

MEDICAL INVENTORY

COLLEGE NAME: SHRI NEHRU MAHA VIDYALAYA COLLEGE OF ARTS AND SCIENCE

COLLEGE CODE: BRU26

TEAM NM ID : NM2025TMID20761

TEAM MEMBERS:

Team Leader Name: JYOLSANA V

Email: 23bcajyolsana@gmail.com

Team Member: HARSHINI N

Email: 23bcaharshini@gmail.com

Team Member: UDHAYA MOORTHY R

Email: udhayamoorthi2006@gmail.com

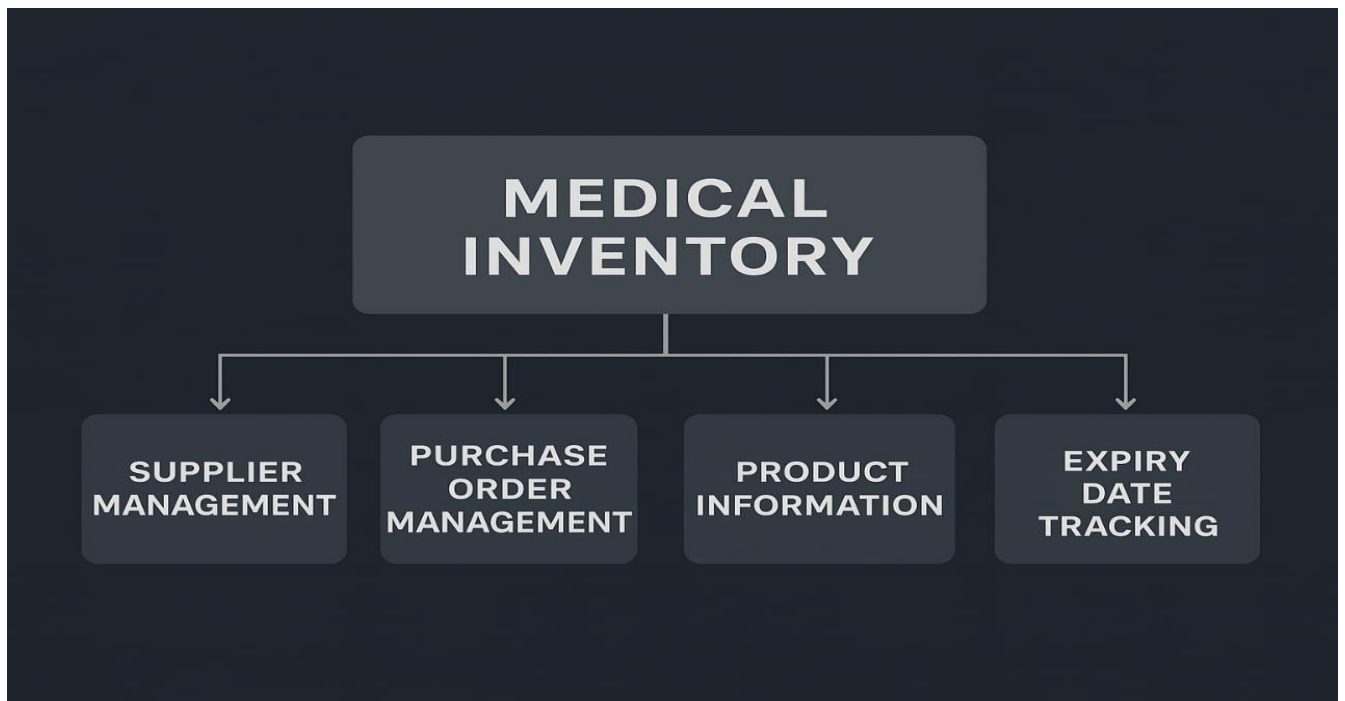
Team Member: DHARSHINIPRIYA B

Email: 2023bcadharshinipriya@gmail.com

1.INTRODUCTION

1.1 Project Overview

The Medical Inventory Management System is a comprehensive Salesforce application designed to streamline and manage various operational aspects of the medical inventory. It can efficiently maintain supplier details, manage purchase orders, track product details and transactions, and monitor expiry dates of products, thereby improving operational efficiency, data accuracy, and reporting capabilities.



1.2 Purpose

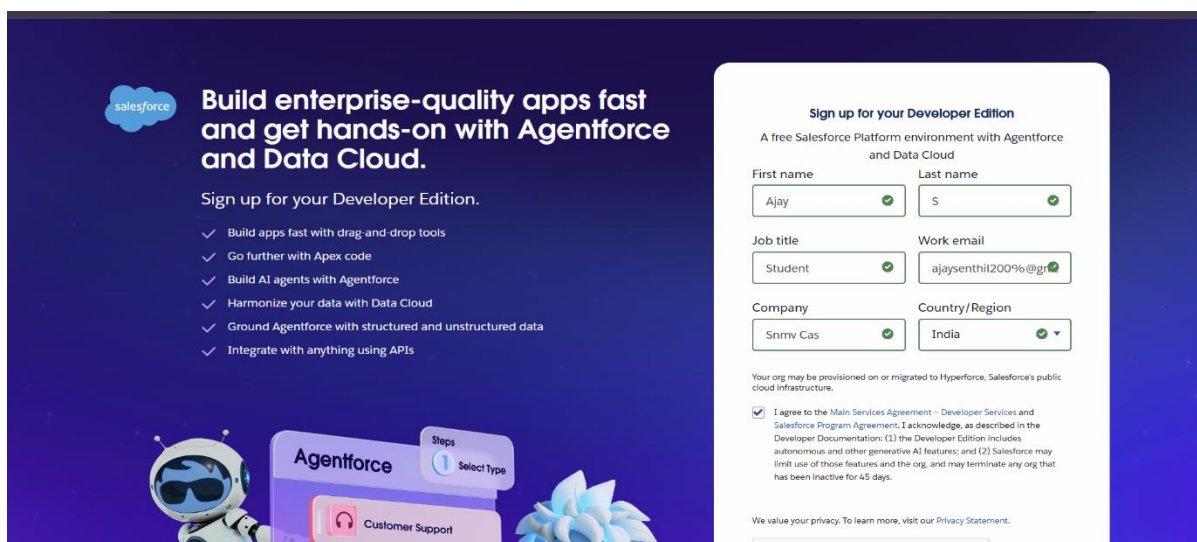
This project is a comprehensive Salesforce application to streamline and manage various operational aspects of medical inventory. The system aims to efficiently maintain supplier details, manage purchase orders, track product details and transactions, and

monitor the expiry dates of products. Maintain detailed records of suppliers, including contact information. Catalog product information, including descriptions, stock levels. Monitor and track product expiry dates to avoid using expired items. Comprehensive reports to track supplier performance, and purchase orders.

DEVELOPMENT PHASE

Creating Developer Account:

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



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: Ajay ✓ Last name: S ✓

Job title: Student ✓ Work email: ajaysenthil200%@gr ✓

Company: Snmv Cas ✓ 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 65 days.

We value your privacy. To learn more, visit our Privacy Statement.

