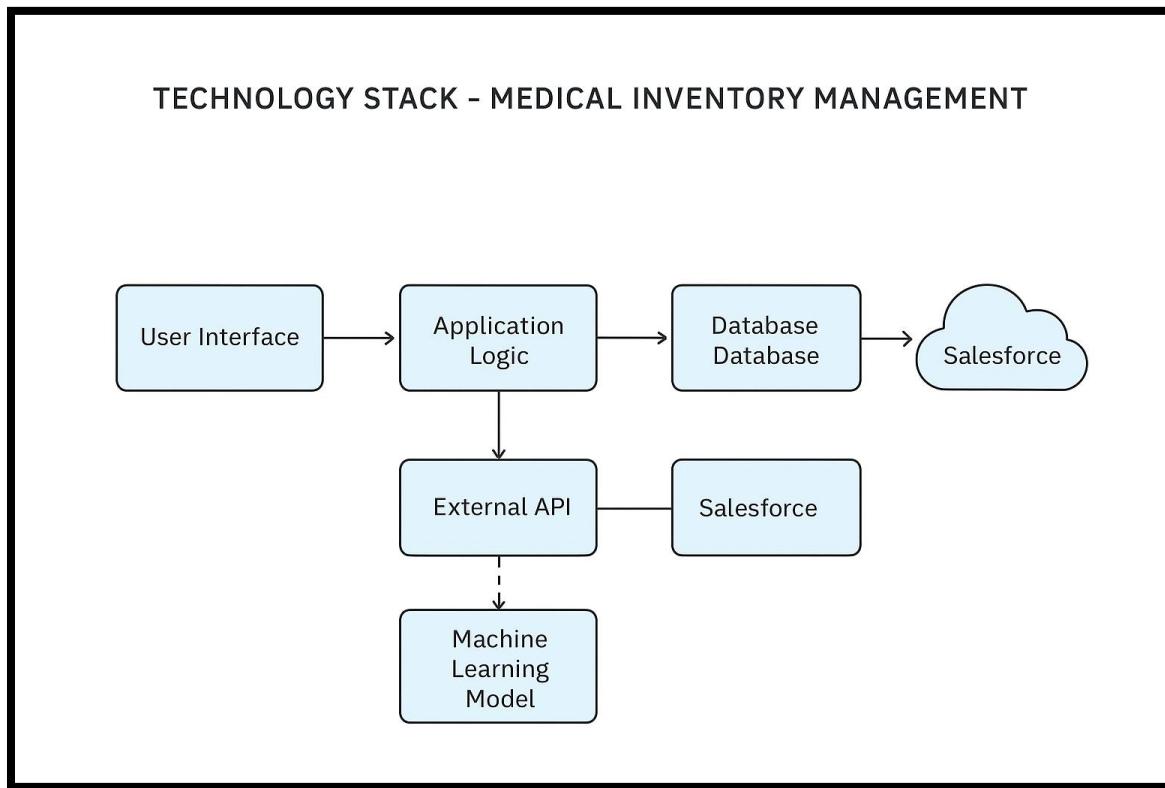


Table-1: Components & Technologies

S.No	Component Description	Technology
1	User Interface	Salesforce Lightning Web Components (LWC)
2	Application Logic-1	Inventory management logic using Apex Controllers
3	Application Logic-2	Validation and automation of stock levels using Process Builder & Flows
4	Application Logic-3	Notification and alert system for low stock levels using Email Alerts / Salesforce Notifications
5	Database	Stores data for medicines, suppliers, and transactions in Salesforce Objects (Custom & Standard)
6	Cloud Database	Managed via Salesforce Cloud Data Storage
7	File Storage	Files and reports stored in Salesforce Files / Attachments
8	External API-1 (Optional)	Integration with Hospital ERP or Supplier systems using REST API
9	External API-2	Integration with payment gateway (if applicable)
10	Automation / AI (Optional)	Einstein AI for predicting inventory restock needs
11	Infrastructure (Server / Cloud)	Hosted on Salesforce Cloud Platform (SaaS)

Table-2: Application Characteristics

S.No	Characteristics Description	Technology
1	Open-Source Frameworks	Not applicable (Salesforce is proprietary)
2	Security Implementations	Role-based access, Field-level security, Object Permissions, and Authentication
3	Scalable Architecture	Cloud-based architecture supporting multi-tenancy and auto-scaling
4	Availability	High availability ensured via Salesforce Cloud infrastructure
5	Performance	Optimized using asynchronous Apex, SOQL indexing, and caching mechanisms