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Internz**

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PARTNER

Medical Inventory Management

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Project Overview

The **Medical Inventory Management System** is designed to automate and streamline the process of managing medical supplies, purchase orders, stock levels, and supplier details within a healthcare or pharmacy environment. The system ensures accurate tracking of product information, supplier interactions, inventory transactions, and purchase activities — all within a unified Salesforce platform.

This project leverages Salesforce's automation tools such as **Flows, Validation Rules, Triggers, and Apex Classes** to manage product details, monitor purchase activity, and maintain optimal stock levels. By digitizing manual processes, the system improves operational efficiency and minimizes human errors in inventory control.

2. Objective

The main goal of the Medical Inventory Management System is to provide a **centralized and automated platform** for managing medical product data, supplier relationships, and inventory movements.

Business Goals:

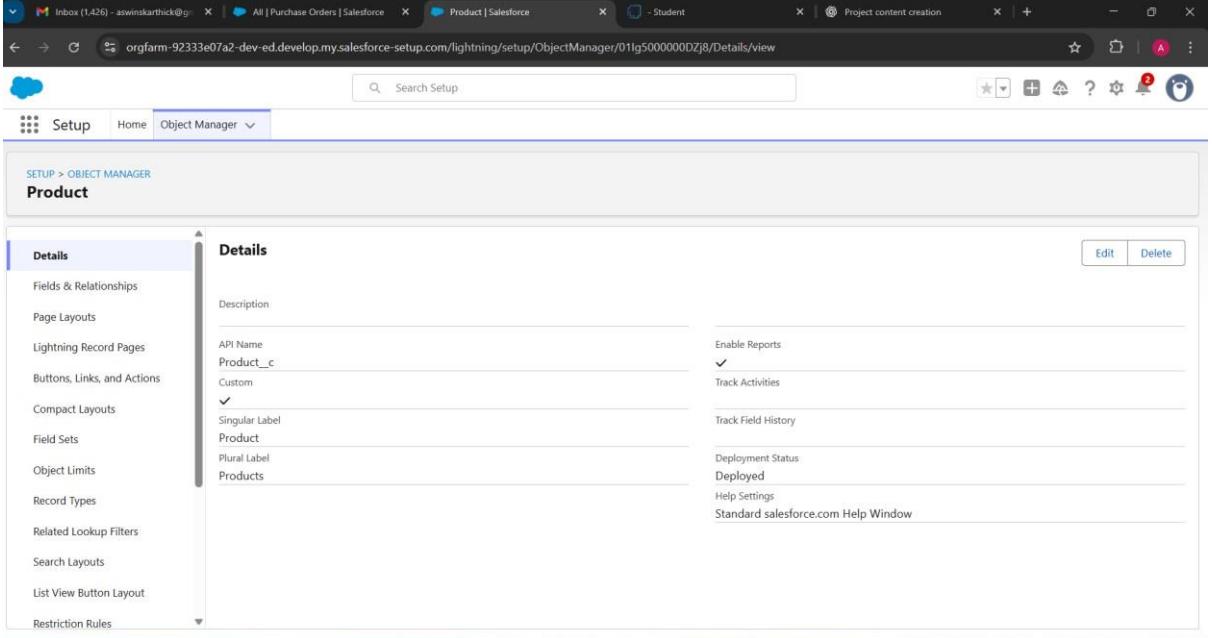
- A. **Automate Inventory Processes:** Create a seamless workflow for tracking purchase orders, supplier details, and product stock updates.
- B. **Optimize Stock Levels:** Prevent overstocking or shortages by maintaining real-time visibility of inventory quantities.
- C. **Improve Supplier Management:** Establish accurate and transparent communication between the purchasing and supplier departments.
- D. **Enhance Decision-Making:** Provide real-time data through reports and dashboards for better forecasting and analysis.
- E. **Reduce Manual Effort:** Use automation, formulas, and triggers to eliminate repetitive tasks and maintain data consistency.

3. Salesforce Key Features and Concepts Utilized

The Medical Inventory Management System uses several Salesforce components and features to efficiently handle the end-to-end medical inventory workflow.

