



**SRI KRISHNA ADITHYA  
COLLEGE OF ARTS & SCIENCE**  
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Kovaipudur, Coimbatore - 641042



**TOPIC: Medical Inventory Management**

**NM\_ID: NM2025TMID22706**

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# 1. Project Overview

**Medical Inventory Management** is a Salesforce-based solution designed to streamline the tracking, storage, and distribution of medical supplies. The system provides **real-time visibility of stock, automated alerts for low or expiring items, and seamless supplier integration** to ensure uninterrupted availability of critical resources.

By leveraging Salesforce dashboards, forecasting tools, and role-based access, the solution helps healthcare providers **reduce waste, minimize shortages, cut costs, and improve patient care**. Beyond efficiency, the project ensures **compliance, transparency, and sustainability**, creating a reliable model for modern healthcare systems.

## 2. Objectives

- Ensure **accurate tracking** of medical supplies, consumables and equipment.
- Provide **real-time inventory visibility** across multiple locations.
- Automate **stock replenishment and alerts** for low or expiring items.
- Maintain **compliance and audit readiness** through accurate records.
- Improve **efficiency in procurement and distribution** of medical items.

## 3. Business Goals:

- **Ensure Resource Availability:** Maintain optimal stock levels of medicines, equipment, and consumables to prevent shortages and delays in patient care.
- **Minimize Waste:** Track usage and expiration dates to reduce overstocking and wastage of critical medical supplies.
- **Optimize Operations:** Automate inventory management, procurement, and reporting to streamline processes and reduce manual errors.
- **Enhance Compliance and Accountability:** Provide transparent tracking, audit-ready reports, and secure role-based access to ensure regulatory adherence and trust.

## 4. Specific Outcomes:

### → Centralized Inventory Control:

- Maintain a unified platform to track medicines, consumables, and equipment across locations.
- Provide real-time visibility into stock levels, usage, and expiration dates.
- Generate compliance-ready reports for audits and regulatory needs.

### → Smart Automation:

- Trigger automatic purchase requests when stock reaches minimum thresholds.

- Send proactive alerts for upcoming expirations to minimize wastage.
- Optimize supply distribution to ensure timely availability in critical areas,

#### → Seamless Collaboration:

- Strengthen coordination between healthcare staff, suppliers, and administrators.
- Facilitate faster approval workflows for procurement and restocking.
- Provide secure, role-based access to ensure accountability.

## 5. Salesforce Key Features and Concepts Utilized:

**Medical Inventory Management** leverages the capabilities of Salesforce to build a reliable, transparent, and efficient platform for managing healthcare supplies. Here's how Salesforce features have been applied:

### 1. Creation of Salesforce Account (Developer Edition):

Logging in through Salesforce Developer Edition provided a secure and free environment to design, test, and implement project components without affecting real data. It enabled hands-on practice with objects, apps, reports, and dashboards, offering a risk-free platform to build and demonstrate the Medical Inventory project effectively.

**Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud.**

Sign up for your Developer Edition.

- ✓ Build apps fast with drag-and-drop tools
- ✓ Go further with Apex code
- ✓ Build AI agents with Agentforce
- ✓ Harmonize your data with Data Cloud
- ✓ Ground Agentforce with structured and unstructured data
- ✓ Integrate with anything using APIs

**Sign up for your Developer Edition**  
A free Salesforce Platform environment with Agentforce and Data Cloud

First name: safi ✓ Last name: tj ✓

Job title: developer ✓ Work email: 23bsds234mohamm ✓

Company: sri krishna adithya co ✓ Country/Region: India ✓

Your org may be provisioned on or migrated to Hyperforce, Salesforce's public cloud infrastructure.

☐ I agree to the Main Services Agreement - Developer Services and Salesforce Program Agreement. I acknowledge, as described in the Developer Documentation: (1) the Developer Edition includes autonomous and other generative AI features; and (2) Salesforce may limit use of those features and the org, and may terminate any org that has been inactive for 45 days.

### 2 Creation of Objects:

Objects act as structured containers for storing and organizing data related to specific business processes. Creating custom objects allows the system to manage all aspects of medical inventory efficiently and systematically.

**Custom Objects: Product, Purchase order, Supplier, Order item and Inventory Transactions are created.**

Setup Home Object Manager

## SETUP New Custom Object

Permissions for this object are disabled for all profiles by default. You can enable object permissions in permission sets or by editing custom profiles. [Tell me more!](#) [Don't show this message again](#)

**Custom Object Definition Edit** Save Save & New Cancel

**Custom Object Information** Required Information

The singular and plural labels are used in tabs, page layouts, and reports.

Label  Example: Account

Plural Label  Example: Accounts

Starts with vowel sound ☐

The Object Name is used when referencing the object via the API.

Object Name  Example: Account

Description

### 3 Creation of Tabs:

Tabs serve as the primary navigation elements that allow users to access and manage different objects within the application creating, these custom tabs ensures that key records are easily accessible, organized, and user-friendly.

SETUP Tabs

## Custom Tabs

You can create new custom tabs to extend Salesforce functionality or to build new application functionality.

Custom Object tabs look and behave like the standard tabs provided with Salesforce. Web tabs allow you to embed external web applications and content within the Salesforce window. Visualforce tabs allow you to embed Visualforce pages. Lightning Component tabs allow you to add Lightning components to the navigation menu in Lightning Experience and the mobile app. Lightning Page tabs allow you to add Lightning Pages to Lightning Experience and the mobile app.