OBJECT:

Created Objects:

- ✓ **Product**
- ✓ **Purchase Order**
- ✓ **Order Item**
- ✓ **Inventory Transaction**
- ✓ **Supplier**

Student | Home | Salesforce | Product | Salesforce

orgfarm-b9f212a963-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgL0000025zrJ/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Product

Details Edit Delete

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Details

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

Type here to search

09:49 14-09-2025

Student | Home | Salesforce | Purchase Order | Salesforce

orgfarm-b9f212a963-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgL00000260H7/Details/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

Purchase Order

Details Edit Delete

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

Details

Description

API Name
Purchase_Order__c

Custom
✓

Singular Label
Purchase Order

Plural Label
Purchase Orders

Enable Reports
✓

Track Activities

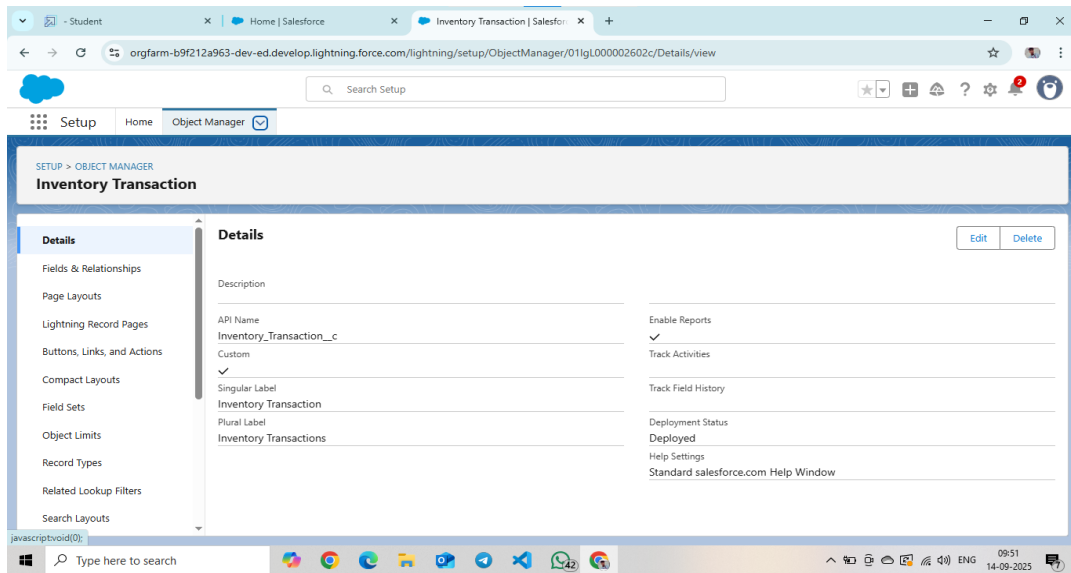
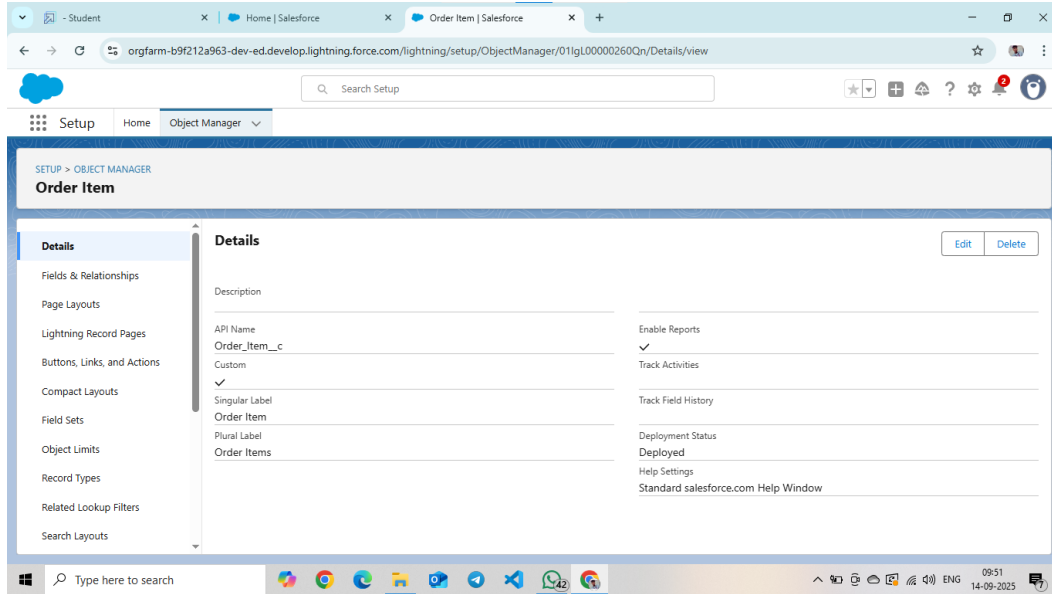
Track Field History

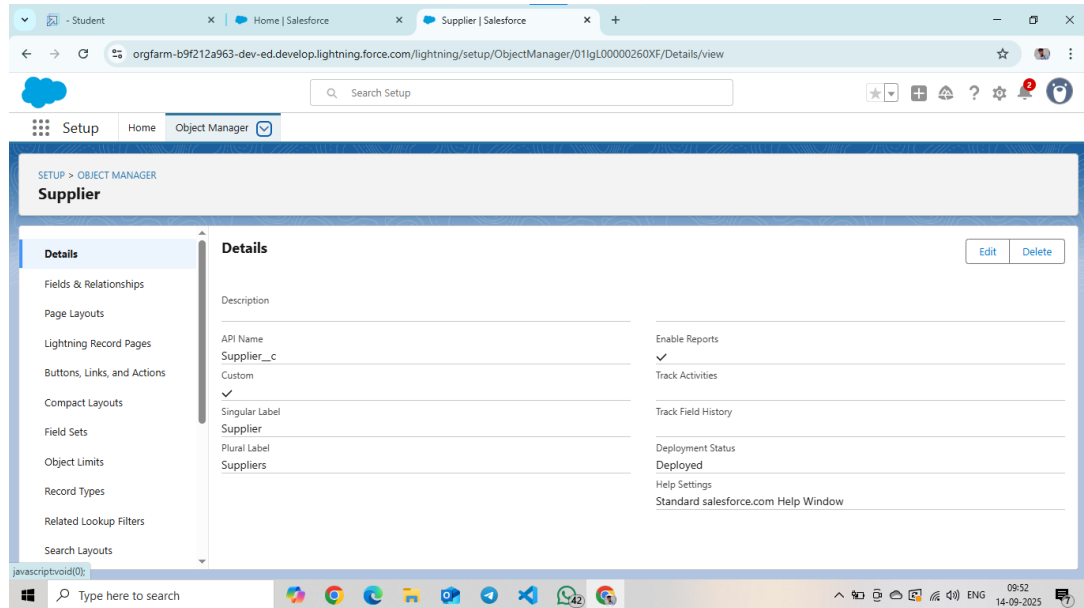
Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

