

Project Design Phase

Solution Architecture

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| Team ID | NM2025TMID04457 |
| Project Name | Medical Inventory Management |
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Solution Architecture

Goals of the Architecture:

- Automate inventory tracking for hospitals and pharmacies
- Ensure accurate stock monitoring and expiry control
- Simplify supplier linkage and restocking process
- Provide data-driven insights for efficient inventory management

Key Components

- **Medicine Object:** Stores medicine details (name, quantity, expiry, batch no.)
- **Supplier Object:** Maintains supplier data and contact information
- **Stock Management Module:** Tracks stock in/out and low-stock alerts
- **Reorder System:** Generates purchase requests when stock is low
- **Notification Module:** Sends alerts for expiry and shortage
- **Reports & Dashboards:** Visualize stock levels and usage trends
- **User Access Control:** Role-based data visibility (Admin, Pharmacist, Staff)

Development Phases:

1. Create Salesforce objects (Medicine, Supplier, Stock, Order)
2. Build relationships between objects
3. Configure validation rules and automation (Flow/Apex)
4. Set up dashboards for analytics
5. Test system for stock updates and expiry notifications

Solution Architecture Description:

The solution architecture focuses on providing an intelligent and automated way to manage medical inventory within hospitals and pharmacies. It integrates multiple Salesforce components such as custom objects, workflows, validation rules, and dashboards to ensure accurate tracking of medicines and their expiry dates.

The architecture ensures that every medicine entry is linked to its supplier and monitored for stock quantity. Automated alerts are triggered when stock levels drop below threshold or

medicines near expiry. This reduces manual monitoring, prevents wastage, and improves the efficiency of procurement and inventory operations.

By utilizing Salesforce automation tools and role-based access, the system promotes transparency, minimizes errors, and ensures that critical medical supplies are always available on time.

Example – Solution Architecture Diagram:

