

Project Design Phase
Solution Architecture

Date	1 NOVEMBER 2025
Team ID	NM2025TMID07834
Project Name	Medical Inventory Management System
Maximum Marks	4 Marks

Solution Architecture:

Goals of the Architecture:

- Automate medical stock management using Salesforce.
- Maintain data accuracy and integrity across medicine and supplier records.
- Reduce manual tracking of expiry dates and stock levels.
- Provide real-time visibility through reports and dashboards.

Key Components:

- **Medicine__c Object** – Stores medicine details such as name, quantity, and expiry date.
- **Supplier__c Object** – Maintains supplier contact and supply information.
- **PurchaseOrder__c Object** – Tracks purchase transactions and stock entries.
- **Flows and Triggers** – Automate low-stock and expiry alerts.
- **Reports and Dashboards** – Provide insights into stock status and supplier performance.

Development Phases:

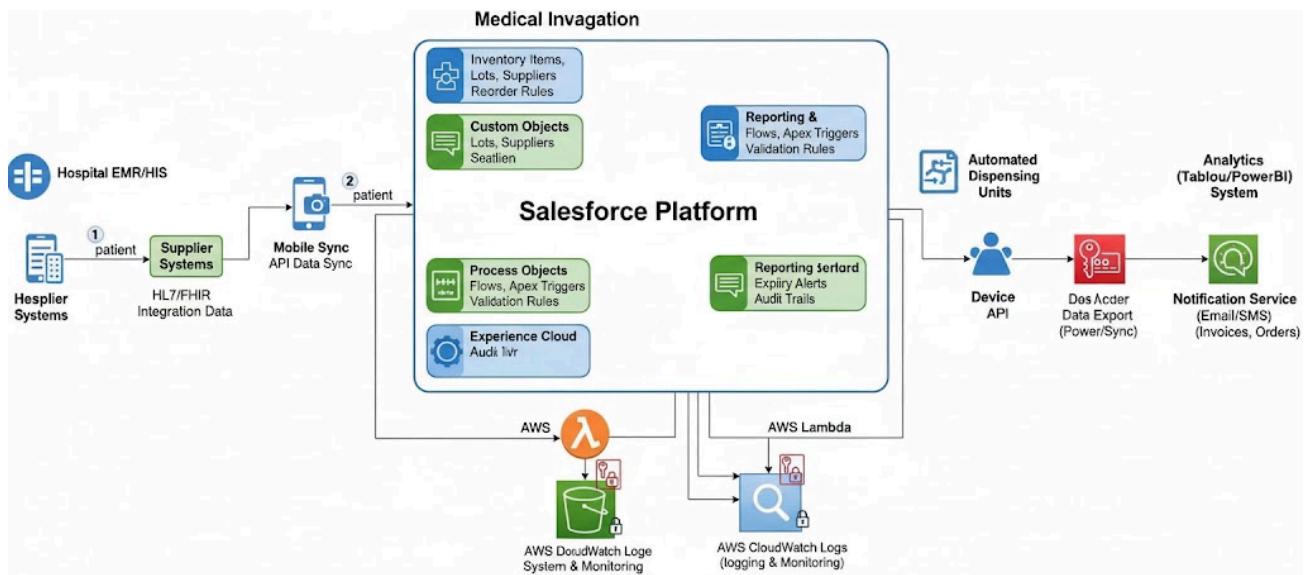
1. Create custom objects (Medicine, Supplier, Purchase Order).
2. Establish relationships between Medicine and Supplier objects.
3. Configure Flows or Triggers to send expiry and low-stock alerts.

4. Build Validation Rules for accurate data entry.
5. Design Reports and Dashboards for admin monitoring.
6. Test alerts and verify automated updates for various scenarios.

Solution Architecture Description:

The **solution architecture** for the *Medical Inventory Management System* is designed to ensure efficient and error-free handling of hospital inventory. It uses Salesforce custom objects to manage medicines, suppliers, and purchase orders. The system employs automation through **Flows and Triggers** to generate alerts for low stock and expiring medicines. Validation Rules maintain data integrity, while Reports and Dashboards offer real-time visibility to administrators. This architecture minimizes manual tracking, improves operational accuracy, and ensures the timely availability of medical supplies, creating a reliable and scalable solution for healthcare management.

Example - Solution Architecture Diagram:



Architecture and Data Flow of the Medical Inventory Management System

Reference: <https://aws.amazon.com/architecture/>