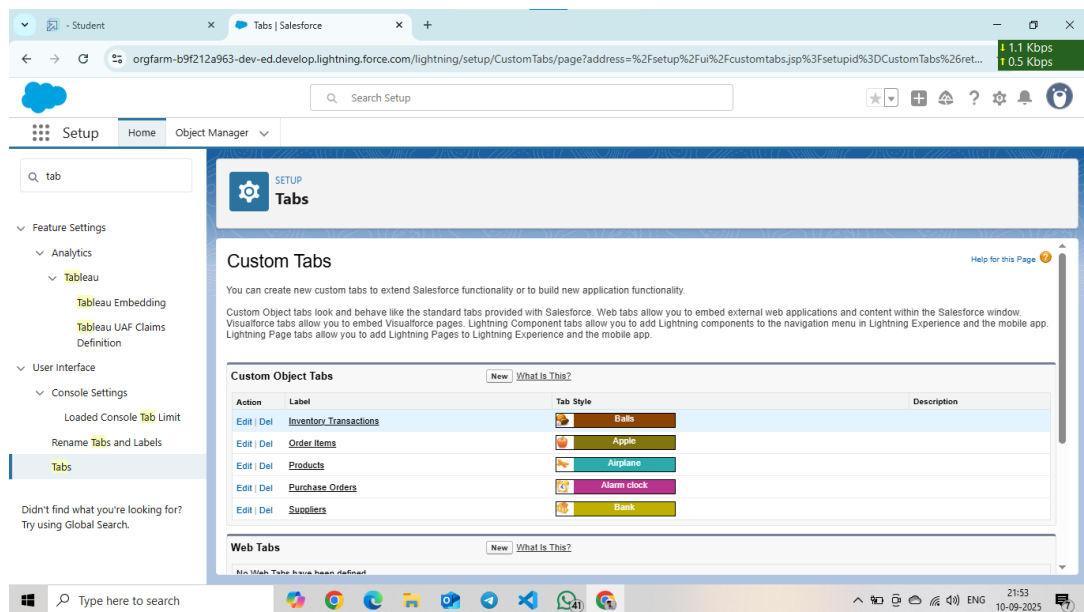
Type here to search

09:50 14-09-2025

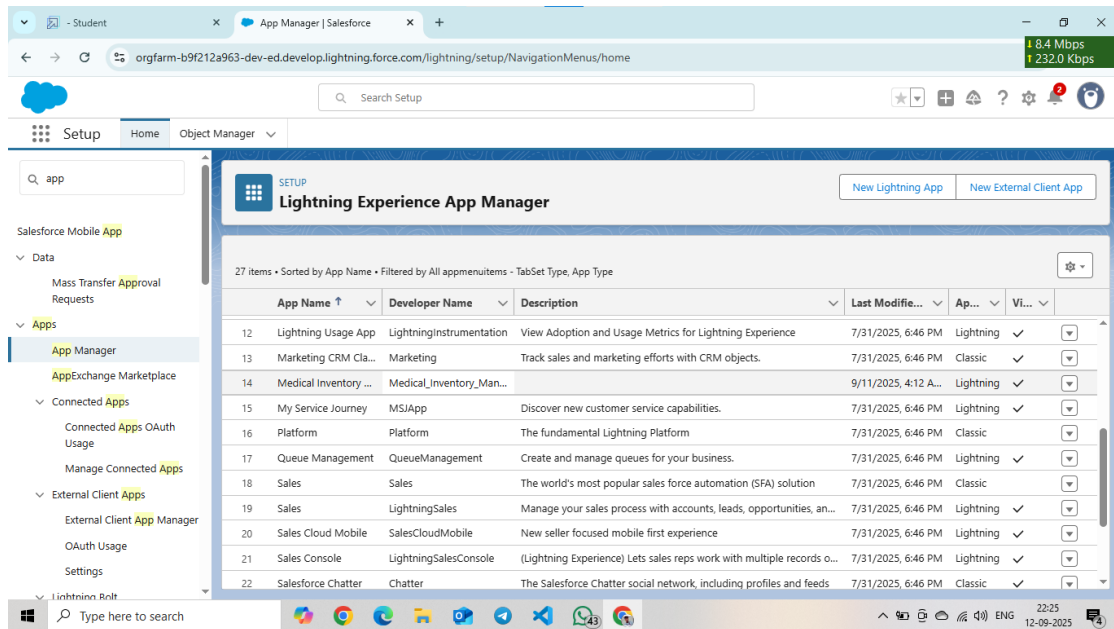




Created Tabs:

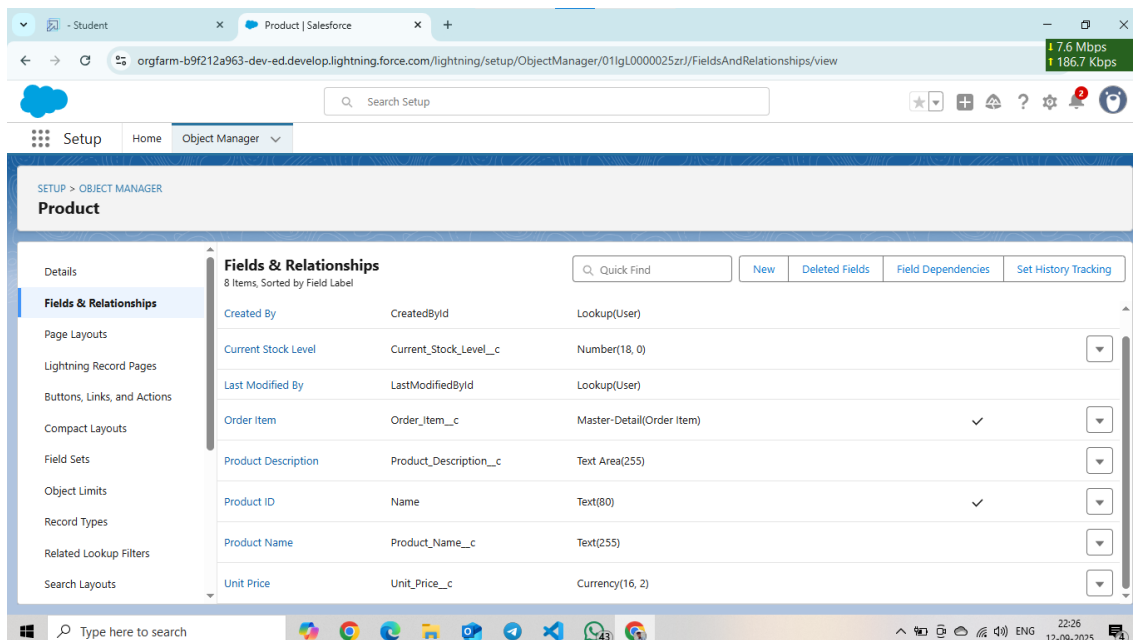


Created a Lightning App

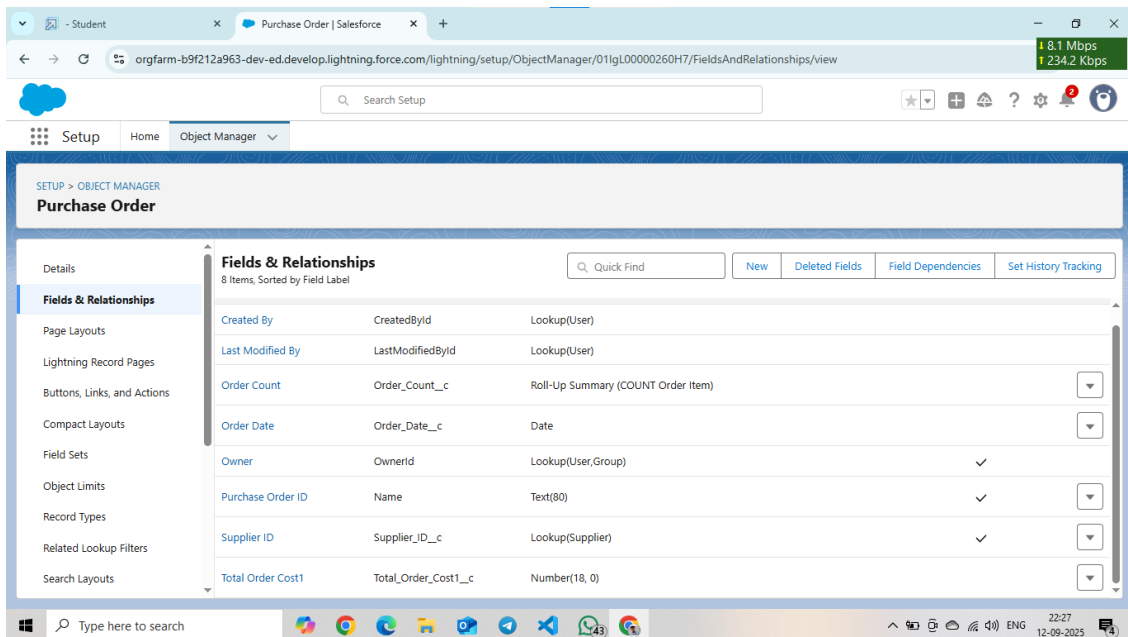


FIELDS:

Creation of fields for the Product object:



