

# Medical Inventory Management

**College Name :** A.V.P College of Arts and Science

**College code :** asbruj

**TEAM ID :** NM2025TMID25370

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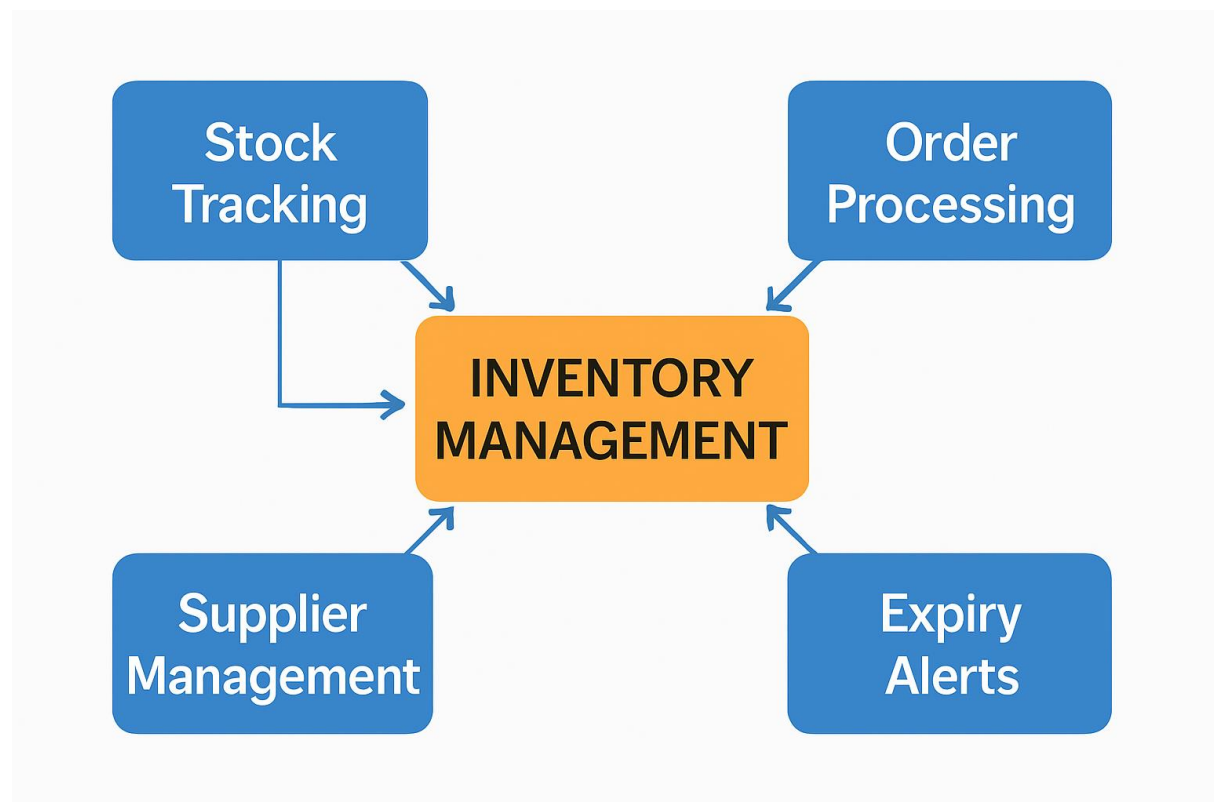
## INTRODUCTION

### Project Overview

This project implements a Medical Inventory Management System using Salesforce to efficiently track and control medical products, purchase orders, suppliers, and inventory transactions. It uses custom objects, automation, and reporting features to optimize inventory management workflows. The system ensures accurate stock levels and timely updates for better resource planning.

### Purpose

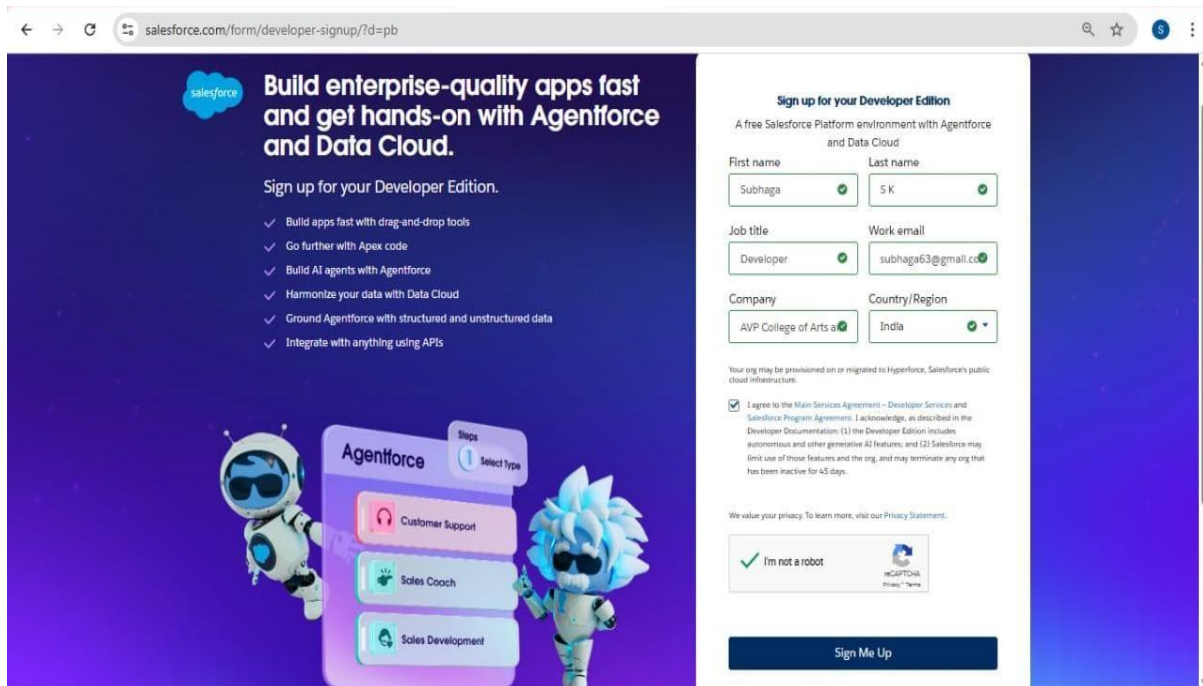
The purpose of this project is to reduce manual errors and improve efficiency in managing medical inventory. It aims to provide real-time tracking of stock and expiry dates, automate order processing tasks, and secure data access through role-based permissions. Ultimately, it supports healthcare organizations in maintaining optimal inventory and improving operational decisions.



## DEVELOPMENT PHASE

### 1. Creating Salesforce Developer Account for app development

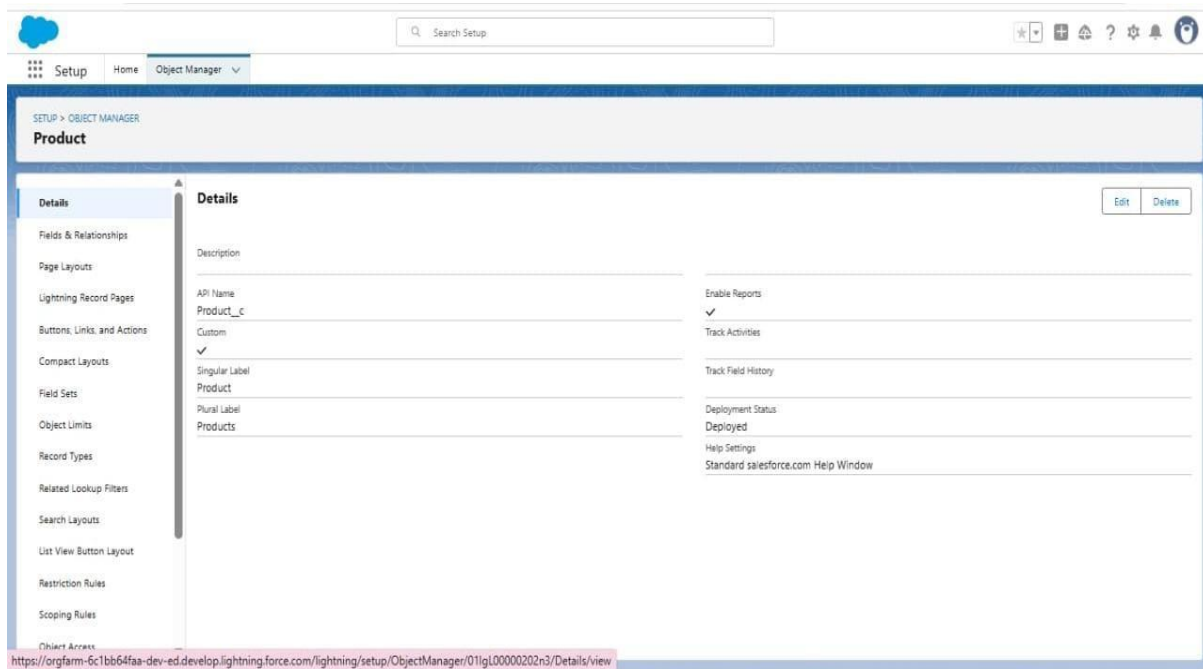
By using the URL: <https://developer.salesforce.com/signup>



The screenshot shows the Salesforce Developer Edition signup page. On the left, there's a blue banner with the text "Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud." Below this, it says "Sign up for your Developer Edition." and lists several benefits: "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", and "Integrate with anything using APIs". In the center, there's a graphic of two Agentforce characters. On the right, there's a form titled "Sign up for your Developer Edition" with fields for First name (Subhaga), Last name (S K), Job title (Developer), Work email (subhaga63@gmail.com), Company (AVP College of Arts & Science), and Country/Region (India). There's a checkbox for "I agree to the Main Services Agreement - Developer Services and Salesforce Program Agreement" and a "Sign Me Up" button at the bottom.