**Custom Object Tabs** New What Is This?

Action	Label	Tab Style	Description
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Inventory Transactions</a>	Big top	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Order Items</a>	Bridge	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Products</a>	Caduceus	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Purchase orders</a>	Building	
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Suppliers</a>	Factory	

### 4 Creation of App Manager:

The App Manager is used to design and organize custom applications that bring together all the required tabs, objects, and tools in one place by creating a custom app through the App Manager ensures that users can work in a focused, role-specific environment tailored to healthcare operations.

← Lightning App Builder

App Settings

Pages

Medical Inventory Management

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

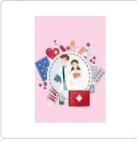
App Details

\* App Name ⓘ  
Medical Inventory Management

\* Developer Name ⓘ  
Medical\_Inventory\_Management

Description ⓘ  
Medical Inventory Management


App Branding

Image ⓘ  
  
Clear

Primary Color Hex Value ⓘ  

#0070D2

Org Theme Options  
☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview  


← Lightning App Builder

App Settings

Pages

Medical Inventory Management

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

Navigation Items

Choose the items to include in the app, and arrange the order in which they appear. Users can personalize the navigation to add or move items, but users can't remove or rename the navigation items are available only for phone or only for desktop. These items are dropped from the navigation bar when the app is viewed in a format that the item doesn't support.

Available Items

⌂ Create

Type to filter list...