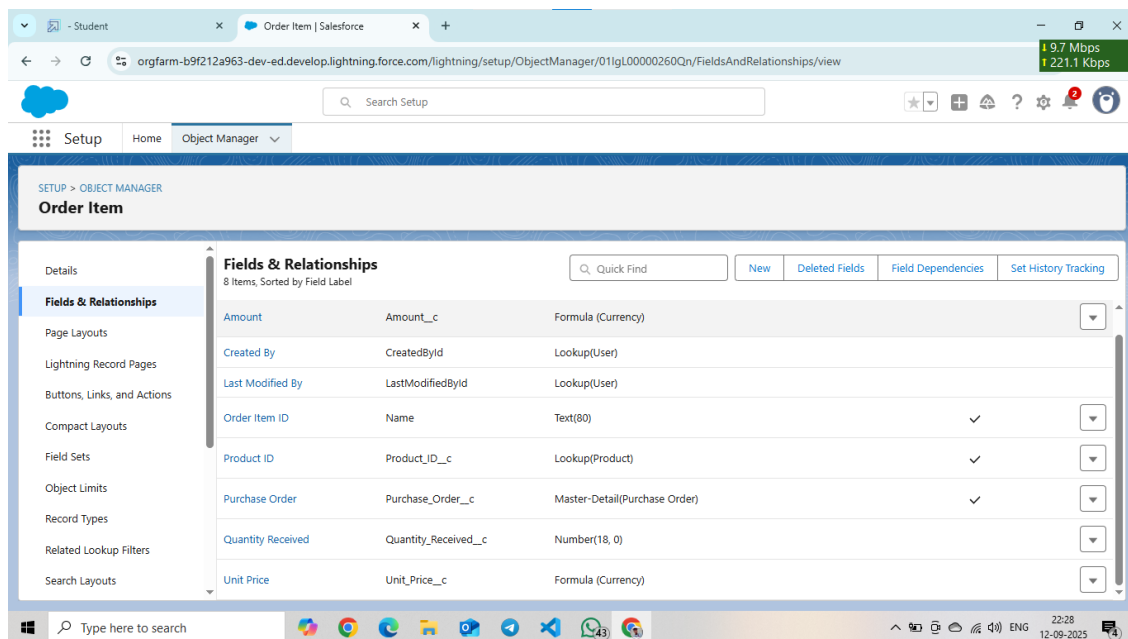
Creation of fields for the Purchase Order object



The screenshot shows the Salesforce Setup interface for the Purchase Order object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Purchase Order' and displays the 'Fields & Relationships' section. It shows 8 items, sorted by Field Label. The fields are listed in a table with columns for Field Label, Field Name, and Field Type. The fields are: Created By (CreatedById, Lookup(User)), 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)), and Total Order Cost1 (Total_Order_Cost1__c, Number(18, 0)).

Field Label	Field Name	Field Type
Created By	CreatedById	Lookup(User)
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)
Total Order Cost1	Total_Order_Cost1__c	Number(18, 0)

Creation of fields for the Order Item object



The screenshot shows the Salesforce Setup interface for the Order Item object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Order Item' and displays the 'Fields & Relationships' section. It shows 8 items, sorted by Field Label. The fields are listed in a table with columns for Field Label, Field Name, and Field Type. The fields are: 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 (Purchase_Order__c, Master-Detail(Purchase Order)), Quantity Received (Quantity_Received__c, Number(18, 0)), and Unit Price (Unit_Price__c, Formula (Currency)).

Field Label	Field Name	Field Type
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	Purchase_Order__c	Master-Detail(Purchase Order)
Quantity Received	Quantity_Received__c	Number(18, 0)
Unit Price	Unit_Price__c	Formula (Currency)

Creation of fields for the Inventory Transaction Object

The screenshot shows the Salesforce Setup interface for the 'Inventory Transaction' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Fields & Relationships' and shows a table of 7 items, sorted by Field Label. The table has columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By (Lookup(User)), Inventory Transaction ID (Text(80)), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), Purchase Order ID (Lookup(Purchase Order)), Total Order Cost (Formula (Currency)), and Transaction Type (Picklist).

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 Type	Transaction_Type__c	Picklist		

Creation of fields for the Supplier object

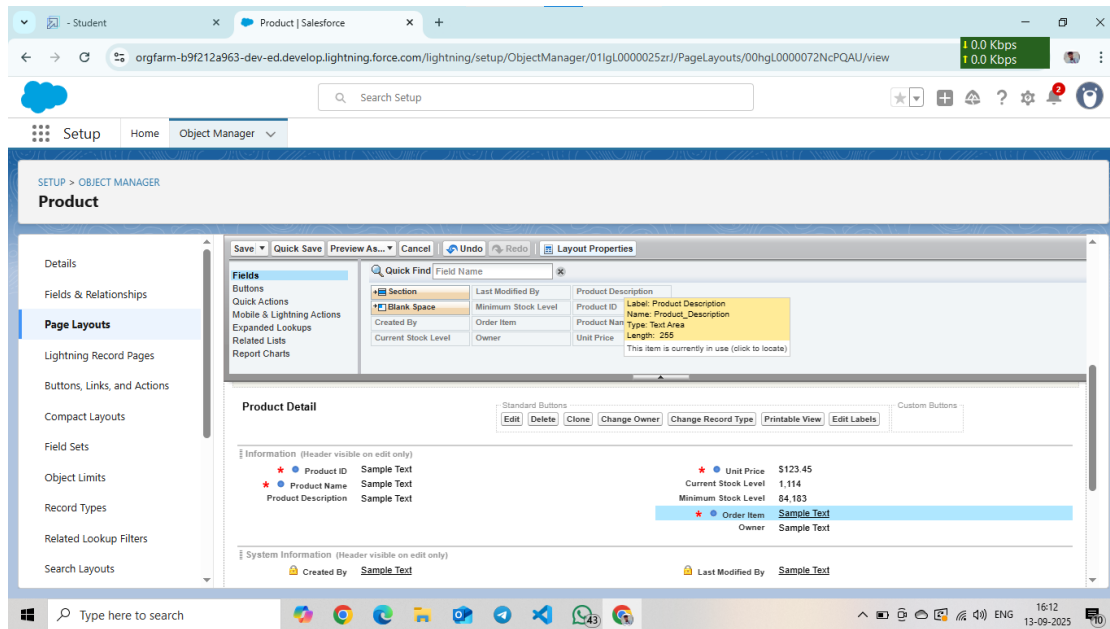
The screenshot shows the Salesforce Setup interface for the 'Supplier' object. The left sidebar contains a navigation menu with options: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area is titled 'Fields & Relationships' and shows a table of 6 items, sorted by Field Label. The table has columns: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By (Lookup(User)), Email (Email), Last Modified By (Lookup(User)), Owner (Lookup(User,Group)), Phone Number (Phone), and Supplier ID (Text(80)).

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
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)		✓

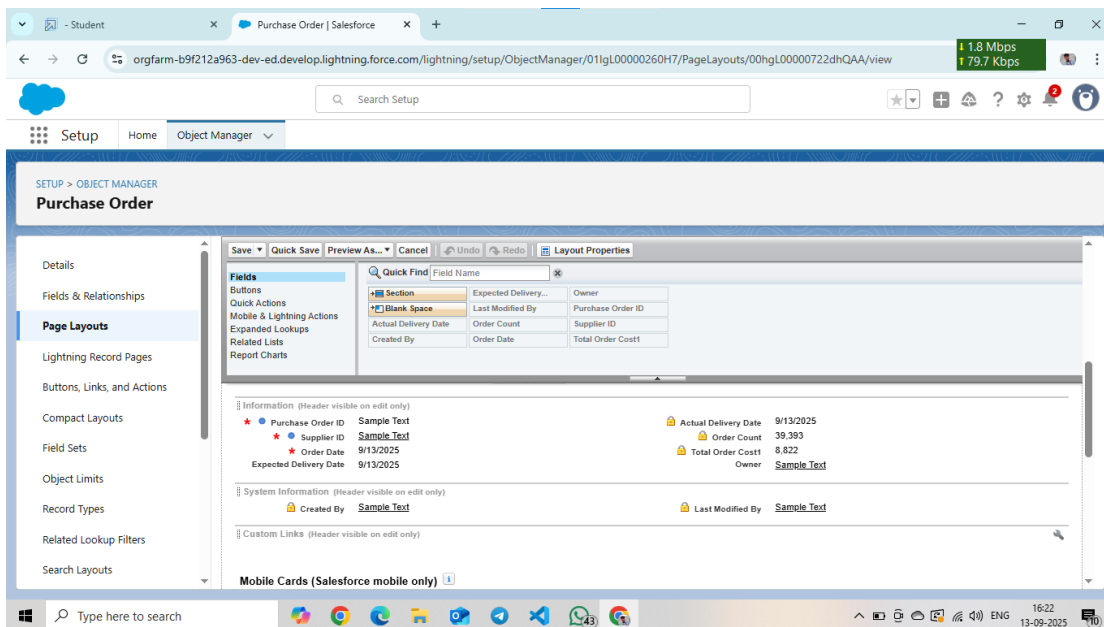
Page Layouts;