Custom Objects

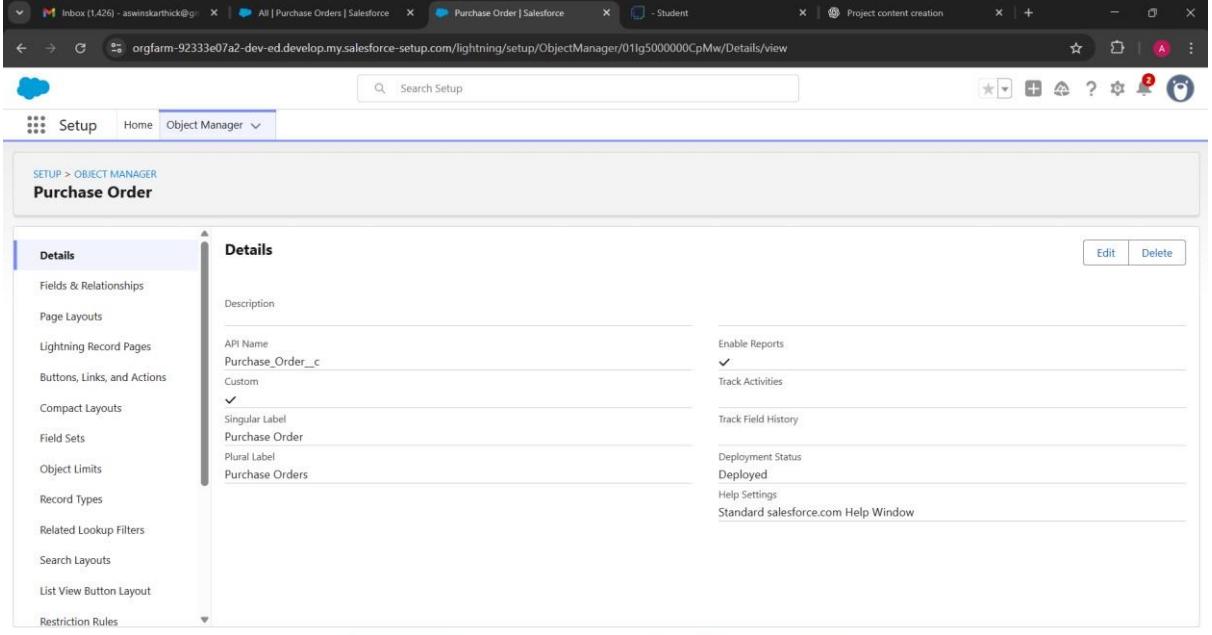
1. **Product:** Stores detailed information about each medical item such as product name, description, stock level, and unit price.



The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. Under 'SETUP > OBJECT MANAGER', the 'Product' object is selected. The left sidebar lists various configuration options: 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, and Restriction Rules. The main 'Details' pane shows the following fields:

- Description
- API Name: Product_c
- Custom: ✓
 - Singular Label: Product
 - Plural Label: Products
- Enable Reports: ✓
- Track Activities
- Track Field History
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

2. **Purchase Order:** Manages purchase-related information like supplier details, order date, and total order cost.



The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. Under 'SETUP > OBJECT MANAGER', the 'Purchase Order' object is selected. The left sidebar lists various configuration options: 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, and Restriction Rules. The main 'Details' pane shows the following fields:

- Description
- API Name: Purchase_Order_c
- Custom: ✓
 - Singular Label: Purchase Order
 - Plural Label: Purchase Orders
- Enable Reports: ✓
- Track Activities
- Track Field History
- Deployment Status: Deployed
- Help Settings: Standard salesforce.com Help Window

3. Order Item: Tracks individual items purchased within a specific purchase order, including quantity received and price.

The screenshot shows the Salesforce Object Manager interface. The left sidebar lists various setup options like Fields & Relationships, Page Layouts, and Record Types. The main pane displays the 'Details' section for the 'Order Item' object. It includes fields for Description, API Name (set to 'Order_Item__c'), Singular Label ('Order Item'), Plural Label ('Order Items'), and several checkboxes for reports and activities. The URL in the browser bar is <https://orgfarm-92333e07a2-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/01lg5000000CpJV/details/view>.

4. Inventory Transaction: Records movements of medical products, including receipts, issues, and adjustments.

This screenshot is identical to the one above, showing the 'Order Item' object details in the Salesforce Object Manager. The left sidebar and main pane are the same, displaying the 'Details' section with the API name set to 'Order_Item__c'. The URL in the browser bar is <https://orgfarm-92333e07a2-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/01lg5000000CpJV/details/view>.

- 5. Supplier:** Contains supplier information such as name, contact number, and email.

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes tabs for 'Inbox (1,426)', 'All | Purchase Orders | Salesforce', 'Supplier | Salesforce', '- Student', and 'Project content creation'. Below the navigation is a search bar labeled 'Search Setup' and a toolbar with various icons. The main area displays the 'Supplier' object details. On the left, a sidebar titled 'Details' lists various setup options: 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, and Restriction Rules. The main content area is titled 'Details' and contains sections for 'Description' (with API Name set to 'Supplier__c'), 'Enable Reports' (unchecked), 'Track Activities' (unchecked), 'Track Field History' (unchecked), 'Deployment Status' (set to 'Deployed'), and 'Help Settings' (set to 'Standard salesforce.com Help Window'). At the bottom right of the main area are 'Edit' and 'Delete' buttons.

Relationships

- Purchase Order → Supplier (Lookup Relationship):**
Links each purchase order to a specific supplier for clear tracking.
- Order Item → Purchase Order (Master-Detail Relationship):**
Ensures each order item belongs to one purchase order and supports roll-up summary calculations.
- Inventory Transaction → Product (Lookup Relationship):**
Connects inventory transactions to products for stock tracking.

These relationships ensure accurate data connections and dependency between records.

Tabs:

Tabs are created in Salesforce to easily access and manage custom object records. In the Medical Inventory Management project, tabs were created for Products, Purchase Orders, Order Items, Inventory Transactions, and Suppliers.

This allows users to quickly view, create, and organize records for each module directly from the Salesforce navigation bar.

Custom Object Tabs

Action	Label	Tab Style	Description
Edit Del	Inventory Transactions	Scales	
Edit Del	Order Items	Box	
Edit Del	Products	Stethoscope	
Edit Del	Purchase Orders	Form	
Edit Del	Supplier Objects	Factory	
Edit Del	Suppliers	Building	

Web Tabs

No Web Tabs have been defined.