Accounts

Activation Targets

Activations

All Sites

Alternative Payment Methods

Analytics

App Launcher

Appointment Categories

Appointment Invitations

Approval Requests

Selected Items

Products

Purchase orders

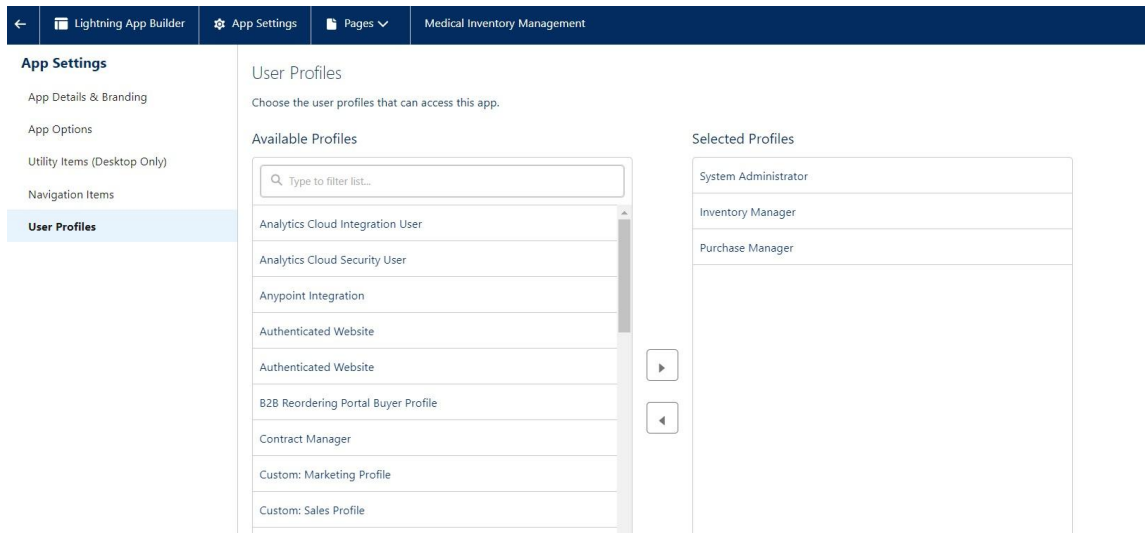
Order Items

Inventory Transactions

Suppliers

Reports

Dashboards

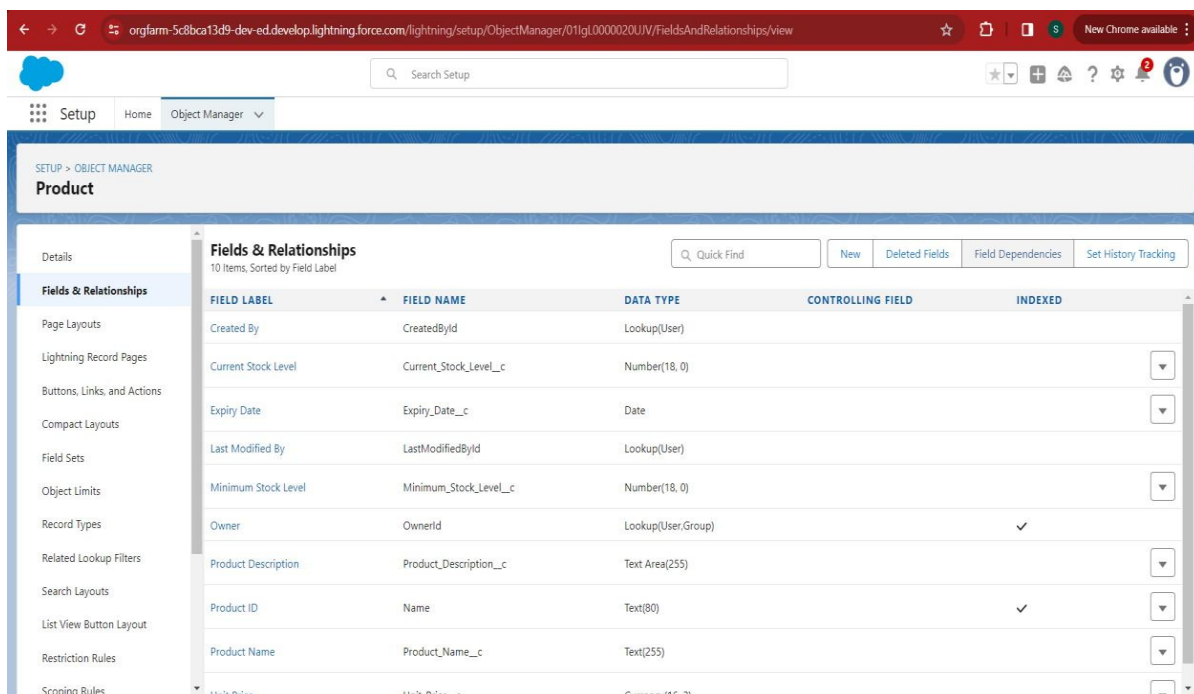


## 5 Creation of Fields:

→ Inventory Records:

### α. Products:

Store detailed information about medicines, consumables, and equipment, including batch numbers, stock levels, expiry dates, and product descriptions, product ID and product names.



- **Purchase Orders:**

Record and manage supplier orders with details such as items requested, order count, order dates, purchase order ID and supplier ID, making it easier for staff to track procurement and ensure timely restocking

SETUP > OBJECT MANAGER  
**Purchase order**

Details  
Fields & Relationships  
Page Layouts  
Lightning Record Pages  
Buttons, Links, and Actions  
Compact Layouts  
Field Sets  
Object Limits  
Record Types  
Related Lookup Filters  
Search Layouts  
List View Button Layout  
Restriction Rules  
Scoping Rules

**Fields & Relationships**  
10 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Actual Delivery Date	Actual_Delivery_Date__c	Date		
Created By	CreatedById	Lookup(User)		
Expected Delivery Date	Expected_Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Order Count	Order_Count__c	Roll-Up Summary (COUNT Order Item)		
Order Date	Order_Date__c	Date		
Owner	OwnerId	Lookup(User/Group)		✓
Purchase order id	Name	Text(80)		✓
Supplier id	Supplier_id__c	Lookup(Supplier object)		✓
Total Order Cost	Total_Order_Cost__c	Formula (16, 2)		

- **Order Items:**

Track and manage individual items within each purchase order, with fields for product name, quantity ordered, quantity received, unit price, and total order cost ensuring clarity and accuracy in procurement records.

SETUP > OBJECT MANAGER  
**Order Item**

Details  
Fields & Relationships  
Page Layouts  
Lightning Record Pages  
Buttons, Links, and Actions  
Compact Layouts  
Field Sets  
Object Limits  
Record Types  
Related Lookup Filters  
Search Layouts  
List View Button Layout  
Restriction Rules  
Scoping Rules

**Fields & Relationships**  
10 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount__c	Formula (Currency)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Order Item	Name	Text(80)		✓
Product ID	Product_ID__c	Lookup(Product)		✓
Purchase order id	Purchase_order_id__c	Master-Detail(Purchase order)		✓
Quantity Ordered	Quantity_Ordered__c	Number(18, 0)		
Quantity Received	Quantity_Received__c	Number(18, 0)		
Total Order Cost	Total_Order_Cost__c	Formula (Currency)		
Unit Price	Unit_Price__c	Formula (Currency)		



- **Inventory Transactions:**

Maintain a centralized log of all stock movements, including details of items issued, received, returned, or adjusted, along with inventory transaction ID, Purchase order id, Transaction dates and Transaction types and Total order cost ensuring complete transparency and traceability of inventory activities

The screenshot shows the Salesforce Setup interface for the 'Inventory Transaction' object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area is titled 'Inventory Transaction' and 'Fields & Relationships' (8 items, Sorted by Field Label). It includes a search bar and buttons for 'New', 'Deleted Fields', 'Field Dependencies', and 'Set History Tracking'. The table below lists the fields for the Inventory Transaction object.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Inventory Transaction id	Name	Text(80)		✓
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Purchase order id	Purchase_order_id__c	Lookup(Purchase order)		✓
Total Order Cost	Total_Order_Cost__c	Formula (Currency)		
Transaction Date	Transaction_Date__c	Date		
Transaction Type	Transaction_Type__c	Picklist		

- **Supplier:**

Store and manage detailed information about suppliers, including contact person, phone

The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, and Scoping Rules. The main content area is titled 'Supplier' and 'Fields & Relationships' (9 items, Sorted by Field Label). It includes a search bar and buttons for 'New', 'Deleted Fields', 'Field Dependencies', and 'Set History Tracking'. The table below lists the fields for the Supplier object.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
Contact Person	Contact_Person__c	Text(255)		
Created By	CreatedById	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedById	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone Number	Phone_Number__c	Phone		
Supplier id	Name	Text(80)		✓
Supplier Name	Supplier_Name__c	Text(255)		



number, supplier ID and supplier name, enabling efficient procurement and strong vendor relationship

Relationships:

