DATE	01/11/2025
NM ID	NM2025TMID08826
PROJECT NAME	MEDICAL INVENTORY MANAGEMENT
MAXIMUM MARKS	4MARKS

Goals of the Architecture

- Ensure accurate tracking of medical inventory across departments

- Prevent usage of expired items through automated alerts

- Maintain data integrity across supplier-product-transaction relationships

- Reduce manual errors and improve compliance visibility

Key Components

- **Supplier__c** object (stores vendor details)

- **Product__c** object (tracks item name, batch, expiry, quantity)

- **Purchase_Order__c** object (links supplier and product)

- **Inventory_Transaction__c** object (logs item movement and usage)

- **Validation Rules** (e.g., expiry date checks, quantity limits)

- **Flows** (automated alerts for low stock or near-expiry items)

- **Reports & Dashboards** (visualize stock levels, expiry status, supplier performance)

Development Phases

1. **Create test suppliers and products** (e.g., MedLife, Apollo)

2. **Log purchase orders and transactions**

3. **Implement validation rules for expiry and quantity**

4. **Configure flows for alerts and automation**

5. **Test deletion of expired and active inventory items**

6. **Generate reports and dashboards for monitoring**

Solution Architecture Description

The solution architecture is designed to safeguard inventory integrity within the Salesforce platform by implementing **custom objects**, **validation rules**, and **flows** that automate tracking and alerting. The system ensures consistency across supplier, product, and transaction records. Validation rules prevent entry of expired items or incorrect quantities, while flows trigger alerts for low stock or upcoming expiries. The development process includes creating test data, configuring rules, and verifying behavior through manual and automated testing. This architecture reduces manual monitoring, enhances operational reliability, and supports scalable healthcare inventory workflows.