Visualforce Tabs

No Visualforce Tabs have been defined.

Lightning App Development

A **Lightning App** named *Medical Inventory Management* was created through **App Manager** to organize all the custom objects.

Tabs Added:

Products, Purchase Orders, Order Items, Inventory Transactions, Suppliers, Reports, Dashboards.

This app provides a single interface for administrators to monitor inventory and purchases efficiently.

App Details & Branding

App Details

*App Name: Medical Inventory Management

*Developer Name: Medical_Inventory_Management

Description: Enter a description...

App Branding

Image: Placeholder image

Primary Color Hex Value: #6DF128

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

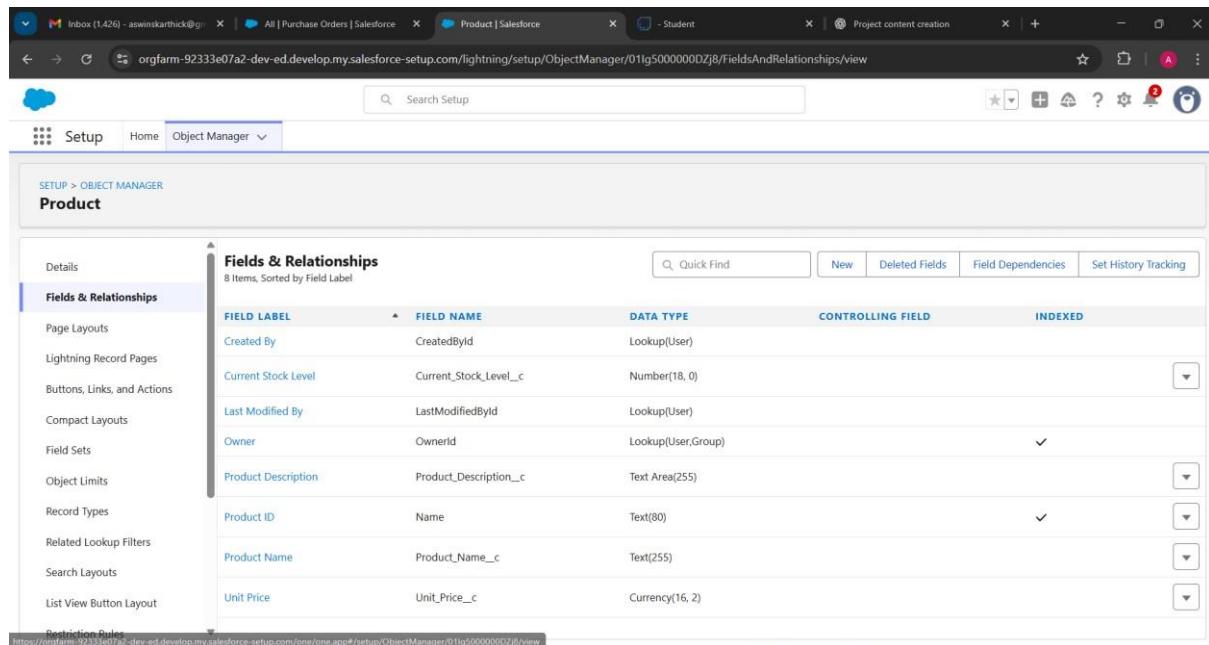
App Launcher Preview

. Field Configurations and Validation Rules

Key fields and formulas were configured in each object to store relevant information accurately.

Product Object

These fields allow administrators to monitor inventory availability, calculate product value, and identify which items need to be reordered. They are directly used in inventory transaction and purchase order calculations.