### 2. Creation Of Objects :

- Product object



The screenshot shows the Salesforce Setup page for the Product object. The left sidebar has a menu with 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", "Search Layouts", "List View Button Layout", "Restriction Rules", and "Scoping Rules". The main content area is titled "Product" and has a "Details" section. It includes fields for "Description", "API Name" (Product\_\_c), "Custom" (checked), "Singular Label" (Product), and "Plural Label" (Products). There are also checkboxes for "Enable Reports" (checked), "Track Activities", and "Track Field History". The "Deployment Status" is set to "Deployed". At the bottom, there's a "Help Settings" link that points to the "Standard salesforce.com Help Window".

- Purchase Order Object

The screenshot shows the Salesforce Setup interface for the 'Purchase Order' object. The left sidebar contains a 'Details' menu with 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, Restriction Rules, and Scoping Rules. The main content area is titled 'Purchase Order' and includes an 'Edit' button and a 'Delete' button. The 'Details' section is expanded, showing the following fields:

Field Name	Value
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

- Order Item Object

The screenshot shows the Salesforce Setup interface for the 'Order Item' object. The left sidebar contains a 'Details' menu with 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, Restriction Rules, and Scoping Rules. The main content area is titled 'Order Item' and includes an 'Edit' button and a 'Delete' button. The 'Details' section is expanded, showing the following fields:

Field Name	Value
Description	
API Name	Order_Item__c
Custom	✓
Singular Label	Order Item
Plural Label	Order Items
Enable Reports	✓
Track Activities	
Track Field History	
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

- Inventory Transaction Object

The screenshot shows the Salesforce Setup interface for the 'Inventory Transaction' object. The left sidebar contains a list of configuration options: 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, and Object Access. The main content area is titled 'Inventory Transaction' and includes a 'Details' section with the following fields:

Details	
Description	
API Name	Inventory_Transaction__c
Custom	<input checked="" type="checkbox"/>
Singular Label	Inventory Transaction
Plural Label	Inventory Transactions
Enable Reports	<input checked="" type="checkbox"/>
Track Activities	<input checked="" type="checkbox"/>
Track Field History	<input checked="" type="checkbox"/>
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

Buttons for 'Edit' and 'Delete' are located in the top right corner of the details section.

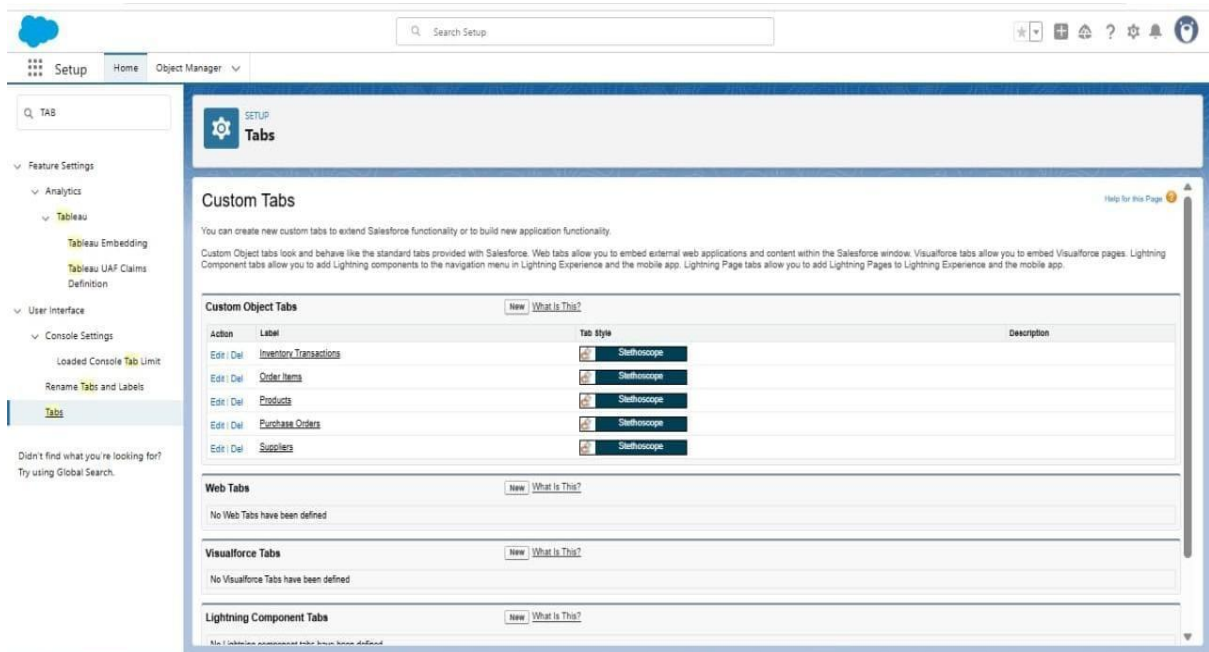
- Supplier Object

The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar contains a list of configuration options: 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, and Object Access. The main content area is titled 'Supplier' and includes a 'Details' section with the following fields:

Details	
Description	
API Name	Supplier_object__c
Custom	<input checked="" type="checkbox"/>
Singular Label	Supplier
Plural Label	Suppliers
Enable Reports	<input checked="" type="checkbox"/>
Track Activities	<input checked="" type="checkbox"/>
Track Field History	<input checked="" type="checkbox"/>
Deployment Status	Deployed
Help Settings	Standard salesforce.com Help Window

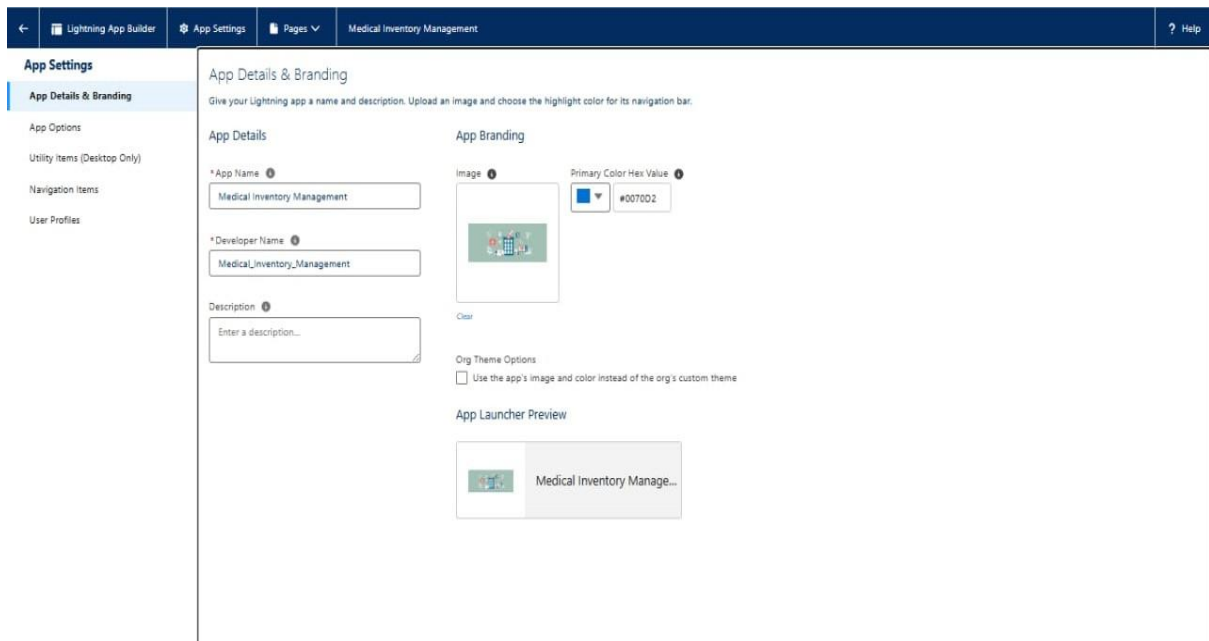
Buttons for 'Edit' and 'Delete' are located in the top right corner of the details section.

### 3. Creating Tabs for Objects



### 4. Building The Lightning App

- Created a lightening app for Medical Inventory Management



- Navigation Items

← Lightning App Builder

⚙ App Settings

📄 Pages ▾

Medical Inventory Management

? Help

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 items that you add. Some 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

Type to filter list...

Accounts

Activation Targets

Activations

All Sites

Alternative Payment Methods

Analytics

App Launcher

Appointment Categories

Appointment Invitations

Approval Requests

Approval Submission Details

Approval Submissions

Selected Items

Products

Purchase Orders

Order Items

Inventory Transactions

Suppliers

Reports

Dashboards

- Setting User Profiles

← Lightning App Builder

⚙ App Settings

📄 Pages ▾

Medical Inventory Management

? Help

App Settings

App Details & Branding

App Options

Utility Items (Desktop Only)

Navigation Items

User Profiles

User Profiles

Choose the user profiles that can access this app.

Available Profiles

Type to filter list...