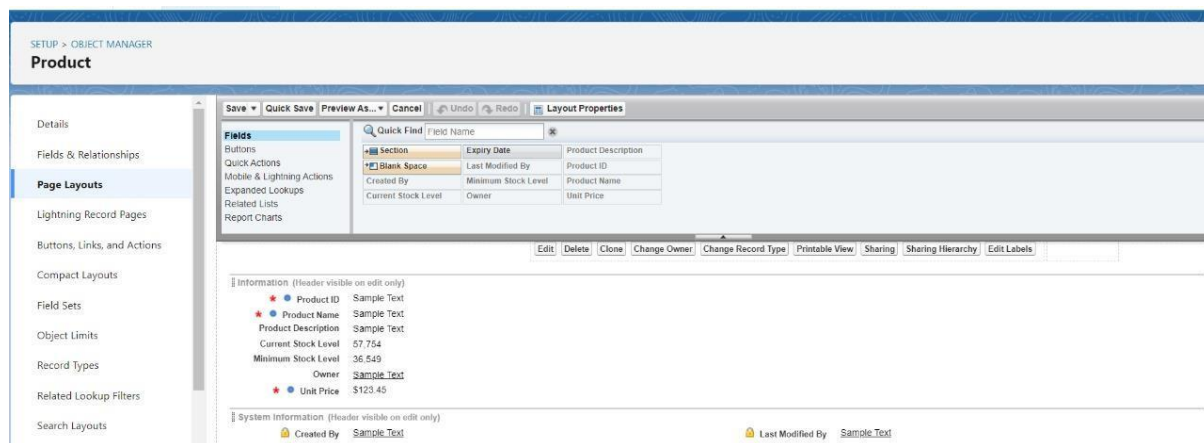
- **Master–Detail Relationships:**  
Create structured connections, such as linking *purchase orders* to their *order items*, ensuring data consistency and clear hierarchy in inventory records.
- **Lookup Relationships:**  
Enable flexible associations, like connecting *inventory transactions* to *suppliers* or

*storage locations*, allowing dynamic tracking and management of stock movements

## 6 Editing of page layouts:

➔ Edit a page layout in product object:

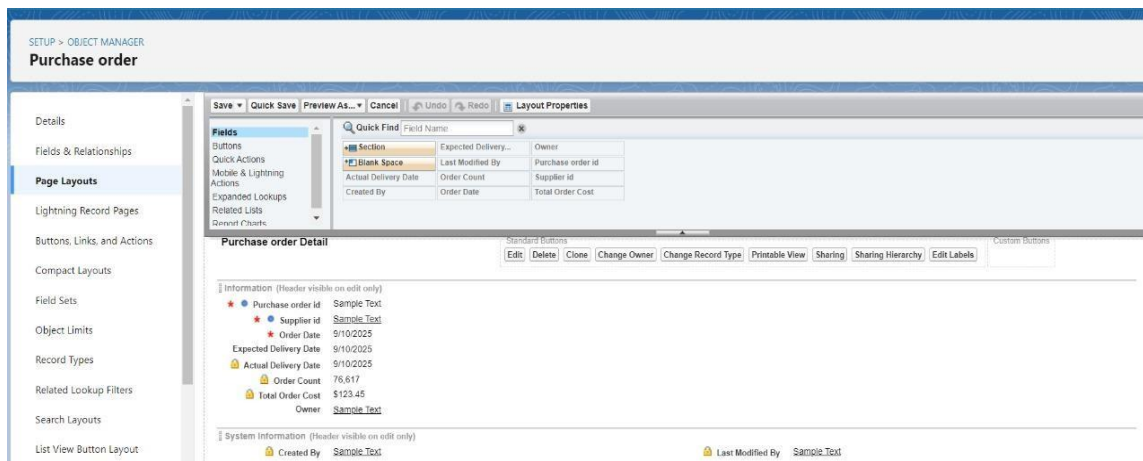
Editing the Product page layout ensures relevant fields are organized for easy data entry and viewing. It improves accuracy and efficiency by showing only necessary information based on user roles.



Edit a page layout in purchase order object:

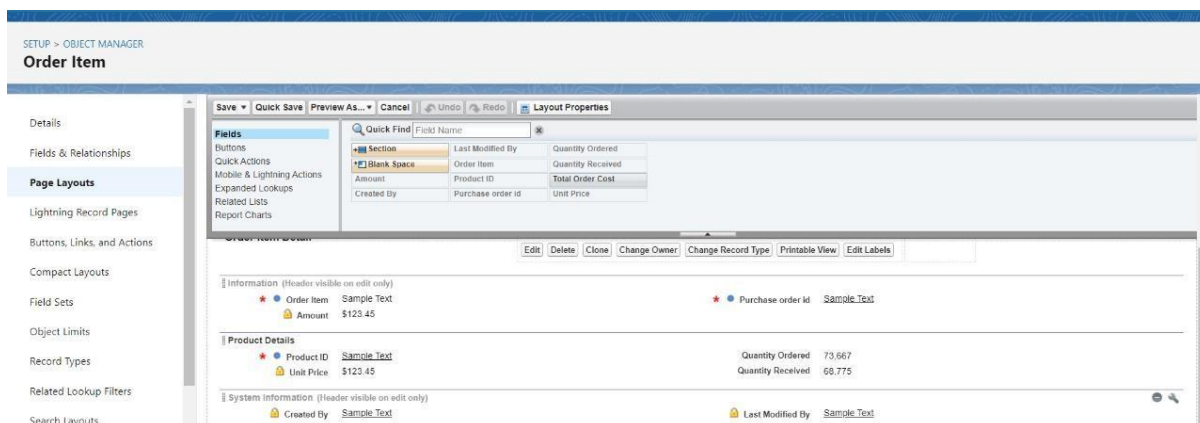
Editing the Purchase Order page layout ensures clear organization of vendor, product, and delivery details for efficient data entry. It helps users focus on relevant fields based on their roles, reducing errors.