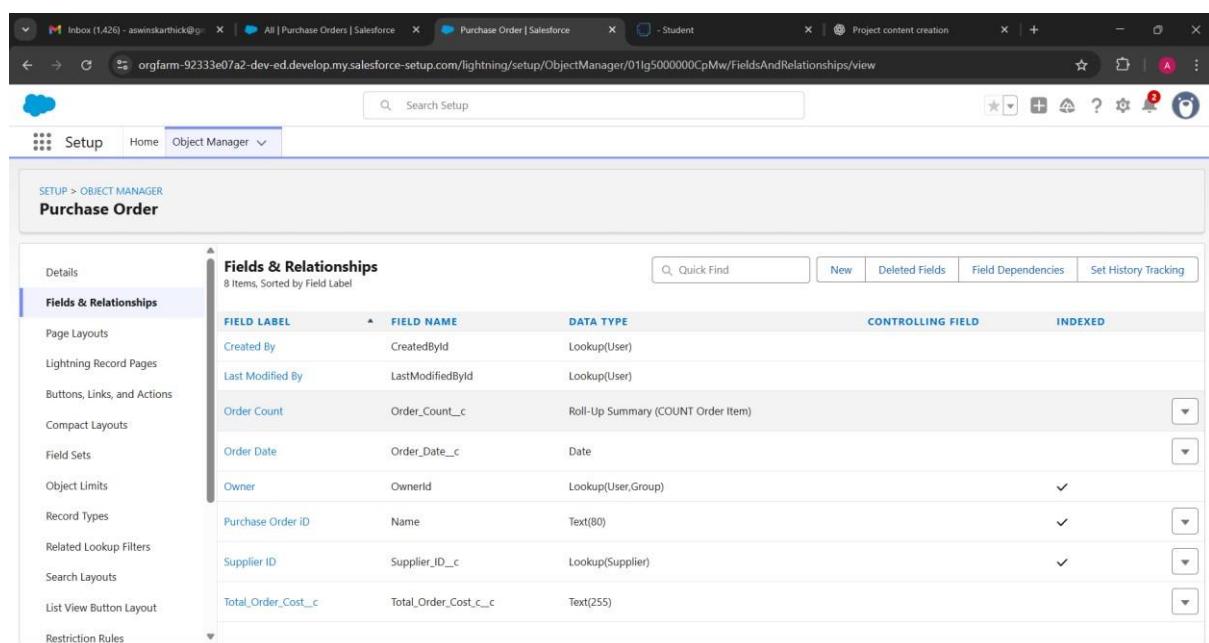


The screenshot shows the Salesforce Object Manager interface for the 'Product' object. The left sidebar has 'Fields & Relationships' selected. The main area is titled 'Fields & Relationships' and lists 8 items, sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data includes:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Current Stock Level	Current_Stock_Level_c	Number(18, 0)		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Product Description	Product_Description_c	Text Area(255)		
Product ID	Name	Text(80)		✓
Product Name	Product_Name_c	Text(255)		
Unit Price	Unit_Price_c	Currency(16, 2)		

Purchase Order Object

This object acts as the main control center for the purchasing process, helping managers track supplier relationships, delivery timelines, and total purchase costs.



The screenshot shows the Salesforce Object Manager interface for the 'Purchase Order' object. The left sidebar has 'Fields & Relationships' selected. The main area is titled 'Fields & Relationships' and lists 8 items, sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The data includes:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	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)		✓
Total Order Cost	Total_Order_Cost_c	Text(255)		

Order Item Object

Each order item contributes to the total purchase cost. The data from these fields is aggregated in the **Purchase Order** object to compute total expenditure.

The screenshot shows the Salesforce Setup interface with the URL <https://orgfarm-92333e07a2-dev-ed.my.salesforce.com/lightning/setup/ObjectManager/01lg5000000CpjV/Details/view>. The page title is "SETUP > OBJECT MANAGER Order Item". On the left, there is a sidebar with options like Details, Fields & Relationships, Page Layouts, etc. The main content area shows the "Details" tab for the Order Item object. It includes fields for Description, API Name (set to Order_Item__c), Singular Label (set to Order Item), Plural Label (set to Order Items), and various status and history settings. Buttons for Edit and Delete are at the top right.

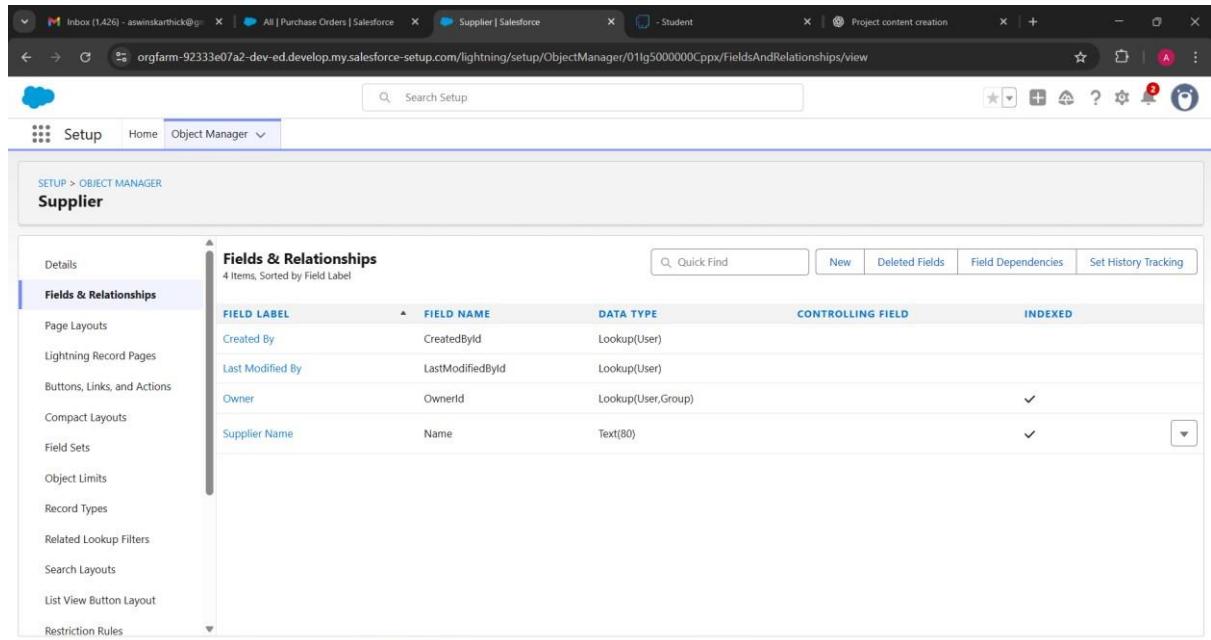
Inventory Transaction Object

These fields enable full traceability of stock movements, allowing the admin to track whether items were added, issued, or adjusted, ensuring stock integrity.