Editing of Page Layouts:

Editing of Page Layout for the Product object



Editing of Page Layout for the Purchase Order object



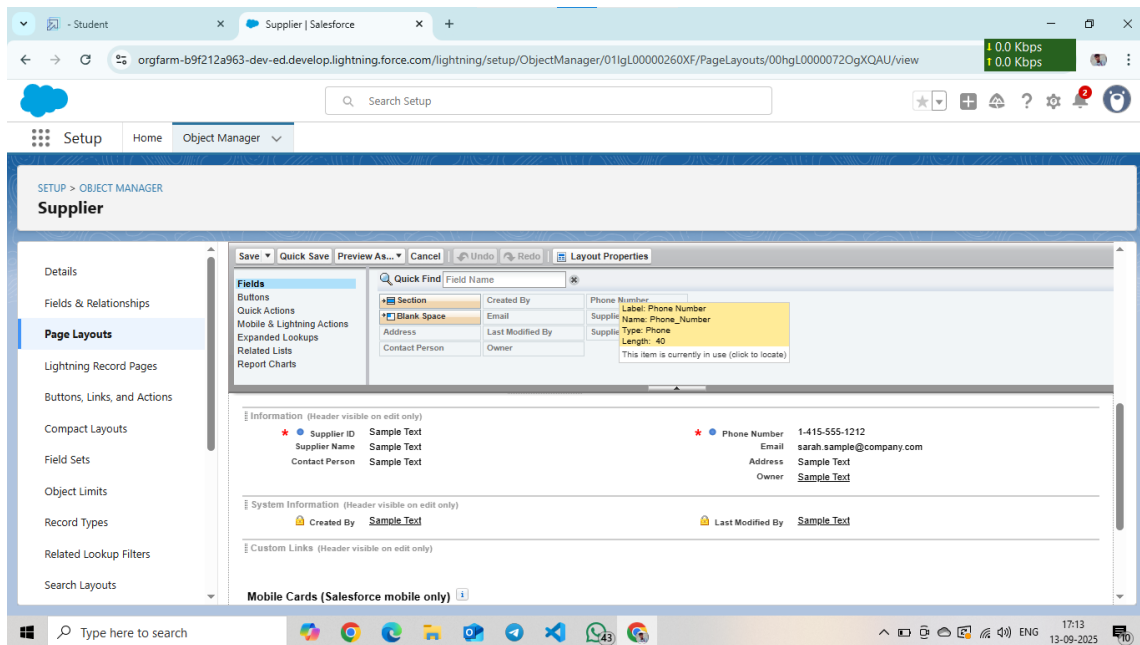
Editing of Page Layout for the Order Item object

The screenshot shows the Salesforce Setup interface for editing the Page Layout of the Order Item 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, and Search Layouts. The main content area displays the 'Order Item Detail' page layout. At the top, there are tabs for 'Save', 'Quick Save', 'Preview As...', 'Cancel', 'Undo', and 'Redo', along with a 'Layout Properties' button. Below these tabs is a 'Quick Find' search bar and a list of fields. The fields are organized into sections: 'Information (Header visible on edit only)' containing Order Item ID, Amount, Purchase Order, and Sample Text; 'Product details' containing Product ID, Unit Price, Quantity Ordered, and Quantity Received; and 'System Information (Header visible on edit only)' containing Created By and Last Modified By. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 16:59 on 13-09-2025.

Editing of Page Layout for the Inventory Transaction object

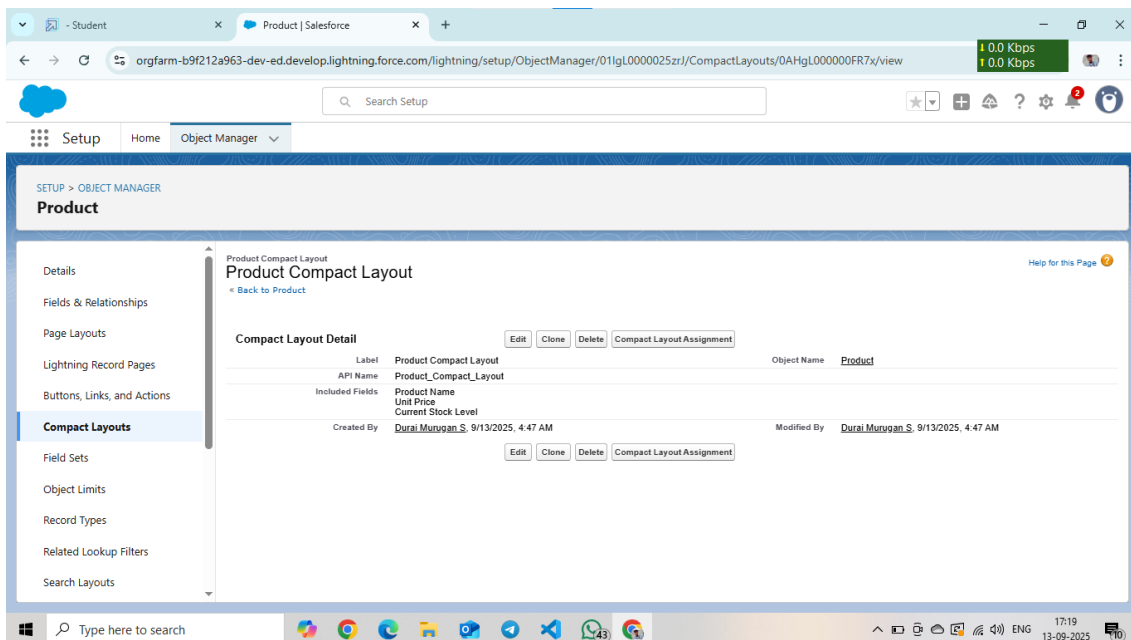
The screenshot shows the Salesforce Setup interface for editing the Page Layout of the Inventory Transaction object. The left sidebar contains a navigation menu with options like Details, Fields & Relationships, Page Layouts (selected), Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, Record Types, Related Lookup Filters, and Search Layouts. The main content area displays the 'Inventory Transaction' page layout. At the top, there are tabs for 'Save', 'Quick Save', 'Preview As...', 'Cancel', 'Undo', and 'Redo', along with a 'Layout Properties' button. Below these tabs is a 'Quick Find' search bar and a list of fields. The fields are organized into sections: 'Information (Header visible on edit only)' containing Transaction ID, Purchase Order ID, Transaction Type, Transaction Date, Total Order Cost, and Owner; 'System Information (Header visible on edit only)' containing Created By and Last Modified By; and 'Custom Links (Header visible on edit only)'. The bottom of the screen shows a Windows taskbar with various application icons and a system clock indicating 17:04 on 13-09-2025.