This improves order tracking, compliance, and overall workflow in the procurement process



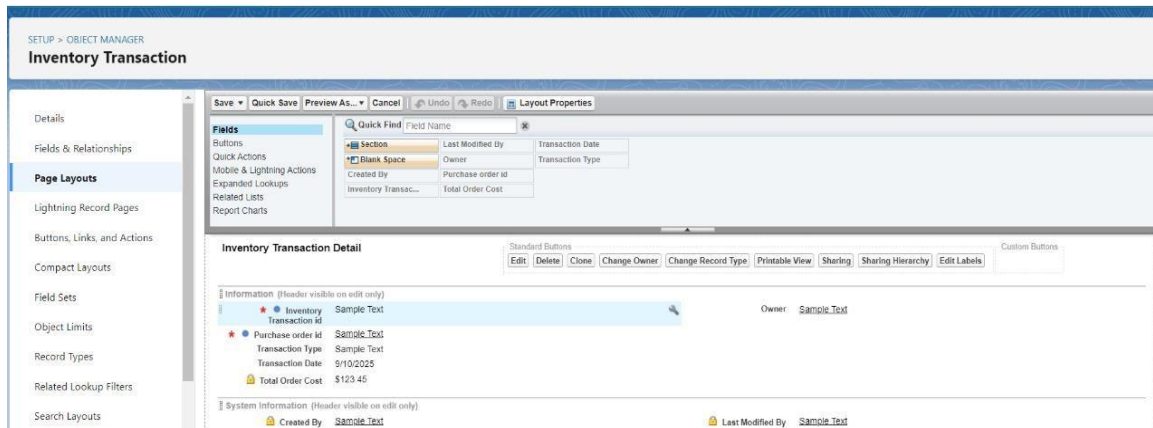
Edit a page layout in order item object:

Editing the Order Item page layout helps display key details like product name, quantity, and price in a clear and organized manner. It ensures accurate data entry and simplifies tracking of individual items within a purchase order. This enhances inventory accuracy and supports efficient order processing.



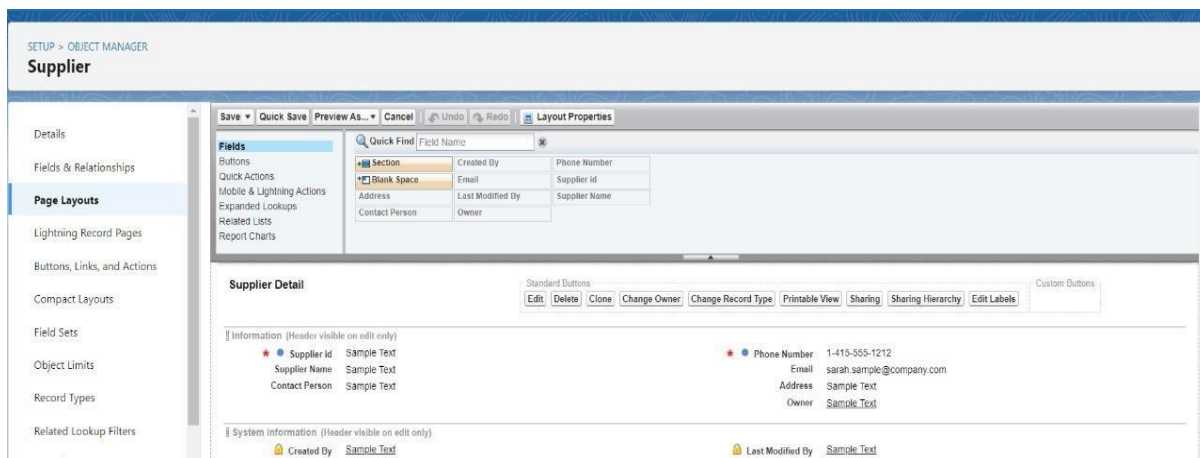
Edit a page layout in inventory transaction object:

Editing the Inventory Transaction page layout ensures clear visibility of transaction details like product, quantity, date, and transaction type. It helps users record and track stock movements accurately. This supports effective inventory control and audit readiness in the medical inventory system.



Edit a page layout in supplier object:

Editing the Supplier page layout allows for clear organization of key supplier details like name, contact info, and product categories. It ensures users can quickly access and update supplier records accurately. This supports efficient procurement processes and maintains reliable supplier data.



## 7 Compact layouts:

➔ Create a compact layout to a product object:

Creating a compact layout for the Product object ensures that essential product details (like name, code, and stock status) are visible at a glance. It improves user efficiency by showing key info in list views, lookups, and mobile views. This supports faster decision-making and streamlined inventory management

SETUP > OBJECT MANAGER

**Product**

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

**Compact Layouts**

Field Sets

Object Limits

Product Compact Layout

< Back to Product

Product Compact Layout

Compact Layout Detail

Label: Product Compact Layout

API Name: Product\_Compact\_Layout

Included Fields: Product Name, Current Stock Level, Unit Price

Object Name: Product

Created By: Sastika R. 9/5/2025, 11:51 PM

Modified By: Sastika R. 9/6/2025, 9:37 PM

Buttons: Edit, Clone, Delete, Compact Layout Assignment

## Create a compact layout to a purchase order object:

Creating a compact layout for the Purchase Order object allows key information like order number, vendor, and status to be easily seen in list views and search results. It improves quick access and selection of records for users. This boosts efficiency in managing and tracking purchase orders within the medical inventory system.

