Project Documentation

Project Title: Medical Inventory Management
Platform: Salesforce

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1. Introduction

The Medical Inventory Management System was developed to streamline the tracking, monitoring, and replenishment of medical supplies within hospitals and clinics. The primary goal is to ensure that medicines, equipment, and consumables are available at the right time, reducing shortages and wastage.

Business Goals:

Manage inventory levels efficiently.

Automate stock updates on issue and receipt.

Enable tracking of expiry dates for medicines.

Provide reporting and dashboards for supply analysis.

Tools Used: Salesforce CRM, Flows, Apex, Validation Rules, Dashboards.

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2. App Overview

A custom app named Medical Inventory Management was created and added to the App Launcher.

Custom Objects Created:

Medicine (fields: Name, Batch No., Expiry Date, Stock Quantity, Supplier).

Equipment (fields: Name, Serial No., Condition, Stock).

Inventory Transaction (fields: Transaction Type, Quantity, Date, Linked Medicine/Equipment).

Standard Objects Used: Users, Reports, Dashboards.

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3. User Interface Demonstration

Record creation in Medicine and Equipment objects.

Validation rules ensure:

Quantity cannot be negative.

Expired medicines cannot be issued.

Field dependencies and dynamic forms were applied for smooth data entry.

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4. Business Process Automation

Flows: Automatic stock reduction when issuing items.

Workflow Rules: Notifications to inventory manager when stock < threshold.

Approval Process: Request approval for bulk purchases above certain limits.

Apex Triggers: For expiry alerts and automated transaction entries.

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5. Reports & Dashboards

Reports showing:

Low-stock medicines.

Expiry date monitoring.

Equipment usage trends.

Dashboards for real-time inventory insights and analytics.

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6. User Management & Security

Profiles & Permission Sets: Ensure only authorized users can update or approve inventory records.

Role Hierarchy: Inventory staff, pharmacists, and admins assigned different access levels.

Field History Tracking: For audit and compliance purposes.

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7. Error Handling & Debugging

Debug logs reviewed during development for automation errors.

Issues such as incorrect stock deduction resolved using flow debugging tools.

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8. Highlights

Automatic expiry alerts for medicines.

Low-stock notifications to prevent shortages.

Easy integration scope with barcode scanners and AI-based demand prediction.

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9. Testing Approach

Each feature (flows, validations, reports) tested with sample data.

Approval processes verified with different user roles.

Reports validated for accuracy of stock levels.

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10. Future Enhancements

Integration with barcode scanning systems for quick stock updates.

Chatbot integration for quick medicine availability queries.

AI-driven forecasting for demand planning.

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11. Conclusion

The Medical Inventory Management System successfully manages hospital and clinic stock, prevents wastage, and ensures timely availability of medicines and equipment. The project was thoroughly tested and documented, and it can be extended in future for advanced integrations.