

**Project Design Phase-II
Technology Stack Template**

Team ID	NM2025TMID04457
Project Name	Medical Inventory Management
Date	1 NOV 2025

Technical Architecture:

The architecture of the **Medical Inventory Management System** is designed using the Salesforce platform to automate inventory operations, monitor stock levels, and manage supplier relationships in real time.

It includes web-based dashboards, automated workflows, cloud storage, and analytics modules. The solution ensures data consistency, scalability, and high performance while providing expiry alerts and supplier integration for restocking.

**Medical Inventory Management System –
Technology Stack Architecture**

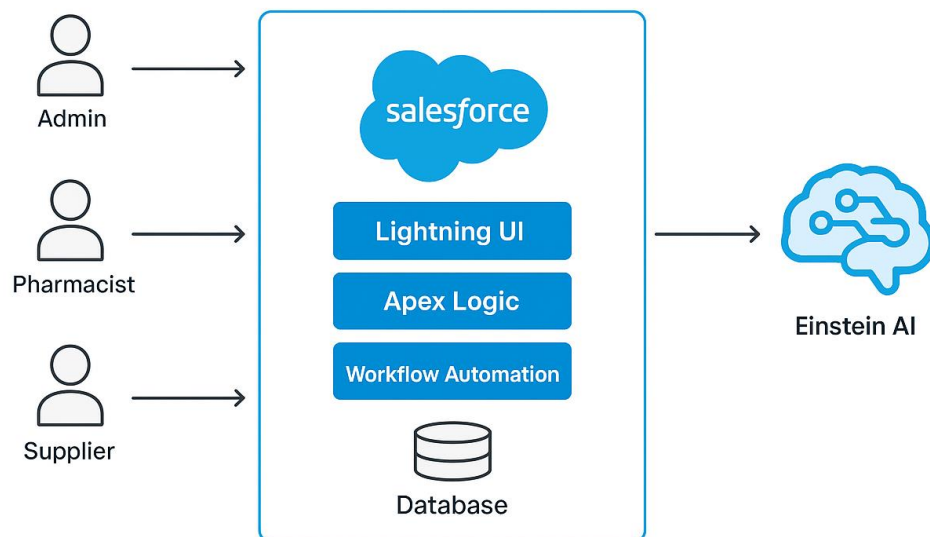


Table-1: Components & Technologies

S.NO	Component Description	Technology
1.	User Interface - Admin and staff interact with the system through a Salesforce Lightning Dashboard	Salesforce Lightning UI
2.	Application Logic-1 – Tracks stock availability and updates quantities during transactions.	Apex Classes, Flows
3.	Application Logic-2 – Checks expiry dates and triggers automatic alerts.	Apex Triggers, Workflow Rules
4.	Application Logic-3 – Generates reorder requests and sends notifications to suppliers.	Salesforce Flow Automation
5.	Database – Stores medicine, supplier, and order details.	Salesforce Object Database
6.	Cloud Database – Managed within Salesforce Cloud infrastructure.	Salesforce Cloud Data Storage
7.	File Storage – Stores purchase invoices and generated reports.	Salesforce Files / Attachments
8.	External API-1 (Optional) – Integration with supplier systems for real-time order tracking.	REST API (Salesforce Integration)
9.	External API-2 – Integration with hospital management systems (if required).	RESTful Web Services
10.	Machine Learning Model – Predicts future demand or expiry trends (future scope).	Salesforce Einstein AI
11.	Infrastructure (Server/Cloud) – Hosted on Salesforce SaaS Cloud for high availability.	Salesforce Cloud (SaaS)

Table-2: Application Characteristics

S.NO	Characteristics	Description	Technology
1.	Open-Source Frameworks	Not applicable; Salesforce is a proprietary platform.	-
2.	Security Implementations	Role-based access, authentication, and data encryption	Salesforce Role Hierarchy, Shield Encryption
3.	Scalable Architecture	Supports multiple pharmacies or branches through cloud scalability	Salesforce Cloud Architecture
4.	Availability	Highly available, with Salesforce's 99.9% uptime.	Salesforce Multi-tenant Infrastructure
5.	Performance	Optimized via indexed queries and background automation flows.	Apex Scheduler, Asynchronous Processing