Analytics Cloud Integration User

Analytics Cloud Security User

Anypoint Integration

Authenticated Website

Authenticated Website

B2B Reordering Portal Buyer Profile

Contract Manager

Custom: Marketing Profile

Custom: Sales Profile

Custom: Support Profile

Customer Community Login User

Customer Community Plus Login User

Selected Profiles

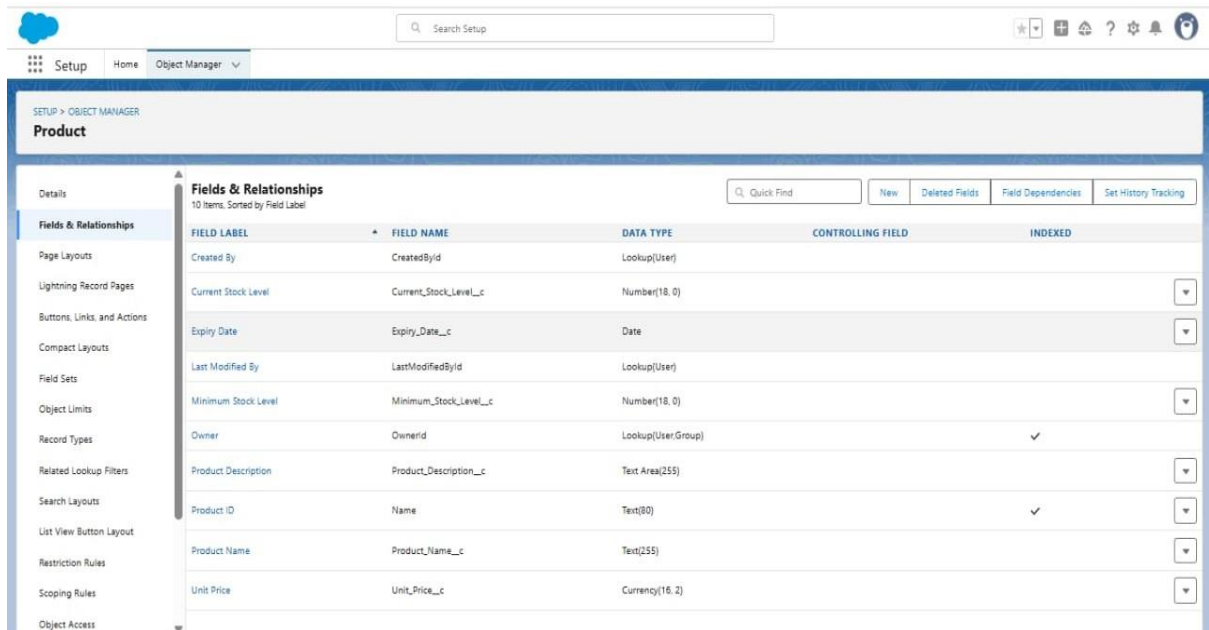
System Administrator

Purchase Manager

Inventory Manager

## 5. Adding Fields to Objects

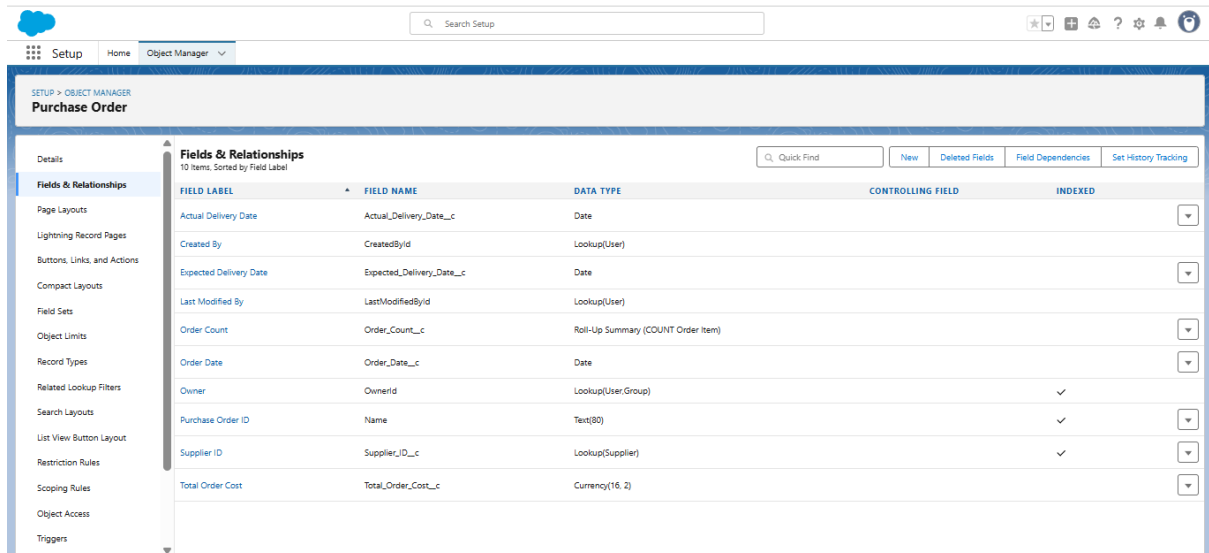
- Product



The screenshot shows the Salesforce Setup interface for the 'Product' object. The 'Fields & Relationships' tab is selected, displaying a list of 10 fields. The interface includes a sidebar with navigation options, a search bar, and a table of fields with columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
Current Stock Level	Current_Stock_Level__c	Number(18, 0)		
Expiry Date	Expiry_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Minimum Stock Level	Minimum_Stock_Level__c	Number(18, 0)		
Owner	OwnerId	Lookup(UserGroup)		✓
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



The screenshot shows the Salesforce Setup interface for the 'Purchase Order' object. The 'Fields & Relationships' tab is selected, displaying a list of 10 fields. The interface includes a sidebar with navigation options, a search bar, and a table of fields with columns for Field Label, Field Name, Data Type, Controlling Field, and Indexed status.

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(UserGroup)		✓
Purchase Order ID	Name	Text(80)		✓
Supplier ID	Supplier_ID__c	Lookup(Supplier)		✓
Total Order Cost	Total_Order_Cost__c	Currency(16, 2)		



- Order Item

SETUP > OBJECT MANAGER

### Order Item

Details

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

Quick Find:  New Deleted Fields Field Dependencies Set History Tracking

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 ID	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)		
Unit Price	Unit_Price__c	Formula (Currency)		

Left sidebar menu: 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, Object Access, Triggers.

- Inventory Transaction

SETUP > OBJECT MANAGER

### Inventory Transaction

Details

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

Quick Find:  New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedById	Lookup(User)		
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 ID	Name	Text(80)		✓
Transaction Type	Transaction_Type__c	Picklist		

Left sidebar menu: 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, Object Access.

- Supplier

The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar contains a navigation menu with 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, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The 'Fields & Relationships' section is active, displaying a table of 9 fields. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are Address, Contact Person, Created By, Email, Last Modified By, Owner, Phone Number, Supplier ID, and Supplier Name.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Text Area(255)		
Contact Person	Contact_Person__c	Text(100)		
Created By	CreatedBy	Lookup(User)		
Email	Email__c	Email		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Phone Number	Phone_Number__c	Phone		
Supplier ID	Name	Text(80)		✓
Supplier Name	Supplier_Name__c	Text(80)		

## 6. Updating Page layouts

- Product object

The screenshot shows the Salesforce Setup interface for the 'Product' object. The left sidebar contains a navigation menu with 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, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The 'Page Layouts' section is active, displaying a list of page layouts for the Product object. The 'Product' page layout is selected, showing a preview of the layout with fields like Product ID, Product Name, Product Description, Expiry Date, Unit Price, Current Stock Level, Minimum Stock Level, and Owner. The 'Mobile Cards (Salesforce mobile only)' section is also visible, showing a list of mobile cards for the Product object.

- Purchase Order object

The screenshot shows the Salesforce Setup interface for the 'Purchase Order' object. The left sidebar contains navigation options: Details, Fields & Relationships, Page Layouts (selected), 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, and Object Access. The main content area is titled 'Purchase Order' and includes a 'Fields' section with a 'Quick Find' bar and a list of fields: Section, Expected Delivery Date, Owner, Last Modified By, Purchase Order ID, Actual Delivery Date, Order Count, Supplier ID, and Created By. Below this is the 'Purchase Order Detail' layout configuration, which includes sections for Information, System Information, and Custom Links. The Information section contains fields like Purchase Order ID, Supplier ID, Order Date, Expected Delivery Date, Actual Delivery Date, Order Count, Total Order Cost, and Owner. The System Information section includes Created By and Last Modified By. The Custom Links section is currently empty. At the bottom, there is a 'Mobile Cards (Salesforce mobile only)' section with a note about dragging expanded lookups and mobile-enabled Visualforce pages.

- Order Item object

The screenshot shows the Salesforce Setup interface for the 'Order Item' object. The left sidebar contains navigation options: Details, Fields & Relationships, Page Layouts (selected), 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, and Object Access. The main content area is titled 'Order Item' and includes a 'Fields' section with a 'Quick Find' bar and a list of fields: Section, Last Modified By, Quantity Ordered, Order Item ID, Quantity Received, Amount, Product ID, Unit Price, and Created By. Below this is the 'Order Item Detail' layout configuration, which includes sections for Information, Product details, System Information, and Custom Links. The Information section contains fields like Order Item ID, Amount, Purchase Order, and Sample Text. The Product details section includes Product ID, Unit Price, Quantity Ordered, and Quantity Received. The System Information section includes Created By and Last Modified By. The Custom Links section is currently empty. At the bottom, there is a 'Mobile Cards (Salesforce mobile only)' section with a note about dragging expanded lookups and mobile-enabled Visualforce pages.

- Inventory Transaction object

The screenshot shows the Salesforce Setup interface for the 'Inventory Transaction' object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts (selected), 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, and Object Access. The main content area is titled 'Inventory Transaction' and includes a 'Save' button, 'Quick Save', 'Preview As...', 'Cancel', 'Undo', 'Redo', and 'Layout Properties' options. Below this is a 'Fields' section with a 'Quick Find' bar and a table of fields. The 'Inventory Transaction Detail' section shows a preview of the layout with fields like Transaction ID, Purchase Order ID, Transaction Type, Transaction Date, and Total Order Cost. The 'Mobile Cards (Salesforce mobile only)' section is also visible.