Editing of Page Layout for the Supplier object

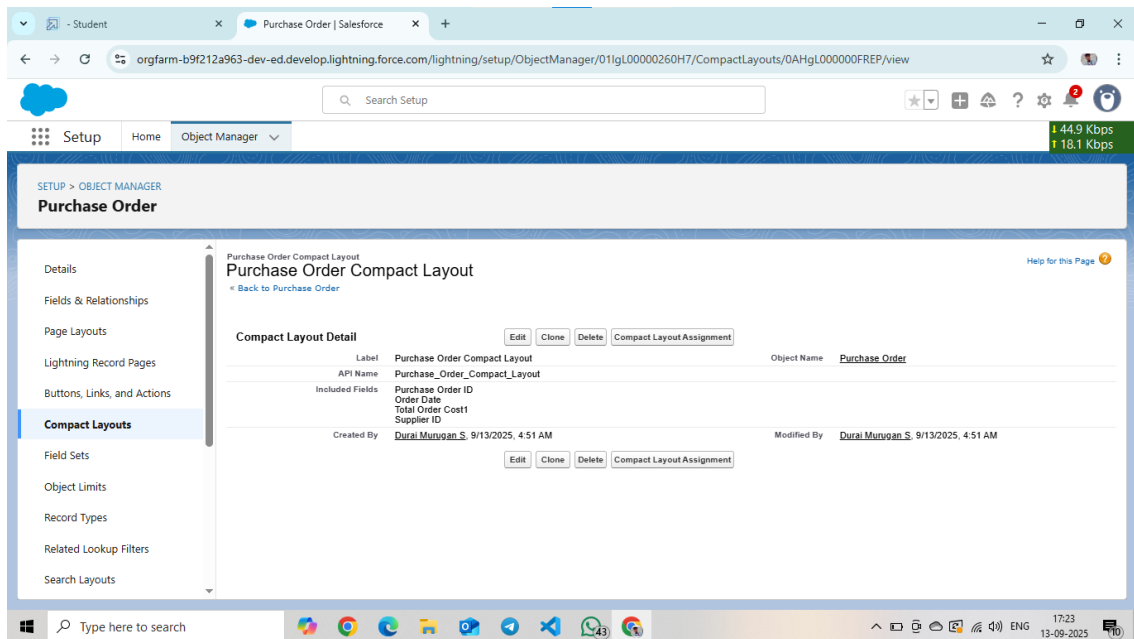


Compact Layouts

Created a Compact Layout for the Product Object

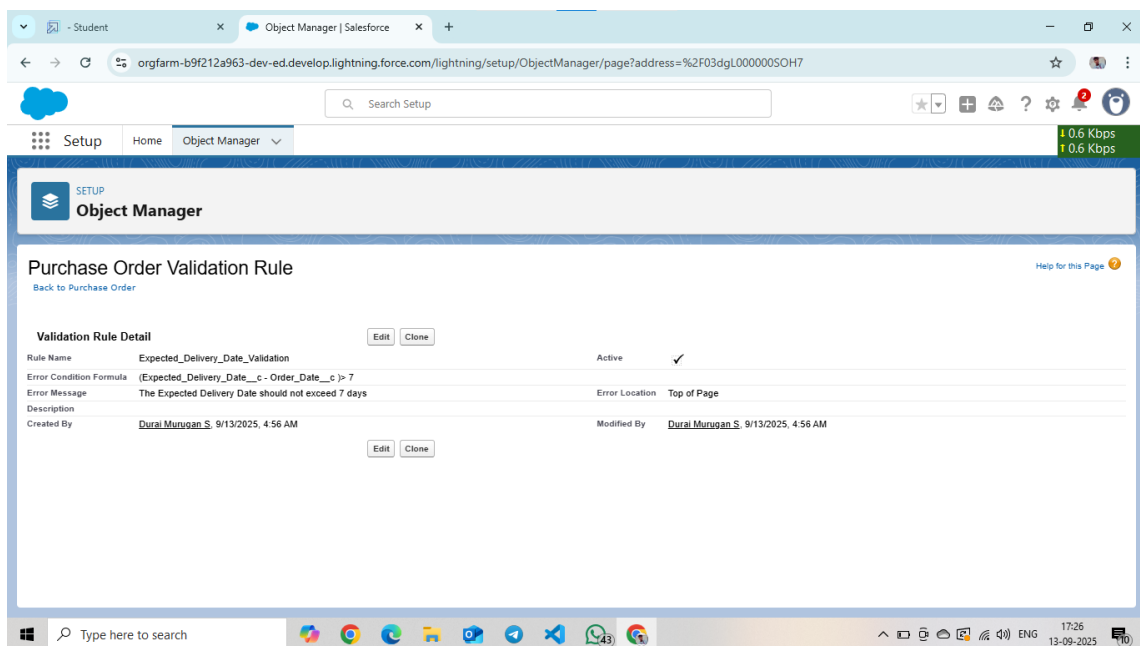


Created a Compact Layout for the Purchase Order Object



Validation Rules

Created an Expected Delivery Date Validation rule to an Employee Object



Profiles

Created an Inventory Manager Profile

The screenshot displays the Salesforce Setup interface for the 'Inventory Manager' profile. The left sidebar shows the 'Setup' menu with 'Profiles' selected under 'Users'. The main content area is titled 'Profiles' and shows the 'Inventory Manager' profile details. The profile is a 'Custom Profile' created by 'Durai Murugan S.' on 9/13/2025 at 5:01 AM. The 'Page Layouts' section shows the 'Global Layout' assigned to the 'Standard Object Layouts' and the 'Location Group Assignment Layout' assigned to the 'Location Group Assignment'.

Profile: **Inventory Manager**

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled External Credential Principal Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail [Edit] [Clone] [Delete] [View Users]

Name	Inventory Manager
User License	Salesforce
Description	
Created By	Durai Murugan S. 9/13/2025, 5:01 AM
Modified By	Durai Murugan S. 9/13/2025, 5:05 AM

Page Layouts

Standard Object Layouts	Global	Global Layout [View Assignment]	Location Group Assignment	Location Group Assignment Layout [View Assignment]
Email Application	Not Assigned [View Assignment]		Macro	Macro Layout [View Assignment]

Created a Purchase Manager Profile

The screenshot displays the Salesforce Setup interface for the 'Purchase Manager' profile. The left sidebar shows the 'Setup' menu with 'Profiles' selected under 'Users'. The main content area is titled 'Profiles' and shows the 'Purchase Manager' profile details. The profile is a 'Custom Profile' created by 'Durai Murugan S.' on 9/13/2025 at 5:07 AM. The 'Page Layouts' section shows the 'Global Layout' assigned to the 'Standard Object Layouts' and the 'Location Group Assignment Layout' assigned to the 'Location Group Assignment'.

Profile: **Purchase Manager**

Users with this profile have the permissions and page layouts listed below. Administrators can change a user's profile by editing that user's personal information.

If your organization uses Record Types, use the Edit links in the Record Type Settings section below to make one or more record types available to users with this profile.

Login IP Ranges [0] | Enabled Apex Class Access [0] | Enabled Visualforce Page Access [0] | Enabled External Data Source Access [0] | Enabled Named Credential Access [0] | Enabled External Credential Principal Access [0] | Enabled Custom Metadata Type Access [0] | Enabled Custom Setting Definitions Access [0] | Enabled Flow Access [0] | Enabled Service Presence Status Access [0] | Enabled Custom Permissions [0]

Profile Detail [Edit] [Clone] [Delete] [View Users]

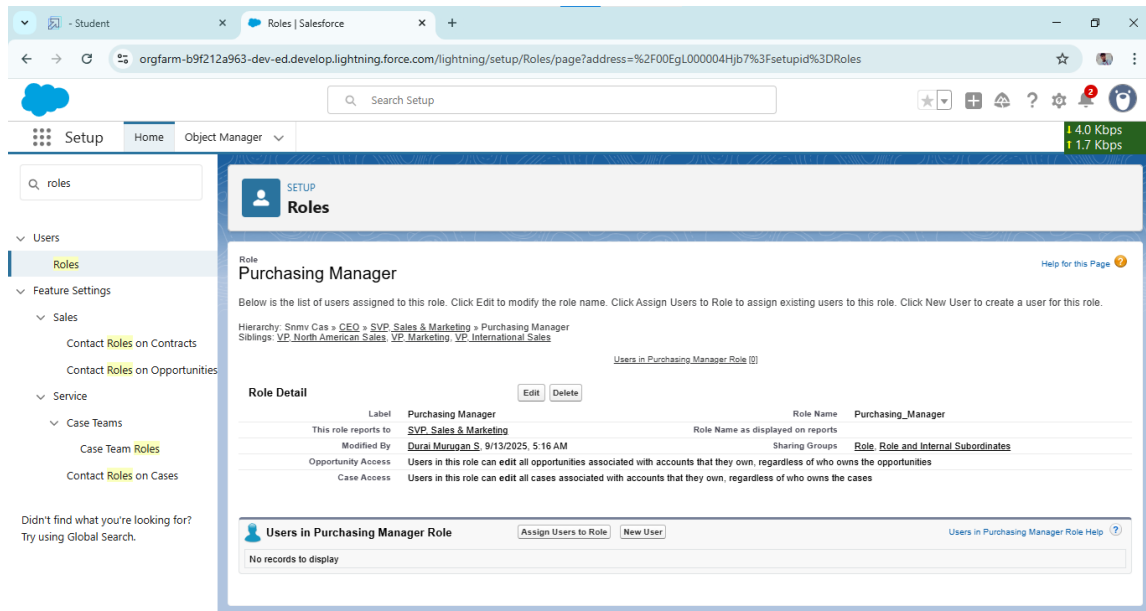
Name	Purchase Manager
User License	Salesforce
Description	
Created By	Durai Murugan S. 9/13/2025, 5:07 AM
Modified By	Durai Murugan S. 9/13/2025, 5:10 AM