The screenshot shows the Salesforce Setup interface with the URL <https://orgfarm-92333e07a2-dev-ed.my.salesforce.com/lightning/setup/ObjectManager/01lg5000000CpmjFieldsAndRelationships/view>. The page title is "SETUP > OBJECT MANAGER Inventory Transaction". On the left, there is a sidebar with options like Details, Fields & Relationships, Page Layouts, etc. The main content area shows the "Fields & Relationships" section for the Inventory Transaction object. It lists six fields: Created By, Inventory Transaction ID, Last Modified By, Owner, Purchase Order ID, and Transaction Type. The table includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Buttons for Quick Find, New, Deleted Fields, Field Dependencies, and Set History Tracking are at the top right.

Supplier Object

Maintains an up-to-date supplier directory that supports lookup relationships with purchase orders. These fields enable automatic communication and accurate supplierbased reporting.



The screenshot shows the Salesforce Object Manager interface for the 'Supplier' object. The left sidebar has 'Fields & Relationships' selected under 'Fields & Relationships'. The main area is titled 'Fields & Relationships' with a sub-label '4 Items, Sorted by Field Label'. It displays four fields in a table:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Supplier Name	Name	Text(80)		✓

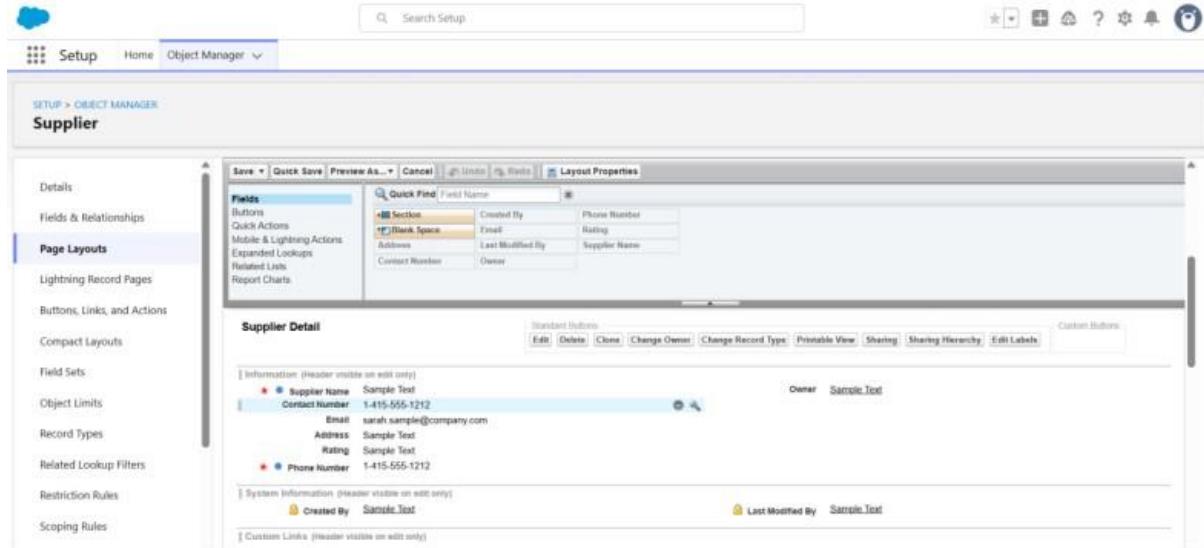
Page Layouts:

Editing **Page Layouts** in Salesforce helps organize how fields, sections, and related lists appear on record pages for better clarity and data entry.

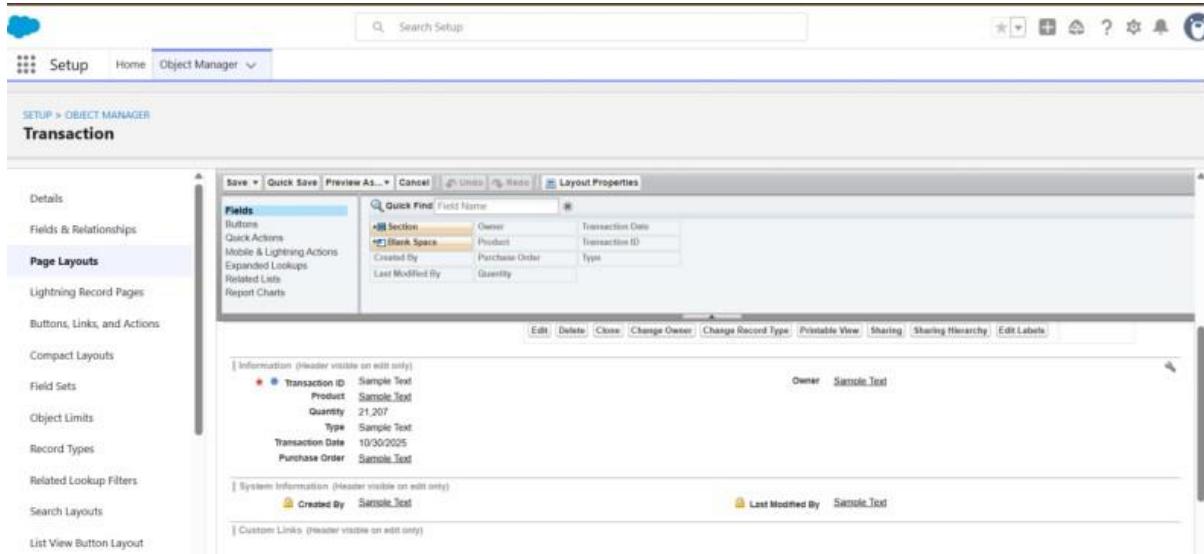
In the **Medical Inventory Management** project, page layouts were customized for **Product**, **Purchase Order**, **Order Item**, **Inventory Transaction**, and **Supplier** objects. Fields such as **Order Date**, **Total Order Cost**, **Supplier ID**, **Product Name**, and **Unit Price** were properly arranged for a clean and structured view.