SETUP > OBJECT MANAGER

**Purchase order**

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

**Compact Layouts**

Field Sets

Object Limits

Purchase order Compact Layout

< Back to Purchase order

Purchase Order Compact Layout

Compact Layout Detail

Label: Purchase Order Compact Layout

API Name: Purchase\_Order\_Compact\_Layout

Included Fields: Purchase order Id, Order Date, Total Order Cost, Supplier Id

Object Name: Purchase order

Created By: Sastika R. 9/5/2025, 11:57 PM

Modified By: Sastika R. 9/5/2025, 11:57 PM

Buttons: Edit, Clone, Delete, Compact Layout Assignment

## 8 Validation rules:

➔ Create an expected delivery date validation rule to a employee object:

Creating an expected delivery date validation rule on the Employee object ensures that delivery dates entered are realistic and not set in the past. It helps maintain accurate scheduling and inventory planning. This improves reliability and prevents errors in the medical inventory management process.

SETUP > OBJECT MANAGER

**Purchase order**

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Purchase order Validation Rule

< Back to Purchase order

Purchase order Validation Rule

Validation Rule Detail

Rule Name: Expected\_Delivery\_Date\_Validation

Active: ☒

Error Condition Formula: (Expected\_Delivery\_Date\_\_c - Order\_Date\_\_c) > 7

Error Message: The Expected Delivery Date should not exceed 7 days.

Description:

Created By: Sastika R. 9/5/2025, 12:03 AM


Modified By: Sastika R. 9/6/2025, 12:03 AM

Buttons: Edit, Clone

## 9 Data Sharing and Security:

### → Profiles and Roles:

Define both inventory manager and purchasing manager roles with specific access permissions, ensuring that administrators, hence staff can collaborate effectively while protecting sensitive medical and supplier data.

 **SETUP**  
**Roles**


Role Edit  
**Inventory Manager**

**Role Edit**


Label

Inventory Manager

Role Name

Inventory\_Manager 

This role reports to


SVP, Sales & Marketing 

Role Name as displayed on reports

Save

Save & New

Cancel

 **SETUP**  
**Roles**


Role Edit  
**Purchasing Manager**

**Role Edit**


Label

Purchasing Manager

Role Name

Purchasing\_Manager 

This role reports to

SVP, Sales & Marketing 

Role Name as displayed on reports

Save

Save & New

Cancel

## → Creation of Permission sets:

Permission Sets are used to extend access beyond what is defined in user profiles, without changing the core profile settings. Permission Sets (Purchase Manager Create Access) ensure that specific users can access additional features or objects as needed, while still maintaining data security.

Setup Home Object Manager

Q permis

Users

Permission Set Groups

Permission Sets

Custom Code

Custom Permissions

Didn't find what you're looking for? Try using Global Search.

SETUP

Permission Sets

Permission Set

Clone: Purchase Manager Create Access

Enter a new label and description for the cloned permission set.