Page Layouts

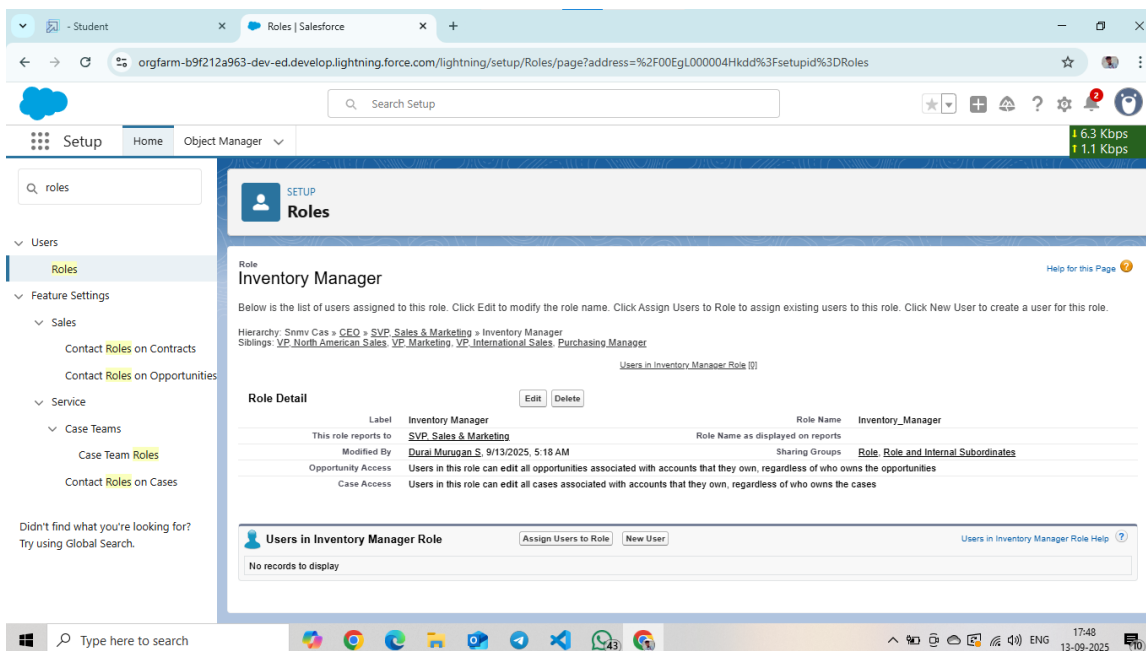
Standard Object Layouts	Global	Global Layout [View Assignment]	Location Group Assignment	Location Group Assignment Layout [View Assignment]
Email Application	Not Assigned [View Assignment]		Macro	Macro Layout [View Assignment]

Roles

Created a Purchasing Manager Role (Purchasing Manager)

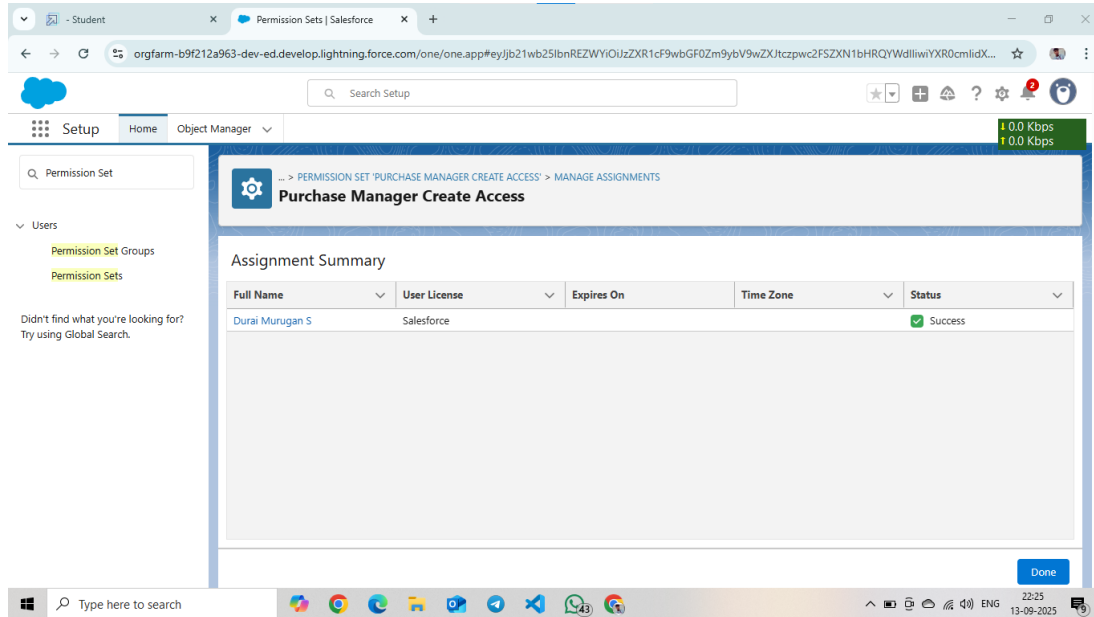


Created a Purchasing Manager Role (Inventory Manager)



