

# Project Design Phase

**Project Title:** Medical Inventory Management System

**Team ID:** NM2025TMID0325

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## 3.1 Objective

The design phase focuses on translating the project requirements into a structured system model that defines the logical and user interface architecture.

## 3.2 System Architecture

The system architecture follows a layered design:

- **Presentation Layer:** Salesforce Lightning UI for users.
- **Logic Layer:** Apex Triggers, Validation Rules, and Flows.
- **Data Layer:** Custom Objects for Supplier, Product, and Orders.
- **Analytics Layer:** Reports and Dashboards.

## 3.3 Data Model

Key objects include:

- **Supplier:** Stores supplier details and contact information.
- **Product:** Includes product name, expiry date, and stock count.
- **Purchase Order:** Tracks supplier-related orders and total cost.
- **Transaction:** Manages inflow and outflow of items.

## 3.4 Validation Rules

Ensures reliable data input:

- Expiry date > Current date.
- Quantity  $\geq 0$ .
- Cost field must be filled.

## 3.5 Interface Design

Tabs and page layouts are designed for ease of use. Compact layouts highlight key information such as product name, expiry date, and supplier.

### **3.6 Automation Design**

Automation via **Flows** and **Apex Triggers** ensures instant updates on order and stock status.

### **3.7 Expected Outcome**

A scalable and user-friendly system design ready for development implementation.

### **3.8 Conclusion**

The design phase successfully transformed abstract requirements into a tangible system structure. The object model, interface layout, and automation logic were clearly established, paving the way for efficient implementation during the development phase.