Save Cancel

Enter permission set information

Label Purchase Manager Create Access

API Name Purchase\_Manager

Description

Session Activation Required ☐

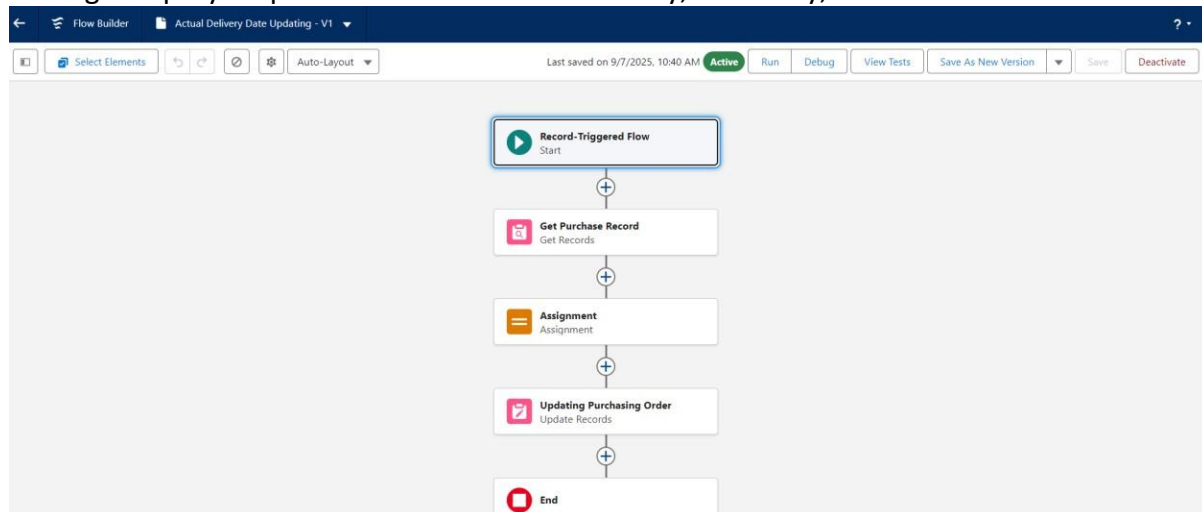
License

Save Cancel

## 10. Automations and Workflows:

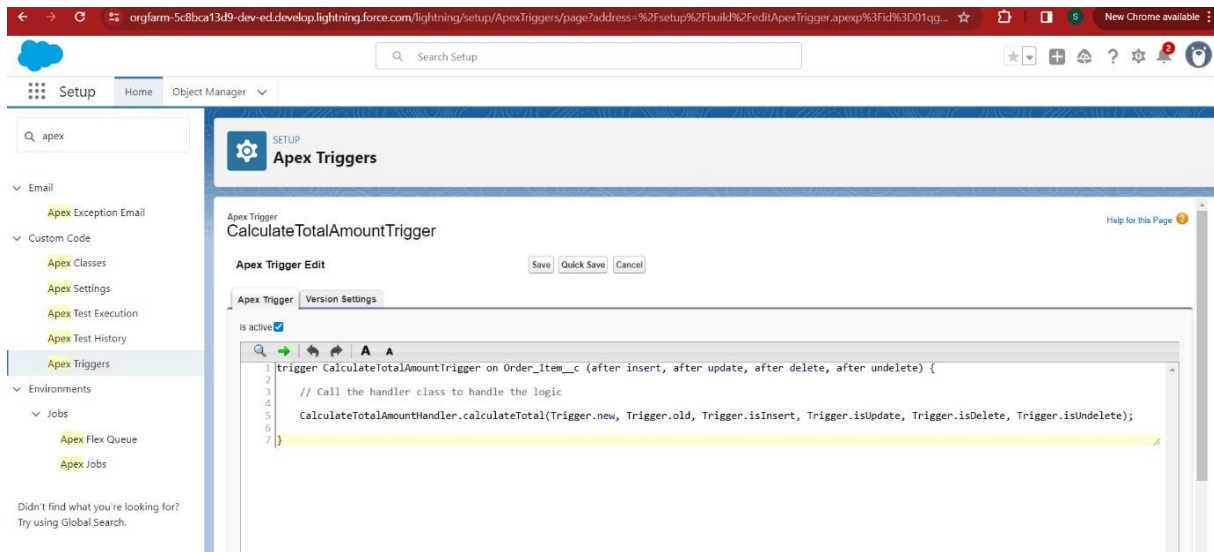
### → Flows:

Automate processes such as creating purchase orders or updating stock levels, guiding users through step-by-step workflows to ensure accuracy, efficiency, and reduced manual effort.



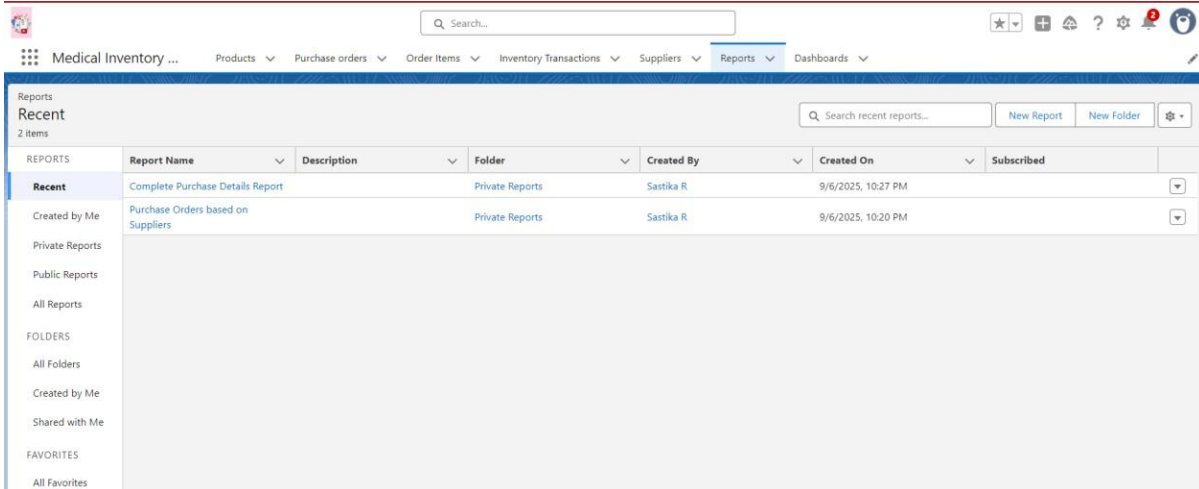
### → Apex Triggers:

Implement custom logic, such as automatically updating inventory quantities when order items are received or triggering alerts for near-expiry medicines, to maintain accuracy and optimize stock management.

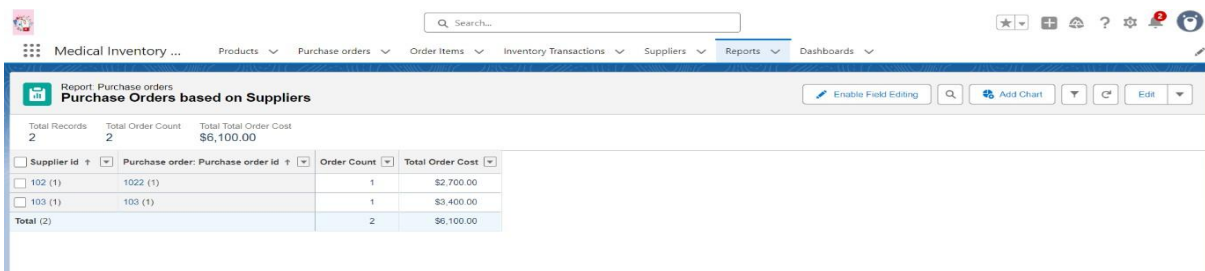


## Reports:

Reports are used to organize, summarize, and analyze data stored in the system, creating reports helps healthcare staff and administrators make data-driven decisions, track inventory performance, and maintain operational efficiency.

