

## **MEDICAL INVENTORY MANAGEMENT**

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

College Code: bruaj

TEAM ID: NM2025TMID25468

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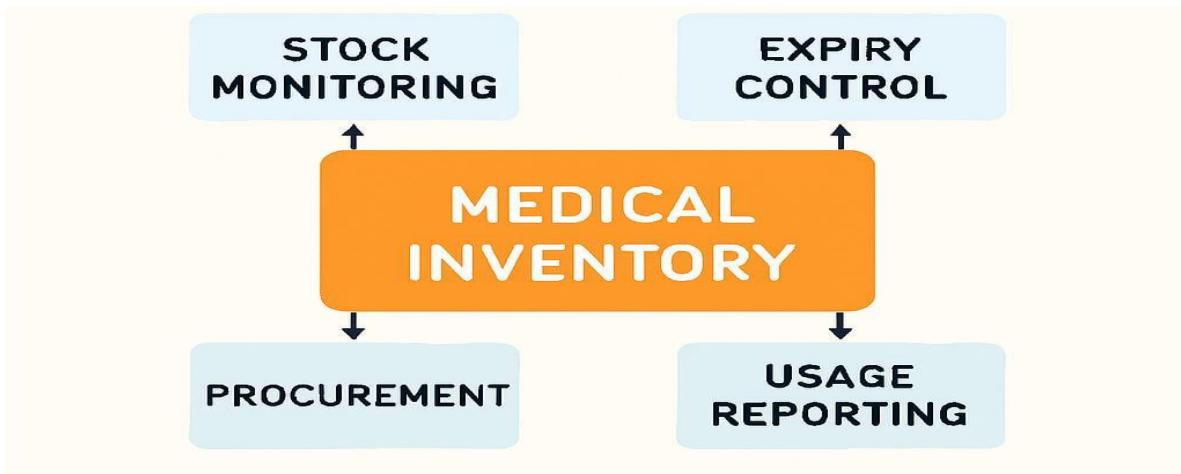
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## **1. INTRODUCTION**

### **1.1 Project Overview**

The Medical Inventory Management System is a Salesforce-based application designed to streamline the tracking and control of medical supplies across healthcare facilities. It supports real-time stock monitoring, expiry alerts, procurement workflows, and usage analytics—ensuring efficient inventory operations and compliance.



## 1.2 Purpose

This project aims to help healthcare organizations manage inventory with greater accuracy and less manual effort. By leveraging Salesforce, it improves supply availability, reduces waste, enhances communication, and lowers operational costs.

## DEVELOPMENT PHASE

Creating Developer Account:

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First name: Sindhu Last name: K.J.

Job title: Student Work email: sindhukj52@gmail.com

Company: A.V.P college of art Country/Region: India

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

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

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I'm not a robot reCAPTCHA

**Sign Me Up**

- Verify and Activate the account
- Created Lightning App For Medical Inventory Management

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

**App Details**

\* App Name: Medical Inventory Management

\* Developer Name: Medical\_Inventory\_Management

Description: Medical Inventory Management

**App Branding**

Image  Upload

Primary Color Hex Value: #0070D2

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

**App Launcher Preview**

MI Medical Inventory Manage... Medical Inventory Management

The screenshot shows the 'Navigation Items' section of the Lightning App Builder. On the left, a sidebar lists 'App Settings' (selected), 'App Details & Branding', 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items' (selected), and 'User Profiles'. The main area is titled 'Navigation Items' and contains a description: '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.' Below this is a 'Available Items' list and a 'Selected Items' list. The 'Available Items' list includes: Accounts, Activation Targets, Activations, All Sites, Alternative Payment Methods, Analytics, and a 'Add Item...' button. The 'Selected Items' list includes: Products, Purchase Orders, Order Items, Inventory Transactions, Suppliers, Reports, and Dashboards. Navigation arrows between the two lists allow items to be moved.

The screenshot shows the 'User Profiles' section of the Lightning App Builder. On the left, a sidebar lists 'App Settings' (selected), 'App Details & Branding', 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles' (selected). The main area is titled 'User Profiles' and contains a description: 'Choose the user profiles that can access this app.' Below this is a 'Available Profiles' list and a 'Selected Profiles' list. The 'Available Profiles' list includes: Analytics Cloud Integration User, Analytics Cloud Security User, Anypoint Integration, Authenticated Website, B2B Reordering Portal Buyer Profile, and Contract Manager. The 'Selected Profiles' list includes: System Administrator, Inventory Manager, and Purchase Manager. Navigation arrows between the two lists allow profiles to be moved.