Field Name	Field Name	Field Name
Section	Owner	Transaction ID
Blank Space	Purchase Order ID	Transaction Type
Created By	Total Order Cost	
Last Modified By	Transaction Date	

Label: Transaction Type  
Name: Transaction\_Type  
Type: Picklist  
This item is currently in use (click to locate)

**Inventory Transaction Detail**

Standard Buttons: Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels

Custom Buttons:

Information (header visible on edit only)

Transaction ID: Sample Text  
Purchase Order ID: Sample Text  
Transaction Type: Sample Text  
Transaction Date: 0/7/2025  
Total Order Cost: \$123.45

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)

**Mobile Cards (Salesforce mobile only)**

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

Related Lists

- Supplier object

The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts (selected), 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, and Object Access. The main content area is titled 'Supplier' and includes a 'Save' button, 'Quick Save', 'Preview As...', 'Cancel', 'Undo', 'Redo', and 'Layout Properties' options. Below this is a 'Fields' section with a 'Quick Find' bar and a table of fields. The 'Supplier Detail' section shows a preview of the layout with fields like Supplier ID, Supplier Name, Contact Person, Phone Number, Email, Address, and Owner. The 'Mobile Cards (Salesforce mobile only)' section is also visible.

Field Name	Field Name	Field Name
Section	Created By	Phone Number
Blank Space	Email	Supplier ID
Address	Last Modified By	Supplier Name
Contact Person	Owner	

Label: Phone Number  
Name: Phone\_Number  
Type: Phone  
Length: 40  
This item is currently in use (click to locate)

Publisher section, and have saved the layout, then this section inherits that set of actions by default when you click to override.

**Supplier Detail**

Standard Buttons: Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels

Custom Buttons:

Information (header visible on edit only)

Supplier ID: Sample Text  
Supplier Name: Sample Text  
Contact Person: Sample Text

Phone Number: 1-415-555-1212  
Email: sarah.sample@company.com  
Address: Sample Text  
Owner: Sample Text

System Information (header visible on edit only)

Created By: Sample Text  
Last Modified By: Sample Text

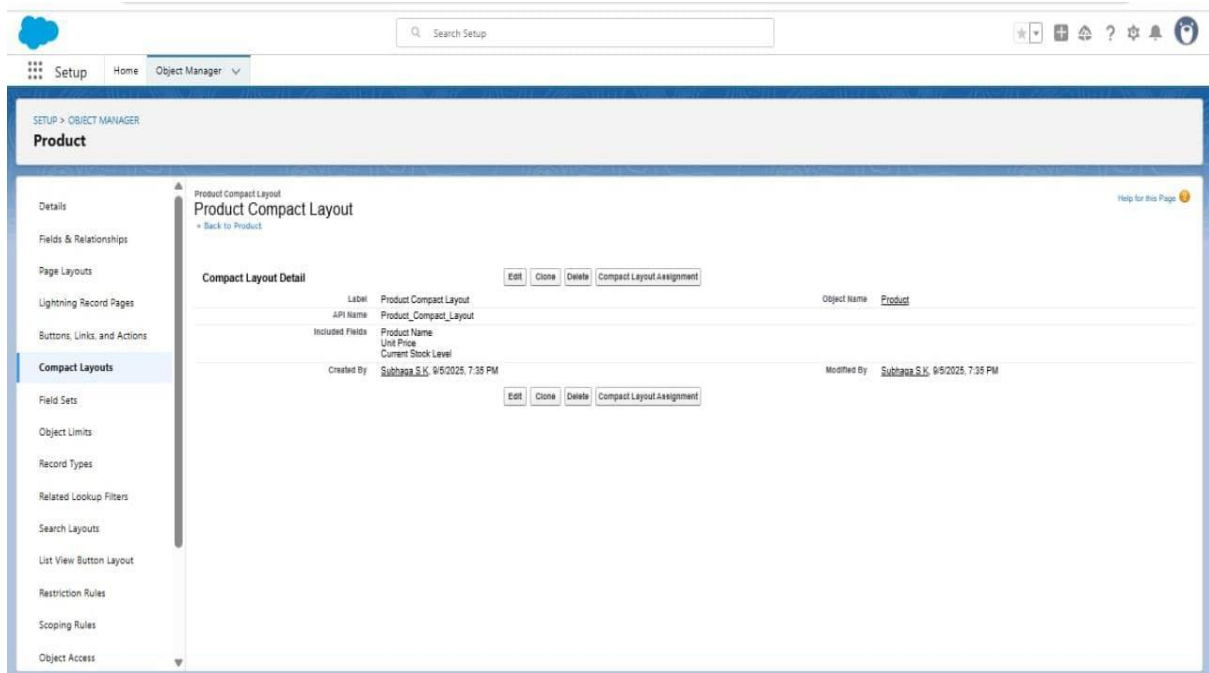
Custom Links (header visible on edit only)

**Mobile Cards (Salesforce mobile only)**

Drag expanded lookups and mobile-enabled Visualforce pages here to display them as mobile cards.

## 7. Creating Compact Layouts

- Product object

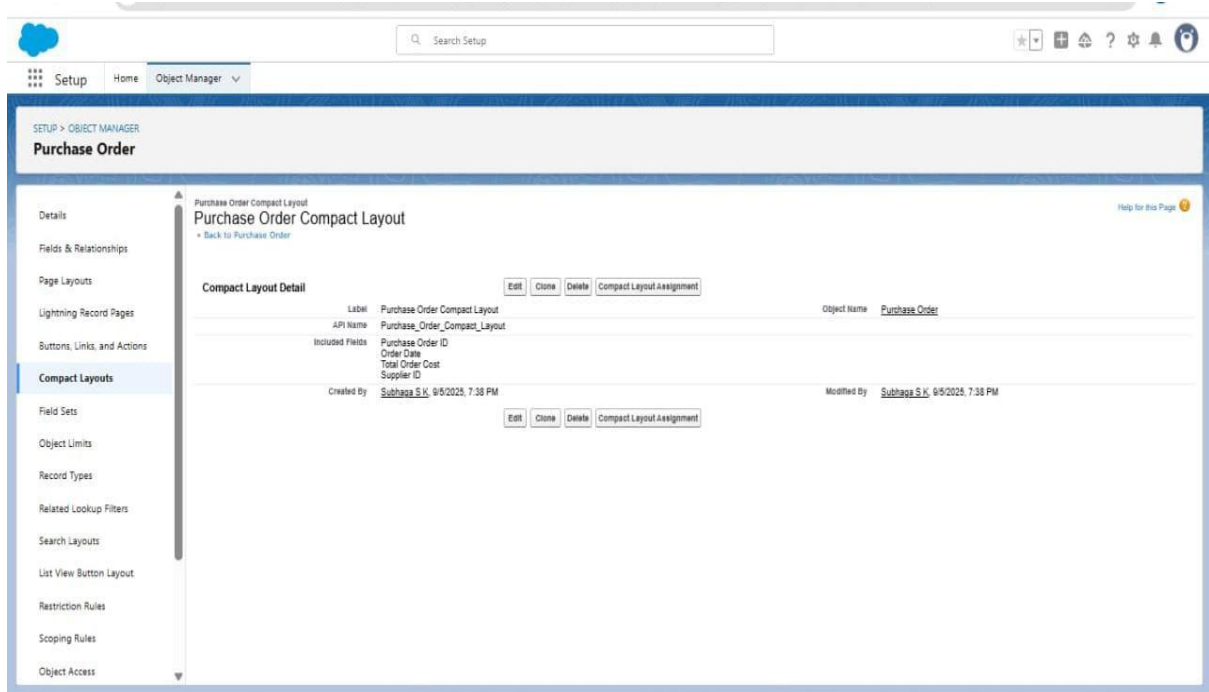


The screenshot shows the Salesforce Setup interface for the Product Compact Layout. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts (selected), Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The main content area is titled "Product Compact Layout" and includes a "Back to Product" link. Below the title is a "Compact Layout Detail" section with buttons for Edit, Clone, Delete, and Compact Layout Assignment. The detail section displays the following information:

Label	Product Compact Layout	Object Name	Product
API Name	Product_Compact_Layout		
Included Fields	Product Name Unit Price Current Stock Level		
Created By	Subhaga S.K. 6/5/2025, 7:35 PM	Modified By	Subhaga S.K. 6/5/2025, 7:35 PM

At the bottom of the detail section, there are buttons for Edit, Clone, Delete, and Compact Layout Assignment.

- Purchase Order object



The screenshot shows the Salesforce Setup interface for the Purchase Order Compact Layout. The left sidebar contains a navigation menu with options: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts (selected), Field Sets, Object Limits, Record Types, Related Lookup Filters, Search Layouts, List View Button Layout, Restriction Rules, Scoping Rules, and Object Access. The main content area is titled "Purchase Order Compact Layout" and includes a "Back to Purchase Order" link. Below the title is a "Compact Layout Detail" section with buttons for Edit, Clone, Delete, and Compact Layout Assignment. The detail section displays the following information:

Label	Purchase Order Compact Layout	Object Name	Purchase Order
API Name	Purchase_Order_Compact_Layout		
Included Fields	Purchase Order ID Order Date Total Order Cost Supplier ID		
Created By	Subhaga S.K. 6/5/2025, 7:38 PM	Modified By	Subhaga S.K. 6/5/2025, 7:38 PM

At the bottom of the detail section, there are buttons for Edit, Clone, Delete, and Compact Layout Assignment.

## 8. Validation Rules

The screenshot shows the Salesforce Setup interface. The top navigation bar includes a search bar labeled 'Search Setup' and several utility icons. The left sidebar contains a menu with 'Setup' selected, and sub-items like 'Home' and 'Object Manager'. The main content area is titled 'PURCHASE ORDER' and 'Purchase Order Validation Rule'. It features a 'Validation Rule Detail' section with the following information:

Validation Rule Detail	
Rule Name	Expected_Delivery_Date_Validation
Error Condition Formula	(Expected_Delivery_Date__c - Order_Date__c) > 7
Error Message	The Expected Delivery Date should not exceed 7 days.
Error Location	Top of Page
Description	
Created By	Subhaga S K, 9/5/2025, 7:40 PM
Modified By	Subhaga S K, 9/5/2025, 7:40 PM

Buttons for 'Edit' and 'Clone' are available for the rule name, error message, and the bottom row of details.