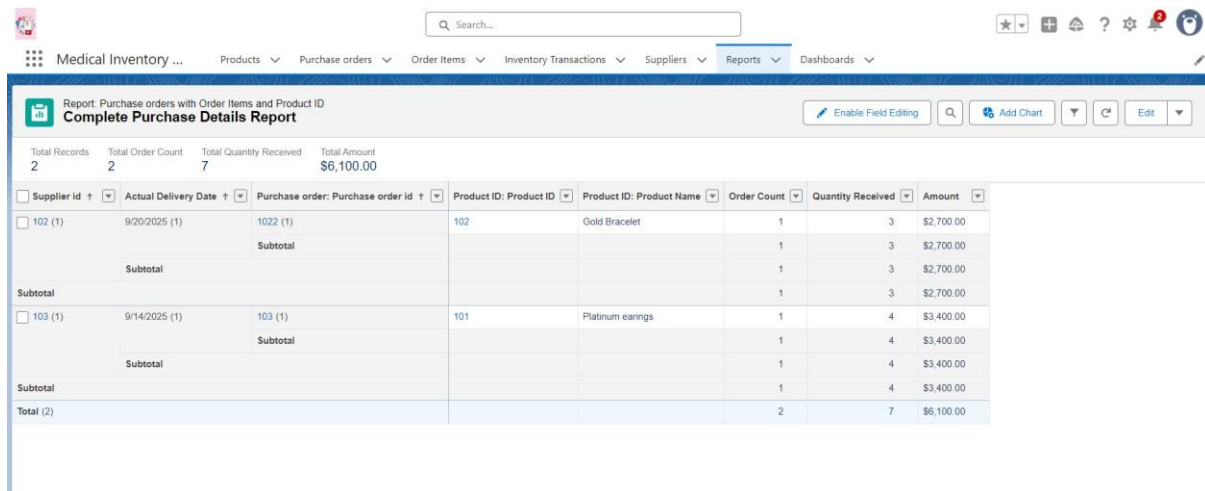


## Purchase Orders based on Suppliers:





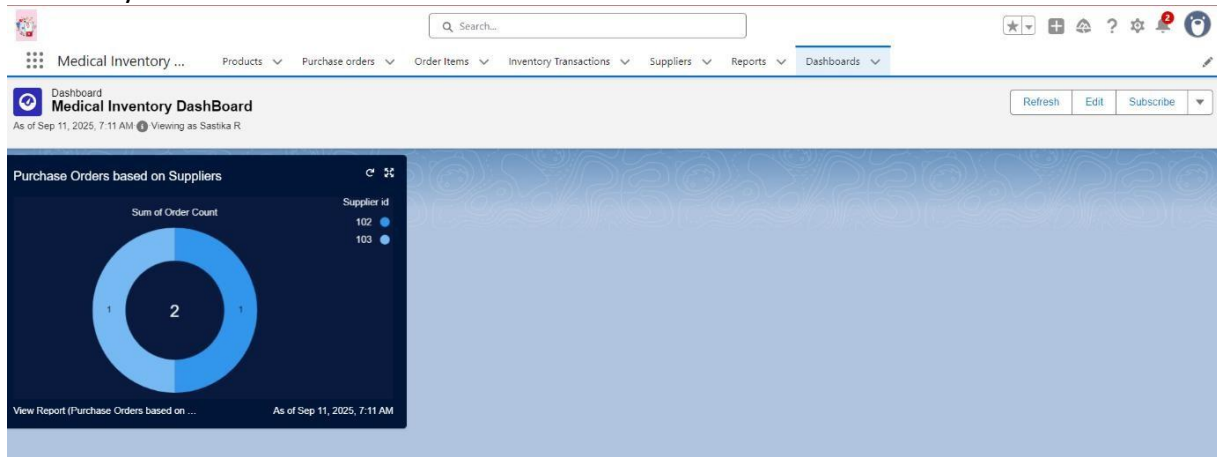
## ➔ Complete Purchase Details Report



Supplier id	Actual Delivery Date	Purchase order	Product ID	Product Name	Order Count	Quantity Received	Amount
102 (1)	9/20/2025 (1)	1022 (1)	102	Gold Bracelet	1	3	\$2,700.00
		Subtotal			1	3	\$2,700.00
		Subtotal			1	3	\$2,700.00
103 (1)	9/14/2025 (1)	103 (1)	101	Platinum earrings	1	4	\$3,400.00
		Subtotal			1	4	\$3,400.00
		Subtotal			1	4	\$3,400.00
		Subtotal			1	4	\$3,400.00
Total (2)					2	7	\$6,100.00

## Dashboards:

Dashboards provide visual representations of key data, helping users understand trends and make informed decisions at a glance. The dashboard (Medical Inventory Management) help administrators, pharmacists, and healthcare staff monitor inventory and procurement efficiently.



## **6. Conclusion:**

The development of the Medical Inventory Dashboard has significantly enhanced the monitoring and management of purchase orders within the system. By providing supplier-based insights through interactive visualizations, the dashboard simplifies data interpretation and promotes informed decision-making. Real-time updates ensure accuracy, while integrated reports allow users to access detailed information seamlessly. The clear representation of order distribution across suppliers improves transparency and accountability. Additionally, the ability to refresh, edit, and subscribe to the dashboard increases its usability and adaptability. This solution not only optimizes procurement tracking but also strengthens inventory control processes.

Overall, the dashboard contributes to improved efficiency, better supplier management, and a more effective medical supply chain.