- Created objects: Product, Purchase Order, Order Item, Inventory Transaction, Supplier

Setup > Object Manager

## Product

Details	
Fields & Relationships	Description
Page Layouts	
Lightning Record Pages	API Name Product_c
Buttons, Links, and Actions	Custom
Compact Layouts	✓ Singular Label Product
Field Sets	Plural Label Products
Object Limits	
Record Types	
Related Lookup Filters	
Search Layouts	
List View Button Layout	
<span style="float: right;">Edit   Delete</span>	

Setup > Object Manager

## Purchase Order

Details	
Fields & Relationships	Description
Page Layouts	
Lightning Record Pages	API Name Purchase_Order_c
Buttons, Links, and Actions	Custom
Compact Layouts	✓ Singular Label Purchase Order
Field Sets	Plural Label Purchase Orders
Object Limits	
Record Types	
Related Lookup Filters	
Search Layouts	
List View Button Layout	
<span style="float: right;">Edit   Delete</span>	

← → ⌂ 🔒 orgfarm-c7419287c0-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgL000001rle9/Details

Setup Home Object Manager

SETUP > OBJECT MANAGER  
**Order Item**

Details	Details	
Fields & Relationships	Description	<a href="#">Edit</a> <a href="#">Delete</a>
Page Layouts		
Lightning Record Pages	API Name	Enable Reports
Buttons, Links, and Actions	Order_Item__c	<input checked="" type="checkbox"/>
Compact Layouts	Custom	Track Activities
Field Sets	✓	Track Field History
Object Limits	Singular Label	
Record Types	Order Item	
Related Lookup Filters	Plural Label	Deployment Status
Search Layouts	Order Items	Deployed
List View Button Layout		Help Settings
		Standard salesforce.com Help Window

← → ⌂ 🔒 orgfarm-c7419287c0-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgL000001rF0M/Details

Setup Home Object Manager

SETUP > OBJECT MANAGER  
**Inventory Transaction**

Details	Details	
Fields & Relationships	Description	<a href="#">Edit</a> <a href="#">Delete</a>
Page Layouts		
Lightning Record Pages	API Name	Enable Reports
Buttons, Links, and Actions	Inventory_Transaction__c	<input checked="" type="checkbox"/>
Compact Layouts	Custom	Track Activities
Field Sets	✓	Track Field History
Object Limits	Singular Label	
Record Types	Inventory Transaction	Deployment Status
Related Lookup Filters	Plural Label	Deployed
Search Layouts	Inventory Transactions	Help Settings
List View Button Layout		Standard salesforce.com Help Window

The screenshot shows the Salesforce Object Manager interface for the 'Supplier' object. The left sidebar contains navigation links for 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, and List View Button Layout. The main content area displays the 'Details' tab for the Supplier object. It includes fields for Description, API Name (Supplier\_\_c), Singular Label (Supplier), Plural Label (Suppliers), Enable Reports (checked), Track Activities, Track Field History, Deployment Status (Deployed), Help Settings, and Standard salesforce.com Help Window. At the bottom right are 'Edit' and 'Delete' buttons.

- Fields and relationships configured per table specifications

The screenshot shows the Salesforce Object Manager interface for the 'Product' object. The left sidebar contains navigation links for 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, and List View Button Layout. The main content area displays the 'Fields & Relationships' tab for the Product object. It lists 10 items, sorted by Field Label. The table includes columns for Field Name, API Name, and Type. Fields listed include Current Stock Level (Current\_Stock\_Level\_\_c, Number(18, 0)), Expiry Date (Expiry\_Date\_\_c, Date), Last Modified By (LastModifiedByld, Lookup(User)), Minimum Stock Level (Minimum\_Stock\_Level\_\_c, Number(18, 0)), 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)), and Unit Price (Unit\_Price\_\_c, Currency(16, 2)). Action buttons for New, Deleted Fields, Field Dependencies, and Set History Tracking are located at the top right of the table.

SETUP > OBJECT MANAGER

## Purchase Order

Details		Fields & Relationships				
		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	Actual Delivery Date	Actual_Delivery_Date__c	Date			
	Created By	CreatedById	Lookup(User)			
	Expected Delivery Date	Expected_Delivery_Date__c	Date			
	Last Modified By	LastModifiedById	Lookup(User)			
	Order Count	Order_Count__c	Roll-Up Summary (COUNT Order Item)			
	Order Date	Order_Date__c	Date			
	Owner	OwnerId	Lookup(User,Group)	✓		
	Purchase Order ID	Name	Text(80)	✓		

SETUP > OBJECT MANAGER

## Order Item

Details		Fields & Relationships				
		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts	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)			

Setup > Object Manager

## Inventory Transaction

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts		Created By	CreatedById	Lookup(User)		
Lightning Record Pages		Inventory Transaction ID	Name	Text(80)		✓
Buttons, Links, and Actions		Last Modified By	LastModifiedById	Lookup(User)		
Compact Layouts		Owner	OwnerId	Lookup(User,Group)		✓
Field Sets		Purchase Order ID	Purchase_Order_ID_c	Lookup(Purchase Order)		✓
Object Limits		Total Order Cost	Total_Order_Cost_c	Formula (Currency)		✓
Record Types		Transaction Date	Transaction_Date_c	Date		✓
Related Lookup Filters		Transaction Type	Transaction_Type_c	Picklist		✓
Search Layouts						
List View Button Layout						