- Creating An Expected Delivery Date Validation Rule to The Purchase Order Object

The screenshot shows the Salesforce Setup interface in edit mode for the 'Purchase Order Validation Rule'. The top navigation bar and left sidebar are consistent with the previous screenshot. The main content area is titled 'PURCHASE ORDER' and 'Purchase Order Validation Rule'. It features a 'Validation Rule Detail' section with the following information:

Validation Rule Detail	
Rule Name	Expected_Delivery_Date_Validation
Active	<input checked="" type="checkbox"/>
Description	

Buttons for 'Edit' and 'Clone' are available for the rule name and description.

The 'Error Condition Formula' section includes an example: `Discount_Percent__c > 0.30`. Below the example, it states: 'Display an error if Discount is more than 30%. If this formula expression is true, display the text defined in the Error Message area'. The formula field contains: `(Expected_Delivery_Date__c - Order_Date__c) > 7`. A 'Check Syntax' button is located below the formula field.

The 'Functions' section on the right lists various functions: ABS, ACOS, ADDMONTHS, AND, ASCII, ASIN. Below the list, it says 'Insert Selected Function' and 'ABS(number) Returns the absolute value of a number, a number without its sign'. A 'Help on this function' link is also present.



## 9. Configuring for user access

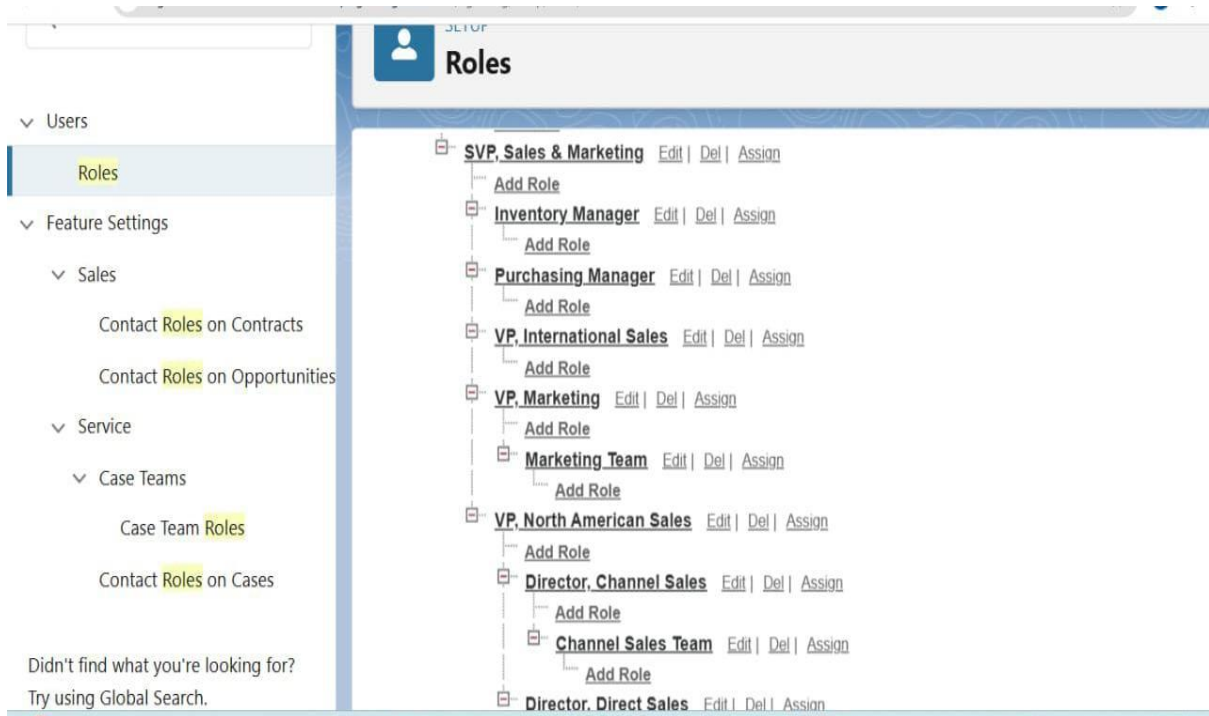
- Creating Inventory Manager profile

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The left sidebar contains a search bar with 'pro' and a list of navigation items: Hyperforce Assistant, Users, Profiles (selected), Data, Feature Settings, Data.com, Marketing, and Sales. The main content area displays the 'Inventory Manager' profile details. At the top, it says 'Profile: Inventory Manager' and provides instructions on how to change a user's profile. Below this, a list of enabled permissions is shown, including Login IP Ranges, Apex Class Access, Visualforce Page Access, External Data Source Access, Named Credential Access, External Credential Principal Access, Custom Metadata Type Access, Custom Setting Definitions Access, Flow Access, Service Presence Status Access, and Custom Permissions. The 'Profile Detail' section includes fields for Name (Inventory Manager), User License (Salesforce), Description, Created By (Subhaga S K, 9/5/2025, 7:44 PM), and Modified By (Subhaga S K, 9/7/2025, 11:26 PM). The 'Page Layouts' section shows Standard Object Layouts for Global (Global Layout), Location Group (Location Group Layout), Email Application (Not Assigned), and Location Group Assignment (Location Group Assignment Layout).

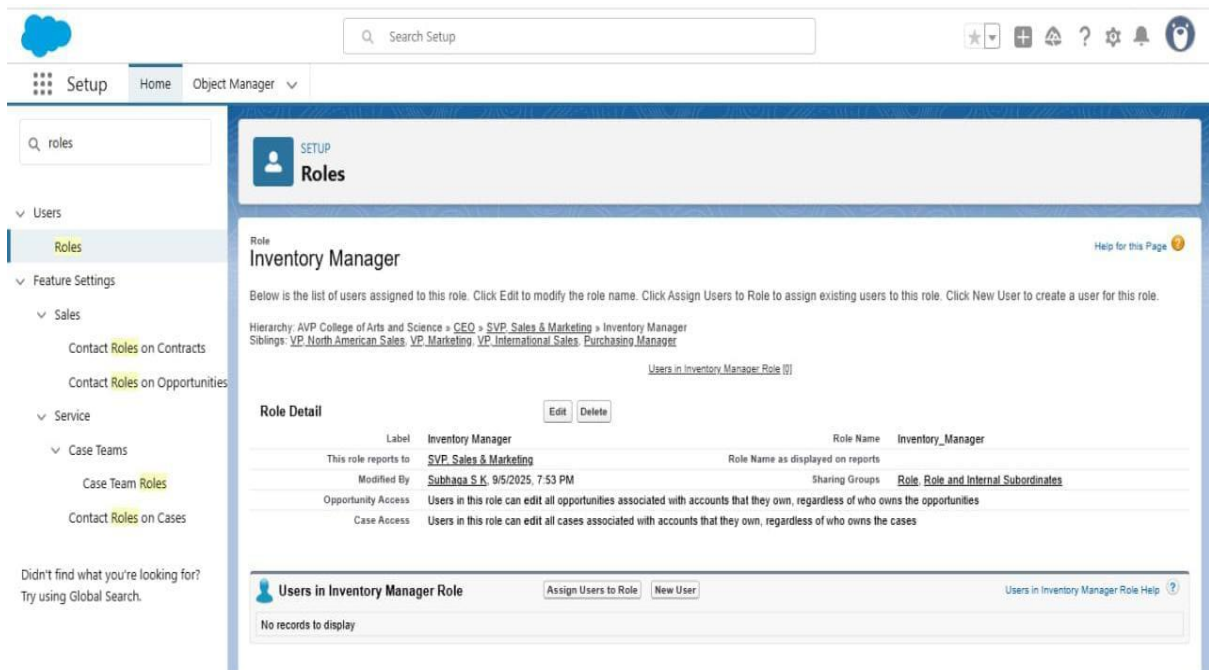
- Creating Purchase manager Profile

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The left sidebar contains a search bar with 'pro' and a list of navigation items: Hyperforce Assistant, Users, Profiles (selected), Data, Feature Settings, Data.com, Marketing, and Sales. The main content area displays the 'Purchase Manager' profile details. At the top, it says 'Profile: Purchase Manager' and provides instructions on how to change a user's profile. Below this, a list of enabled permissions is shown, including Login IP Ranges, Apex Class Access, Visualforce Page Access, External Data Source Access, Named Credential Access, External Credential Principal Access, Custom Metadata Type Access, Custom Setting Definitions Access, Flow Access, Service Presence Status Access, and Custom Permissions. The 'Profile Detail' section includes fields for Name (Purchase Manager), User License (Salesforce), Description, Created By (Subhaga S K, 9/5/2025, 7:49 PM), and Modified By (Subhaga S K, 9/7/2025, 11:26 PM). The 'Page Layouts' section shows Standard Object Layouts for Global (Global Layout), Location Group (Location Group Layout), Email Application (Not Assigned), and Location Group Assignment (Location Group Assignment Layout).