Some important fields like **Order Date** were marked as *Required*, while calculated fields such as **Total Order Cost** were set as *Read-Only* to maintain data accuracy and prevent manual modification.

These layout edits make data management easier and improve user experience across all modules.



The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar lists various configuration options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, Restriction Rules, and Scoping Rules. The 'Page Layouts' option is selected. The main area displays the 'Supplier Detail' page layout. It includes sections for 'Information' (Supplier Name, Contact Number, Email, Address, Rating, Phone Number) and 'System Information' (Created By, Last Modified By). A 'Layout Properties' panel is open at the top, showing fields grouped into sections: 'Section' (Created By, Phone Number), 'Blank Space' (Email, Last Modified By, Rating, Supplier Name), and 'Contact Number' (Owner). Standard buttons like Edit, Delete, Close, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels, and Custom Buttons are visible at the bottom.



The screenshot shows the Salesforce Setup interface for the 'Transaction' object. The left sidebar lists similar configuration options as the Supplier setup. The 'Page Layouts' option is selected. The main area displays the 'Transaction Detail' page layout. It includes sections for 'Information' (Transaction ID, Product, Quantity, Type, Transaction Date, Purchase Order) and 'System Information' (Created By, Last Modified By). A 'Layout Properties' panel is open at the top, showing fields grouped into sections: 'Section' (Owner, Transaction Date, Transaction ID), 'Blank Space' (Product, Purchase Order, Type), and 'Created By' (Quantity). Standard buttons like Edit, Delete, Close, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels, and Custom Buttons are visible at the bottom.

Profiles and Permission Sets

- Profiles Created

Setup Home Object Manager

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

Save Quick Save Preview As... Cancel Undo Undo Layout Properties

Quick Find Field Name: Order Item ID

Fields Buttons Quick Actions Mobile & Lightning Actions Expanded Lookups Related Lists Report Charts

Actions in this section are predefined by Salesforce. You can override the predefined actions to set a customized list of actions on Lightning Experience and mobile app pages that use this layout. If you customize the actions in the Quick Actions in the Salesforce Classic Publisher section, and have saved the layout, then this section inherits that set of actions by default when you click to override.

Order Item Detail Standard Buttons Edit Delete Close Change Owner Change Record Type Printable View Sharing Sharing Hierarchy Edit Labels Custom Buttons

Information (Header visible on edit only)
Order Item ID Sample Text Owner Sample Text

System Information (Header visible on edit only)
Created By Sample Text Last Modified By Sample Text

Custom Links (Header visible on edit only)

Setup Home Object Manager

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

Save Quick Save Preview As... Cancel Undo Undo Layout Properties

Quick Find Field Name: Order Date

Fields Buttons Quick Actions Mobile & Lightning Actions Expanded Lookups Related Lists Report Charts

Information (Header visible on edit only)
Supplier ID Sample Text Purchase Order ID Sample Text Order Date 10/30/2025 Total Amount \$123.45 Quantity Received 43 Unit Price \$123.45 Total Amount \$123.45 Expected Delivery Date 10/30/2025 Order Date 10/30/2025

System Information (Header visible on edit only)
Created By Sample Text Last Modified By Sample Text

Custom Links (Header visible on edit only)

Setup Home Object Manager

SETUP > OBJECT MANAGER Product

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

Save Quick Save Preview As... Cancel Undo Undo Layout Properties

Quick Find Field Name: Current Stock Level

Fields Buttons Quick Actions Mobile & Lightning Actions Expanded Lookups Related Lists Report Charts

Information (Header visible on edit only)
Products ID Sample Text Product Name Sample Text Purchase Description Sample Text Supplier ID Sample Text Unit Price \$123.45 Expiry Date 10/30/2025 Order Date 10/30/2025 Current Stock Level 37.747 Product Description Sample Text

System Information (Header visible on edit only)
Created By Sample Text Last Modified By Sample Text

Custom Links (Header visible on edit only)

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The profile 'Inventory Manager' is displayed, which includes the following details:

- Profile Detail:**
 - Name: Inventory Manager
 - User License: Salesforce
 - Description:
 - Created By: Aswin.karthick, 10/29/2025, 2:17 AM
 - Modified By: Aswin.karthick, 10/29/2025, 2:18 AM
 - Custom Profile: checked
- Page Layouts:**

Standard Object Layouts	Global	Location Group
Email Application	Not Assigned [View Assignment]	Location Group Assignment [View Assignment]
Home Page Layout	Home Page Default [View Assignment]	Macro Macro Layout [View Assignment]
Account	Account Layout [View Assignment]	Object Milestone Object Milestone Layout [View Assignment]
Alternative Payment Method	Alternative Payment Method Layout [View Assignment]	Operating Hours Operating Hours Layout

- **Purchase Manager** — Access to purchase order and supplier objects.

