Final Project Report

Project Title : Medical Inventory Management College Name: Swarnandhra College of Engineering and Technology, Narasapur

Academic Year: 2022–2026 Team ID: LTVIP2025TMID30537

Team Members:

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**1. Technology Stack Used**

* **Salesforce CRM**
* **Apex (Triggers)**
* **Lightning App Builder**
* **Validation Rules**
* **Reports & Dashboards**
* **Flows & Permission Sets**

**2. Project Modules**

* **Developer Account Creation & Activation**
* **Object Creation: Medical Product & Supplier**
* **Tabs & Lightning App Setup**
* **Fields: Text, Phone, Email, Number, Currency, Picklist, Formula Fields**
* **Lookup & Master-Detail Relationships**
* **Schema Builder Configuration**
* **Field Dependencies**
* **Validation Rules Implementation**
* **Profiles: Pharmacist & Inventory Manager**
* **Roles & Permission Sets**
* **Apex Triggers & Handler Class**
* **Report Creation & Dashboard Setup**
* **Flow Creation (Automation)**

**3. Project Phases**

**3.1 Ideation Phase**

* Brainstorming session on healthcare inventory problems
* Empathy Map for hospital staff and pharmacists
* Problem Statement: "Lack of digital tracking for medicine stock, expiry, and supplier communication leads to overstocking or shortages."

**3.2 Requirement Analysis**

* Customer Journey Map: From product request to delivery
* Data Flow Diagram: Supplier → Inventory → Product Request → Stock Update
* Selected Technology Stack: Salesforce CRM + Apex + Flows

**3.3 Design & Planning Phase**

* Proposed Solution: Cloud-based Medical Inventory Tracker
* Architecture: Object-based model with automation and validations
* Project Plan: Step-by-step implementation with testing

**3.4 Development Phase**

* **Object & Field Creation**:
  + *Medical\_Product\_\_c*: Name, Category, Stock, Unit\_Price, Expiry\_Date
  + *Supplier\_\_c*: Name, Phone, Email, Address
* **Relationships**:
  + Lookup from Medical Product to Supplier
  + Master-Detail between Inventory Transaction and Product
* **Page Layouts & Record Types**
* **Apex Triggers**:
  + Auto-calculate stock after each transaction
  + Notify if product stock is low or near expiry
* **Reports & Dashboards**:
  + Product Stock Report, Expired Product List, Supplier-wise Orders
* **Flows**:
  + Auto-assign permissions to new Inventory Manager
  + Auto-create reorder request when stock falls below threshold

**3.5 Testing & Validation Phase**

* Validation Rules for mandatory fields (e.g., Expiry Date > Today)
* Functional Testing with Screenshot Evidence for:
  + Object relations
  + Record creation
  + Trigger actions
  + Dashboard output

**3.6 Final Output**

* Working Salesforce application for Medical Inventory Management
* Sample records created for:
  + Medical products (e.g., Paracetamol, Saline)
  + Suppliers (e.g., MedLife Pvt Ltd)
* Dashboard visualizations for:
  + Current stock levels
  + Expiry tracking
  + Supplier activity

**4. Screenshots**

* Medical Product & Supplier objects
* Field configuration (text, currency, formula, picklist)
* Schema builder diagram
* Sample triggers and handler class
* Dashboards (stock, expiry alerts, supplier performance)
* Validation rule examples
* Flows created for automation

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