## 10. Defining Roles

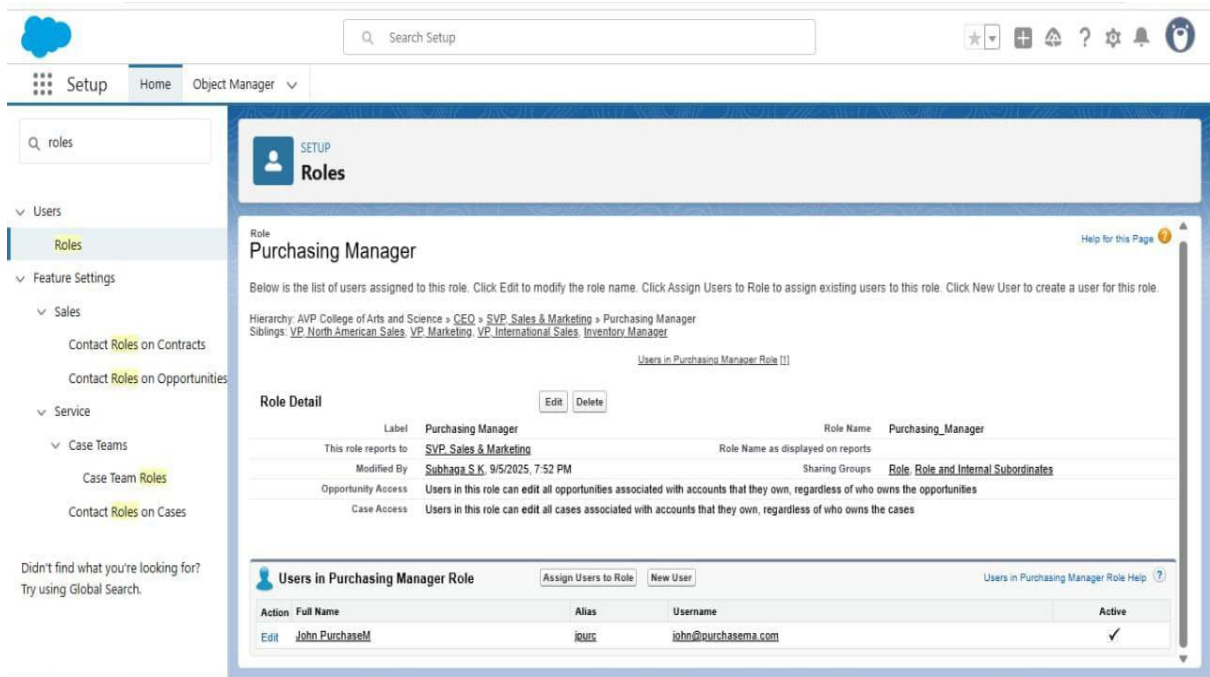


- Creating Inventory Manager Role

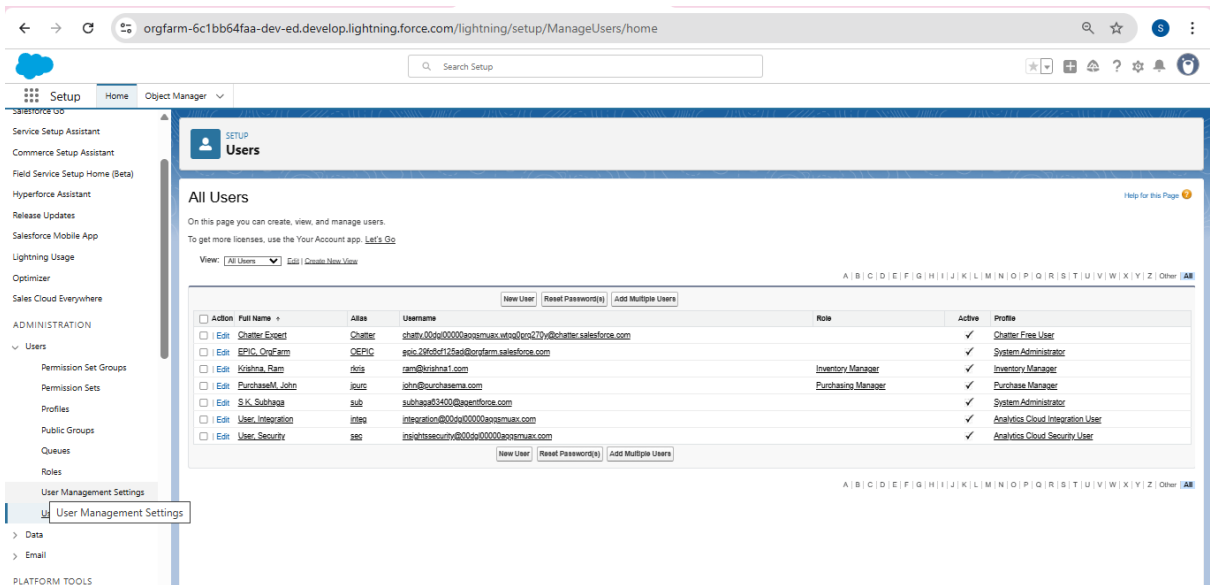




- Creating purchasing manager role



## 11. Adding User



- Created a purchasing manager user – JohnPurchaseM

The screenshot shows the Salesforce Setup page for the user John PurchaseM. The left sidebar contains navigation links for Setup, Home, Object Manager, and various setup assistants. The main content area displays the user's details and permissions.

User Detail		Role
Name	John PurchaseM	Purchasing Manager
Alias	jpurch	User License
Email	john@purchasema.com [Verify]	Profile
Username	john@purchasema.com	Purchasing Manager
Nickname	User1787138945206721821	Active
Title		Marketing User
Company		Offline User
Department		Knowledge User
Division		Flow User
Address		Service Cloud User
Time Zone	(GMT-07:00) Pacific Daylight Time (America/Los_Angeles)	Site.com Contributor User
Locale	English (United States)	Site.com Publisher User
Language	English	WDC User
Delegated Approver		Mobile Push Registrations
Manager		Data.com User Type
Receive Approval Request Emails	Only if I am an approver	Accessibility Mode (Classic Only)
Federation ID		Debug Mode
App Registration: One-Time Password Authenticator		High-Contrast Palette on Charts
App Registration: Salesforce Authenticator		Load Lightning Pages While Scrolling
Security Key (U2F or WebAuthn)		Salesforce CRM Content User
Lightning Login		Receive Salesforce CRM Content Email Alerts
		Receive Salesforce CRM Content Alerts as Daily Digest

- Created an inventory manager user - RamKrishna

The screenshot shows the Salesforce Setup page for the user Ram Krishna. The left sidebar contains navigation links for Setup, Home, Object Manager, and various setup assistants. The main content area displays the user's details and permissions.

User Detail		Role
Name	Ram Krishna	Inventory Manager
Alias	rkrs	User License
Email	subhasa03@gmail.com [Verified]	Profile
Username	ram@krishna1.com	Inventory Manager
Nickname	User17879424352927189904	Active
Title		Marketing User
Company		Offline User
Department		Knowledge User
Division		Flow User
Address		Service Cloud User
Time Zone	(GMT-07:00) Pacific Daylight Time (America/Los_Angeles)	Site.com Contributor User
Locale	English (United States)	Site.com Publisher User
Language	English	WDC User
Delegated Approver		Mobile Push Registrations
Manager		Data.com User Type
Receive Approval Request Emails	Only if I am an approver	Accessibility Mode (Classic Only)
Federation ID		Debug Mode
App Registration: One-Time Password Authenticator		High-Contrast Palette on Charts
App Registration: Salesforce Authenticator		Load Lightning Pages While Scrolling
Security Key (U2F or WebAuthn)		Salesforce CRM Content User
Lightning Login		Receive Salesforce CRM Content Email Alerts
		Receive Salesforce CRM Content Alerts as Daily Digest

## 12. Creating And Assigning Permission Sets

The screenshot shows the Salesforce Setup interface for a Permission Set named "Purchase Manager Create Access". The left sidebar contains navigation links: Setup, Home, Object Manager, Users, Permission Set Groups, Permission Sets (selected), Custom Code, and Custom Permissions. The main content area displays the "Permission Set Overview" for "Purchase Manager Create Access".

**Permission Set Overview**

Field	Value
Description	
License	
Session Activation Required	<input type="checkbox"/>
Permission Set Groups Added To	0
API Name	Purchase_Manager_Create_Access
Namespace Prefix	
Created By	Subhaga S K
Created Date	9/5/2025, 11:17 PM
Last Modified By	Subhaga S K
Last Modified Date	9/5/2025, 11:18 PM