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The profile 'Purchase Manager' is displayed, which includes the following details:

- Profile Detail:**
 - Name: Purchase Manager
 - User License: Analytics Cloud Integration User
 - Description:
 - Created By: Aswin.karthick, 11/2/2025, 2:32 AM
 - Modified By: Aswin.karthick, 11/2/2025, 2:33 AM
 - Custom Profile: checked
- Page Layouts:**

Standard Object Layouts	Global	Location Group
Email Application	Not Assigned [View Assignment]	Location Group Assignment [View Assignment]
Home Page Layout	Home Page Default [View Assignment]	Macro Macro Layout [View Assignment]
Account	Account Layout [View Assignment]	Object Milestone Object Milestone Layout [View Assignment]
Alternative Payment Method	Alternative Payment Method Layout [View Assignment]	Operating Hours Operating Hours Layout [View Assignment]
Appointment Invitation	Appointment Invitation Layout [View Assignment]	Opportunity Opportunity Layout [View Assignment]
Asset	Asset Layout [View Assignment]	Opportunity Product Opportunity Product Layout [View Assignment]

- **Permission Set:**

Purchase Manager Create Access — Allows creation of Order Items and visibility of related records.

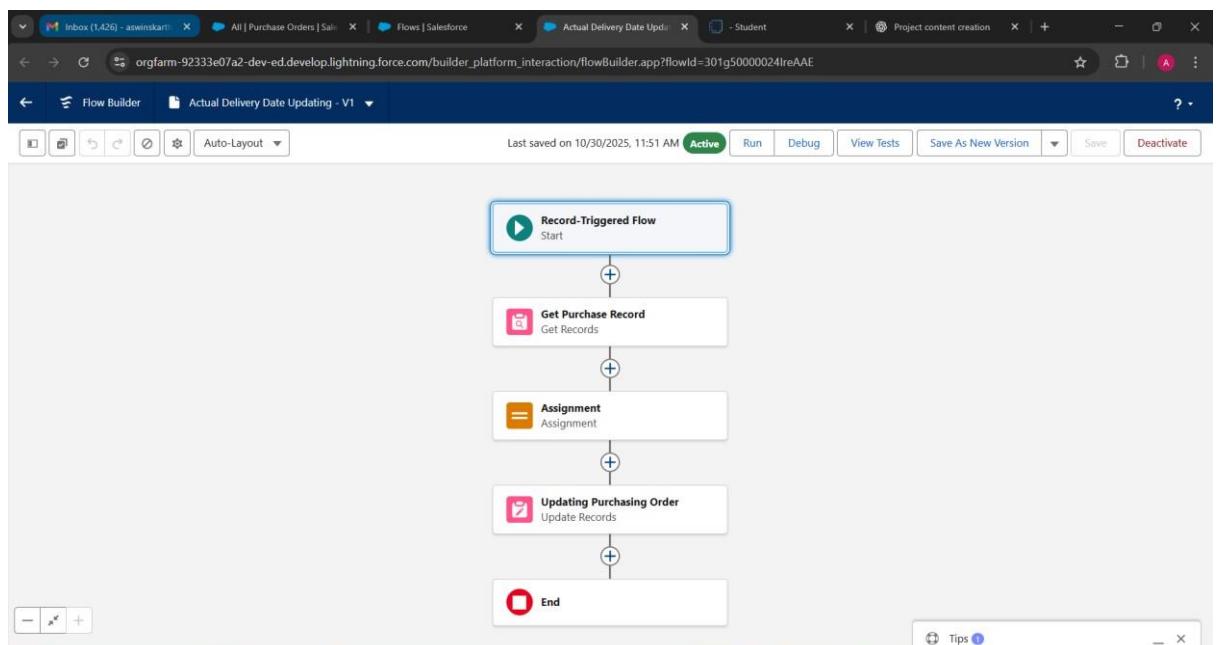
Action	Permission Set Name	Description	License
<input type="checkbox"/>	Partner Connect Plat...	Set up Partner Conn...	Salesforce
<input type="checkbox"/>	Payments Administr...	Has all the user per...	Salesforce Payme...
<input type="checkbox"/>	Connect Template Ma...	Manage prompt tem...	Einstein Prompt T...
<input type="checkbox"/>	Connect Template Use...	Run prompt templ...	Einstein Prompt Tem...
<input type="checkbox"/>	ConnectTemplateEver...	Cloud Integration User	Cloud Integration User
<input type="checkbox"/>	Publish Suggested to...	Access the Core A...	Cloud Integration User
<input type="checkbox"/>	Purchase Manage...		

. Automations and Flows

- **Flow – Actual Delivery Date Automation:**

A Record-Triggered Flow automatically updates the *Actual Delivery Date* field to be 3 days after the *Order Date*.

This ensures delivery tracking happens without manual updates.