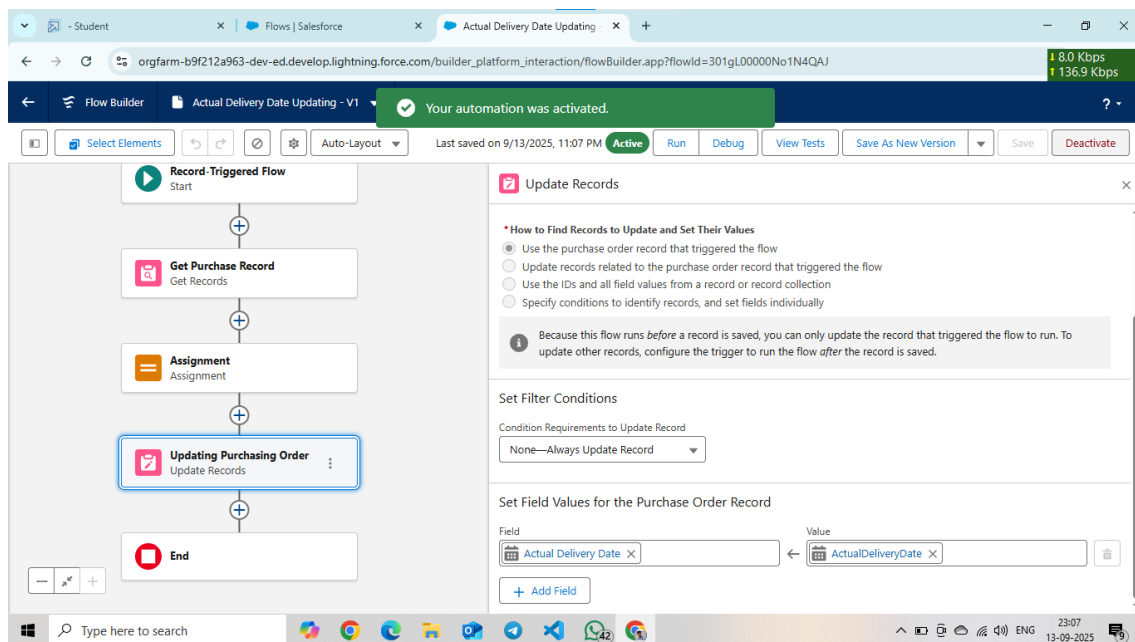
Permission Sets

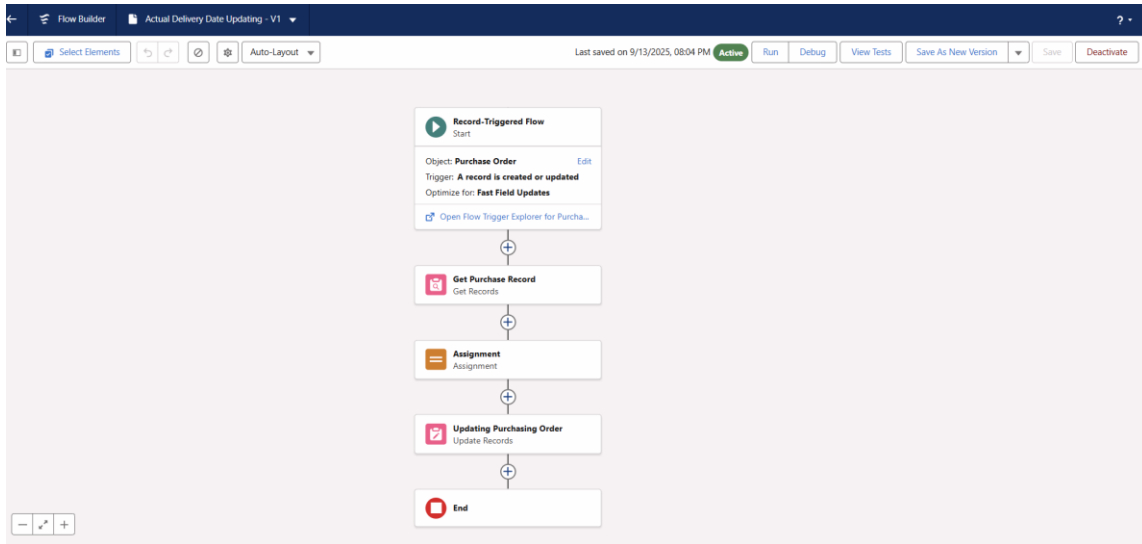
Create a Permission Set



Flows

Created Flow to update the Actual Delivery Date





Triggers

Create an Apex Trigger

```

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 }
8

```

Coding

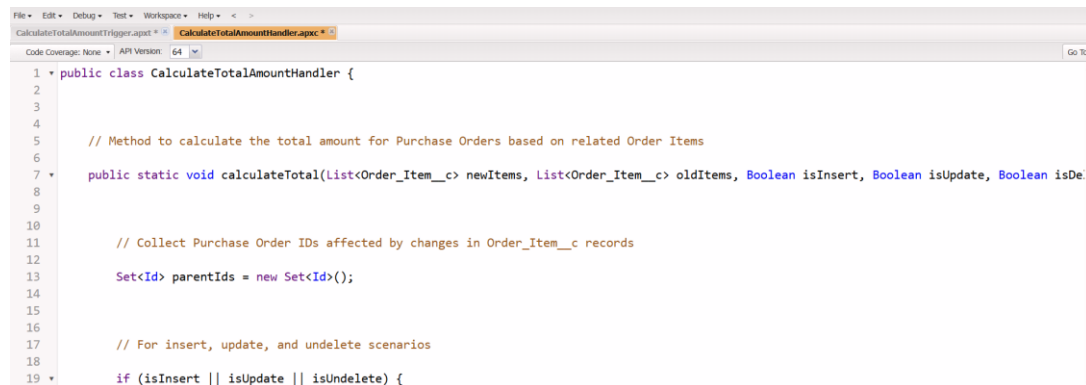
trigger CalculateTotalAmountTrigger on Order_Item__c (after insert, after update, after delete, after undelete) {

// Call the handler class to handle the logic

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

}

Create an Apex Class



Coding

```
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()) {
```

```

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;

}

}

}

```

Reports

Created a Purchase Orders based on Suppliers (Summary) Report

Report: Purchase Orders
Purchase Orders based on Suppliers

Total Records: 5 Total Order Count: 8 Total Total Order Cost: 420

Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
<input type="checkbox"/> SUP001 (2)	PO001 (1)	1	10
	PO-002 (1)	2	350
<input type="checkbox"/> SUP-002 (1)	PO-003 (1)	3	40
<input type="checkbox"/> SUP-003 (2)	PO-004 (1)	1	20
	po1 (1)	1	0
Total (5)		8	420

Row Counts ☒ Detail Rows ☒ Subtotals ☐ Grand Total ☒

Created a Complete Purchase Details Report

Report: Purchase Orders
Purchase Orders based on Suppliers

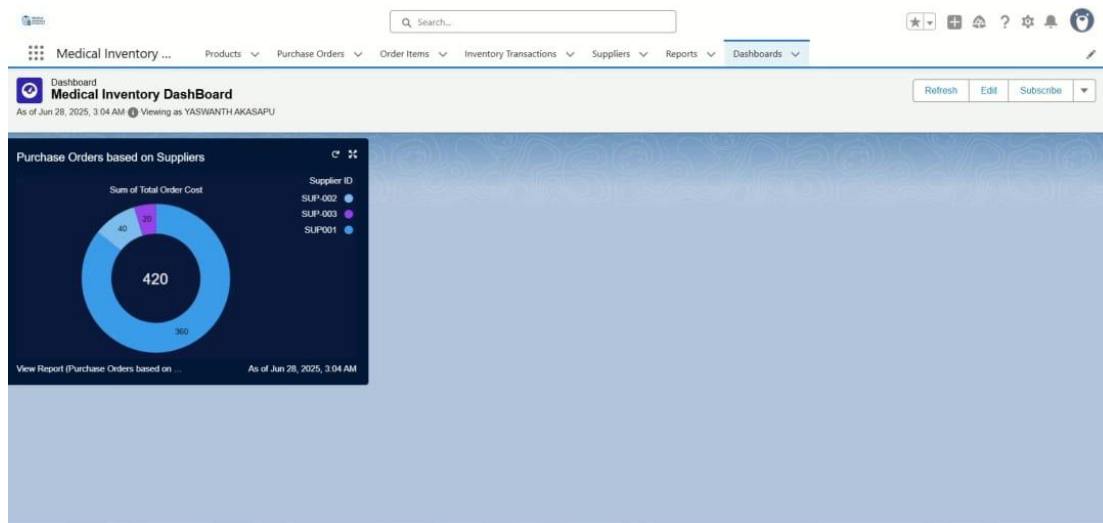
Total Records: 5 Total Order Count: 8 Total Total Order Cost: 420

Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
<input type="checkbox"/> SUP001 (2)	PO001 (1)	1	10
	PO-002 (1)	2	350
<input type="checkbox"/> SUP-002 (1)	PO-003 (1)	3	40
<input type="checkbox"/> SUP-003 (2)	PO-004 (1)	1	20
	po1 (1)	1	0
Total (5)		8	420

Row Counts ☒ Detail Rows ☒ Subtotals ☐ Grand Total ☒

Dashboards

Creation and view of Dashboard



Conclusion

The Salesforce-based Medical Inventory Management System successfully streamlines and automates the key operational aspects of medical inventory. By integrating supplier management, purchase order tracking, product cataloging, and expiry date monitoring, the system ensures accuracy, efficiency, and reliability in handling medical supplies. It reduces the risk of errors, prevents the use of expired products, and enhances decision-making through comprehensive reports and analytics. Overall, this project demonstrates how Salesforce can be effectively utilized to improve healthcare inventory operations, contributing to better resource management and patient safety.