**Apps**

**Assigned Apps**  
Settings that specify which apps are visible in the app menu

**Assigned Connected Apps**  
Settings that specify which connected apps are visible in the app menu

**Object Settings**  
Permissions to access objects and fields, and settings such as tab availability

**App Permissions**  
Permissions to perform app-specific actions, such as "Manage Call Centers"

- Purchase Manager Create Access

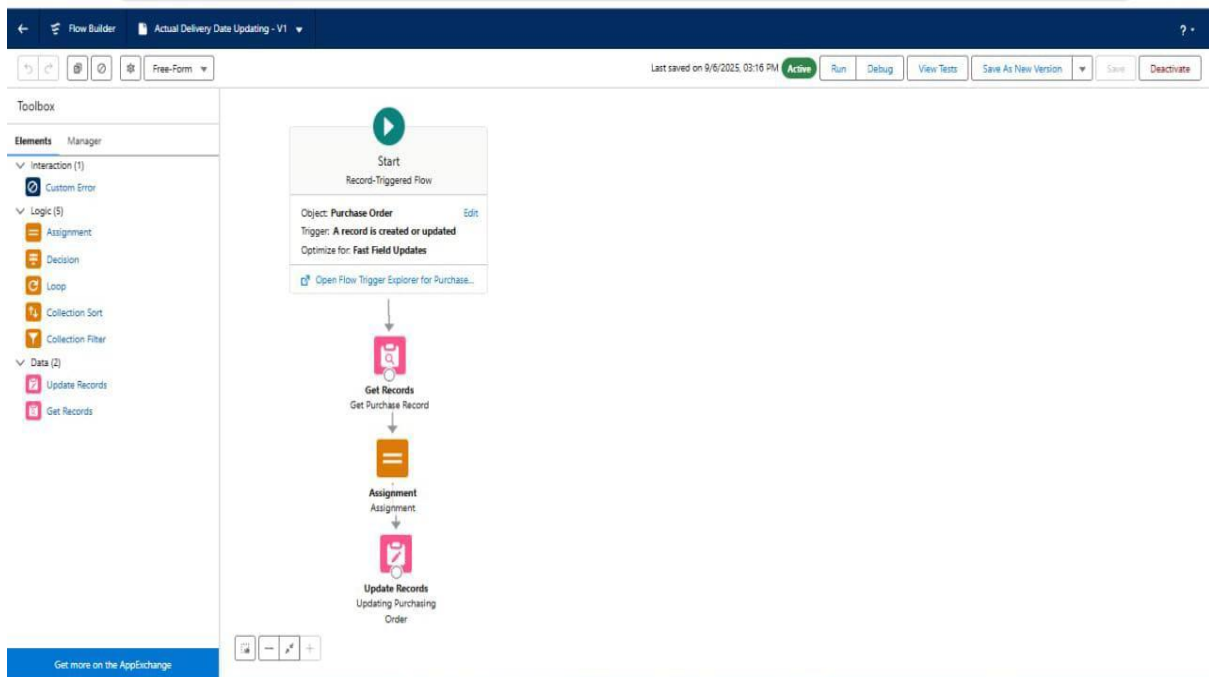
The screenshot shows the Salesforce Setup interface for a Permission Set named "Purchase Manager Create Access". The left sidebar contains navigation links: Setup, Home, Object Manager, Users, Permission Set Groups, Permission Sets (selected), Custom Code, and Custom Permissions. The main content area displays the "Current Assignments" for "Purchase Manager Create Access".

**Current Assignments**

Full Name ↑	Active	Role	Profile	User License	Expires On
John PurchaseM	✓	Purchasing Manager	Purchase Manager	Salesforce	

**Buttons:** Add Assignment

### 13. Building Flows to Update the Actual Delivery Date



### 14. Developing apex Triggers

```
File Edit Debug Test Workspace Help < >
CalculateTotalAmountTrigger.apxt CalculateTotalAmountHandler.apxc
Code Coverage: None API Version: 64 Go To

1 trigger CalculateTotalAmountTrigger on Order_Item__c (after insert, after update, after delete, after undelete) {
2
3     // Call the handler class to handle the logic
4
5     CalculateTotalAmountHandler.calculateTotal(trigger.new, trigger.old, trigger.isInsert, trigger.isUpdate, trigger.isDelete, trigger.isUndelete);
6
7 }
```

User	Application	Operation	Time	Status	Read	Size
------	-------------	-----------	------	--------	------	------

Filter Click here to filter the log list

- Creating a trigger to calculate total amount on order item

```

1 public class CalculateTotalAmountHandler {
2
3
4
5 // Method to calculate the total amount for Purchase Orders based on related Order Items
6
7 public static void calculateTotal(List<Order_Item_c> newItems, List<Order_Item_c> oldItems, Boolean isInsert, Boolean isUpd
8
9
10
11 // Collect Purchase Order IDs affected by changes in Order_Item_c records
12
13 Set<Id> parentIds = new Set<Id>();
14
15

```

The screenshot shows an IDE window with a code editor and a logs panel. The code editor displays the implementation of the `CalculateTotalAmountHandler` class. The logs panel is currently empty.

## 15. Creating reports for data analysis

- Purchase Order Based on Suppliers Report

The screenshot shows a web application interface with a report titled "Purchase Orders based on Suppliers". The report displays a table with columns: Supplier ID, Purchase Order: Purchase Order ID, Order Count, and Total Order Cost. The table contains 4 records and a total row.

Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
Supplier-001 (1)	purchase-002 (1)	1	\$50,000.00
Supplier-002 (2)	purchase-003 (1)	2	\$700.00
	purchase-004 (1)	1	\$30,000.00
Supplier-003 (1)	purchase-001 (1)	1	\$100,000.00
<b>Total (4)</b>		<b>5</b>	<b>\$180,700.00</b>

The report also includes summary statistics at the top: Total Records: 4, Total Order Count: 5, Total Total Order Cost: \$180,700.00. The interface includes a search bar, navigation tabs, and a footer with row count settings.

- Complete Purchase Details Report

Medical Inventory ...

ProductsPurchase OrdersOrder ItemsInventory TransactionsSuppliersReportsDashboards

Q Search...

StarAddShareHelpSettingsNotificationsProfile

Report: Purchase Orders with Order Items and Product ID

Complete Purchase Details Report

Enable Field Editing

QFilterPrintExportEdit

Total Records5

Total Order Count5

Total Quantity Received203

Total Amount\$454,000.00

Supplier ID	Actual Delivery Date	Purchase Order: Purchase Order ID	Product ID: Product ID	Product ID: Product Name	Order Count	Quantity Received	Amount
Supplier-003 (1)	9/7/2025 (1)	purchase-001 (1)	Gen-001	Syringes	1	10	\$2,500.00
Supplier-001 (1)	9/4/2025 (1)	purchase-002 (1)	Gen-001	Syringes	1	50	\$12,500.00
Supplier-002 (3)	9/5/2025 (2)	purchase-003 (2)	syn-001	calpol 120mg Syrup	2	10	\$40,000.00
			Cap-001	Dolo 650	2	103	\$306,000.00
	9/8/2025 (1)	purchase-004 (1)	Cap-001	Dolo 650	1	30	\$90,000.00
Total (5)					5	203	\$454,000.00

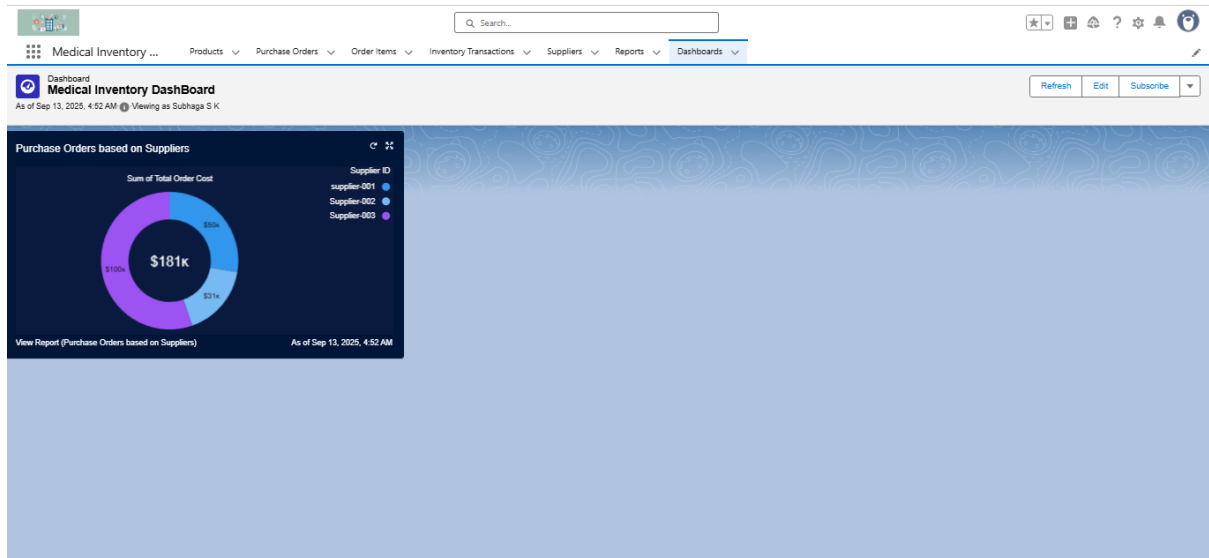
Row Counts

Detail Rows

Subtotals

Grand Total

## 16. Designing Dashboard for Insights



## RESULTS

### OUTPUT:

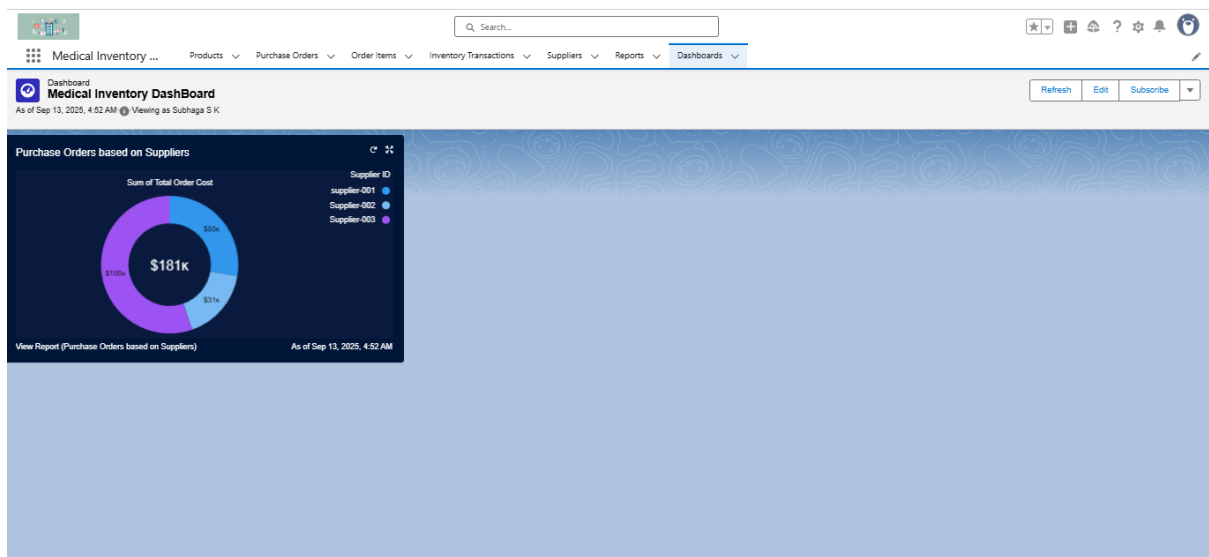
#### 1. Error Message

- “The Expected Delivery Date Should Not Exceed 7 Days”