- **Formula Fields:**

In the **Order Item** object, an *Amount* formula field calculates:

`Quantity_Received__c * Unit_Price__c`

SETUP > OBJECT MANAGER
Product

Compact Layouts

LABEL	API NAME	PRIMARY	MODIFIED BY	LAST MODIFIED
Product Compact Layout	Product_Compact_Layout		Aswin karthic	10/29/2025, 2:08 AM
System Default	SYSTEM	✓		

Apex Trigger and Handler

An **Apex Trigger and Handler Class** were created to automatically calculate the *Total Order Cost* whenever Order Items are inserted, updated, or deleted.

```
trigger CalculateTotalAmountTrigger on Order_Item__c (after insert, after update, after delete, after undelete) {
    // Call the handler class to handle the logic
    CalculateTotalAmountHandler.calculateTotal(Trigger.new, Trigger.old, Trigger.isInsert, Trigger.isUpdate, Trigger.isDelete, Trigger.isUn
}

Step 4:
i) In the Developer Console window, go to the top menu and click on "File".
ii) Select New: From the dropdown menu under "File", select "New".
iii) Choose Apex Class: Name it as CalculateTotalAmountHandler
```

Reports:

1. Purchase Orders based on Suppliers

A summary report grouping records by Supplier ID and Purchase Order ID, displaying Order Count and Total Order Cost.

The screenshot shows a report titled "Purchase Orders Report" with the following details:

Total Records	Total Total Amount
1	\$0.00

Below the table, there is a grid with columns: Supplier ID, Expected Delivery Date, Purchase Order: Purchase Order ID, Order Date, and Total Amount. One row is visible for "Naveen Srik (1)" with values: 10/30/2025 (1), Purchasing Manager (1), 10/30/2025, and \$0.00. A summary row at the bottom shows "Total (1)" with a value of \$0.00.

2. Complete Purchase Details Report

A detailed report combining Purchase Orders, Order Items, and Products with grouped columns for Supplier, Product, Quantity, and Amount.

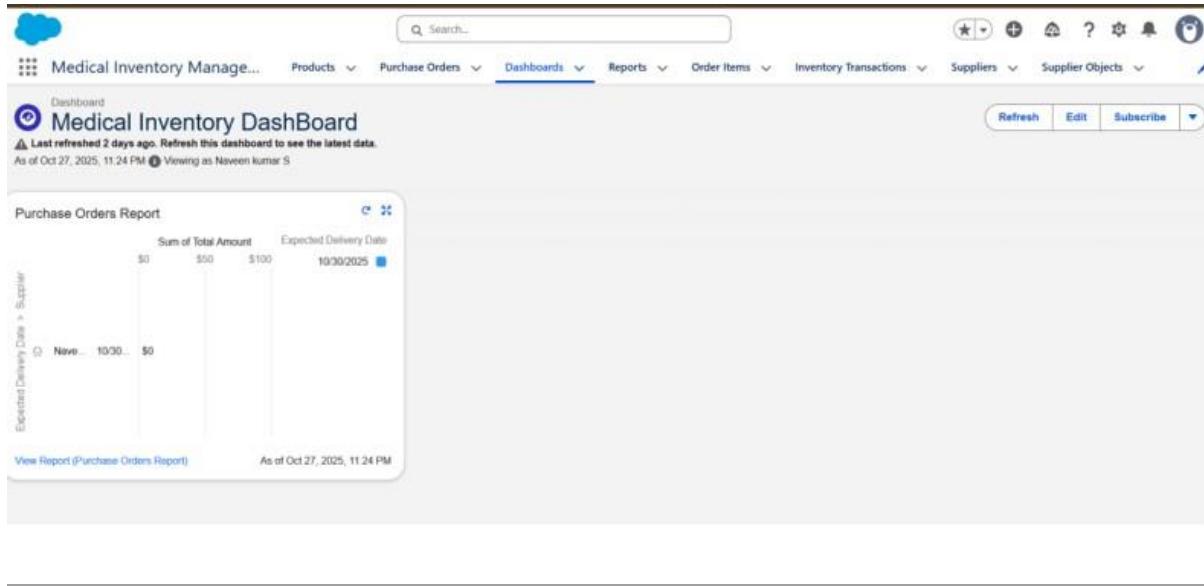
The screenshot shows a report titled "New Purchase Orders Report" with the following details:

Total Records	Total Total Amount
1	\$0.00

Below the table, there is a grid with columns: Purchase Order: Purchase Order ID, Product, Quantity, Total Amount, and Order Date. One row is visible for "Purchasing Manager (1)" with values: - (1), - (1), \$0.00, and 10/30/2025. A summary row at the bottom shows "Total (1)" with a value of \$0.00.

Dashboard:

A dashboard named *Medical Inventory Dashboard* visualizes purchase data, supplier performance, and total order cost using charts and tables derived from reports.



11. Key Scenarios Addressed by Salesforce

1. Inventory Accuracy:

Automates tracking of stock levels and transactions to prevent shortages.

2. Supplier Management:

Centralizes supplier data with email and phone contact integration.

3. Purchase Monitoring:

Enables managers to view real-time order progress through reports and dashboards.

4. Automated Calculations:

Formula fields and triggers keep cost data updated automatically.

5. Role-Based Access:

Profiles and permission sets control which users can create or edit records.

6. Data Validation:

Validation rules prevent incorrect delivery date entries and ensure reliable data.

12. Conclusion

The **Medical Inventory Management System** successfully automates the core functions of a medical procurement and inventory process using Salesforce.