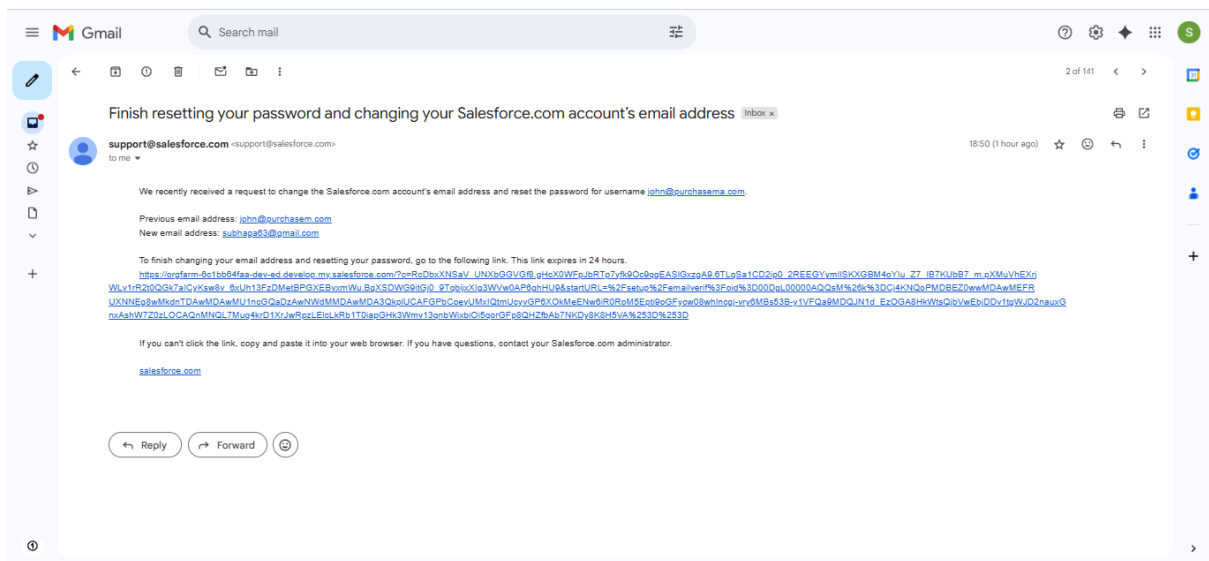
The screenshot shows a web application interface for managing purchase orders. The top navigation bar includes links for Medical Inventory, Products, Purchase Orders, Order Items, Inventory Transactions, Suppliers, Reports, and Dashboards. The main content area displays the details for Purchase Order 'purchase-003'. The form includes fields for Order Date (9/2/2025), Total Order Cost (\$700), Supplier ID (Supplier-002), Actual Delivery Date (9/5/2025), Order Count (2), and Expected Delivery Date (9/24/2025). A red error message box is overlaid on the form, stating: "We hit a snag. Review the errors on this page. The Expected Delivery Date should not exceed 7 days." The error message is attributed to Subhaga S K, 9/6/2025, 3:41 AM. The form also includes a 'Created By' field and a 'By' field (Subhaga S K, 9/9/2025, 9:09 AM). The form has 'Cancel' and 'Save' buttons.

#### 2. Dashboard

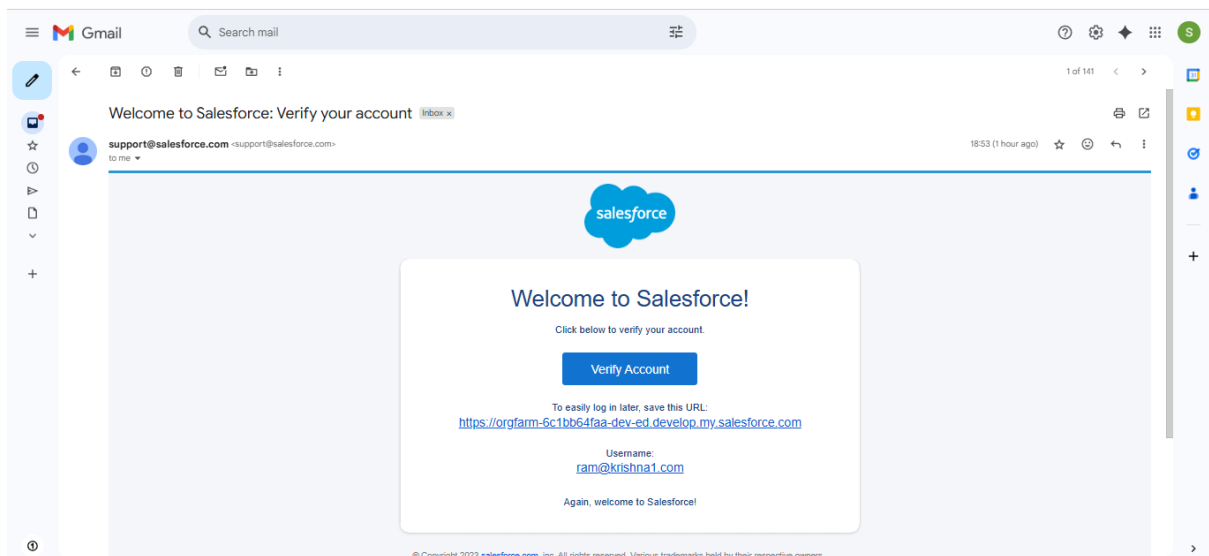
- Graph



### 3. Received User login and reset password email for JohnPurchaseM



### 4. Received User login and reset password email for RamKrishna





## **ADVANTAGES AND DISADVANTAGES**

### **Advantages:**

- **Improves Inventory Accuracy:** Automates tracking of stock levels and expiry dates, reducing errors and preventing use of expired products.
- **Centralized Data Management:** Stores all supplier, product, and purchase order data in one integrated system for better coordination.
- **Enhanced Reporting and Insights:** Generates comprehensive reports and dashboards for effective monitoring of inventory and supplier performance.
- **Process Automation:** Uses Salesforce flows and triggers to automate routine tasks, saving time and increasing efficiency.
- **Secure Access Control:** Implements profiles, roles, and permission sets to ensure users have appropriate and secure data access.

### **Disadvantages:**

- **Time-Consuming Setup:** Initial configuration of objects, fields, layouts, and automation requires considerable development effort.
- **User Training Required:** Users and admins must learn how to navigate and use the system effectively, which may take time.
- **Platform Dependency:** Relies on Salesforce, which involves subscription costs and potential limits on customization or data volume.
- **Customization Complexity:** Advanced business rules may require Apex coding, increase maintenance and troubleshoot efforts.

## **CONCLUSION**

The Medical Inventory Management System built on Salesforce successfully streamlines and automates the tracking of medical supplies. By using custom objects, validation rules, flows, and Apex triggers, the system ensures data accuracy and operational efficiency. Role-based access controls secure sensitive information while reports and dashboards provide valuable insights for decision-making. This solution reduces manual effort and supports timely inventory management. Overall, the project delivers a scalable, user-friendly platform that can adapt to future organizational needs and improve healthcare supply management.

## APPENDIX

**Source code :** provided in apex class and triggers.

### **CalculateTotalAmountTrigger.apxt\***

trigger CalculateTotalAmountTrigger on Order\_Item\_\_c (after insert, after update, after delete, after undelete) {

```
    CalculateTotalAmountHandler.calculateTotal(trigger.new,    trigger.old,    trigger.isInsert,
    trigger.isUpdate, trigger.isDelete, trigger.isUndelete);
}
```

### **CalculateTotalAmountHandler.apxc\***

```
public class CalculateTotalAmountHandler {
```

```
    public static void calculateTotal(List<Order_Item__c> newItems, List<Order_Item__c>
    oldItems, Boolean isInsert, Boolean isUpdate, Boolean isDelete, Boolean isUndelete) {
```

```
        Set<Id> parentIds = new Set<Id>();
```

```
        if (isInsert || isUpdate || isUndelete) {
```

```
            for (Order_Item__c ordItem : newItems) {
```

```
                parentIds.add(ordItem.Purchase_Order_Id__c);
```

```
            }
```

```
        }
```

```
        if (isUpdate || isDelete) {
```

```
            for (Order_Item__c ordItem : oldItems) {
```

```
                parentIds.add(ordItem.Purchase_Order_Id__c);
```

```
            }
```

```
        }
```

```
        Map<Id, Decimal> purchaseToUpdateMap = new Map<Id, Decimal>();
```

```
        if (!parentIds.isEmpty()) {
```

```
            // Perform an aggregate query to sum the Amount__c for each Purchase Order
```

```
            List<AggregateResult> aggrList = [
```

```
                SELECT Purchase_Order_Id__c, SUM(Amount__c) totalAmount
```

```
                FROM Order_Item__c
```

```
                WHERE Purchase_Order_Id__c IN :parentIds
```

```
                GROUP BY Purchase_Order_Id__c
```

```
            ];
```

```

for (AggregateResult aggr : aggrList) {
    Id purchaseOrderId = (Id)aggr.get('Purchase_Order_Id__c');
    Decimal totalAmount = (Decimal)aggr.get('totalAmount');
    purchaseToUpdateMap.put(purchaseOrderId, totalAmount);
    List<Purchase_Order__c> purchaseToUpdate = new List<Purchase_Order__c>();
    for (Id purchaseOrderId : purchaseToUpdateMap.keySet()) {
        Purchase_Order__c purchaseOrder = new Purchase_Order__c(Id =
purchaseOrderId, Total_Order_cost__c = purchaseToUpdateMap.get(purchaseOrderId));
        purchaseToUpdate.add(purchaseOrder);
    }
    if (!purchaseToUpdate.isEmpty()) {
        update purchaseToUpdate;
    }
}
}
}

```