Setup > Object Manager

## Supplier

Fields & Relationships		FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Page Layouts		Address	Address_c	Text Area(255)		✓
Lightning Record Pages		Contact Person	Contact_Person_c	Text(255)		✓
Buttons, Links, and Actions		Created By	CreatedById	Lookup(User)		
Compact Layouts		Email	Email_c	Email		✓
Field Sets		Last Modified By	LastModifiedById	Lookup(User)		
Object Limits		Owner	OwnerId	Lookup(User,Group)		✓
Record Types		Phone Number	Phone_Number_c	Phone		✓
Related Lookup Filters		Supplier ID	Name	Text(80)		✓
Search Layouts						
List View Button Layout						

Established three formula fields,

## 1. Creating Unit Price Formula Field in Order Item object

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named "Unit Price" is being created for the "Order Item" object. The field is defined as a formula type, using the formula `Quantity_Received__c * Unit_Price__c`. Other details like field label, name, and API name are also specified.

Field Label	Unit Price
Field Name	Unit_Price
API Name	Unit_Price__c
Description	
Help Text	
Data Owner	
Field Usage	
Data Sensitivity Level	
Compliance Categorization	
Created By	Neeraja Seshagiri, 9/6/2025, 10:14 PM
Modified By	Neeraja Seshagiri, 9/6/2025, 10:14 PM

## 2. Configured Amount field (formula) under Order Item

The screenshot shows the continuation of the setup process for the "Order Item" object. An "Amount" field is being configured with a formula type, using the formula `Quantity_Received__c * Unit_Price__c`. The field is also set to have 2 decimal places.

Data Type	Formula
Decimal Places	2

### 3. Configured formula field for Total Order Cost in Inventory Transaction

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "SETUP > OBJECT MANAGER" followed by "Inventory Transaction". On the left, there's a sidebar with various options like Details, Fields & Relationships, Page Layouts, and Lightning Record Pages. The "Fields & Relationships" section is currently selected. In the main content area, the "Custom Field Definition Detail" for "Total Order Cost" is displayed. The "Field Information" section shows the field label as "Total Order Cost", field name as "Total\_Order\_Cost", and API name as "Total\_Order\_Cost\_c". The "Object Name" is listed as "Inventory Transaction". The "Formula Options" section indicates the data type is "Formula" and the decimal places are set to 2. The formula used is "Purchase\_Order\_\_r.Total\_Order\_Cost\_\_c".

- Page layouts implemented for Product, Purchase Order, Order Item, Inventory Transaction, and Supplier modules

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes links for Setup, Home, and Object Manager. The main title is "SETUP > OBJECT MANAGER" followed by "Product". On the left, there's a sidebar with various options like Details, Fields & Relationships, and Page Layouts. The "Page Layouts" section is currently selected. In the main content area, a page layout for the "Product" object is being configured. The layout includes sections for "Fields", "Information", and "System Information". The "Fields" section contains fields for Product ID, Product Name, Expiry Date, Last Modified By, Current Stock Level, Minimum Stock Level, Unit Price, and Owner. The "Information" section shows sample values for these fields. The "System Information" section also displays sample values for Created By and Last Modified By.

Setup > OBJECT MANAGER

## Purchase Order

Page Layouts

Fields & Relationships

Details

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

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

Quick Find Field Name

Section	Label	Type	Description
Blank Space	Created By	Lookup	This item is currently in use (click to locate)
Section	Expected Delivery...	Text	
Blank Space	Last Modified By	Text	
Section	Actual Delivery Date	Date	
Blank Space	Order Count	Text	
Section	Supplier ID	Text	
Blank Space	Order Date	Date	
Section	Total Order Cost	Text	

Information (Header visible on edit only)

★ Purchase Order ID	Sample Text
★ Supplier ID	Sample Text
★ Order Date	9/7/2025
Expected Delivery Date	9/7/2025
Actual Delivery Date	9/7/2025
Order Count	24,245
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)

Edit Delete Clone Change Owner Printable View Edit Labels

Setup > OBJECT MANAGER

## Order Item

Page Layouts

Fields & Relationships

Details

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

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

Quick Find Field Name

Section	Label	Type	Description
Blank Space	Last Modified By	Text	
Section	Order Item ID	Text	
Blank Space	Quantity Ordered	Text	
Section	Amount	Text	
Blank Space	Product ID	Text	
Section	Unit Price	Text	
Blank Space	Purchase Order ID	Text	

Information (Header visible on edit only)

★ Order Item ID	Sample Text
★ Purchase Order ID	Sample Text
Amount	\$123,45

Product Details

Product ID	Sample Text	Quantity Ordered	87,828
Unit Price	\$123,45	Quantity Received	3,274

System Information (Header visible on edit only)

Edit Delete Clone Change Owner Printable View Edit Labels

**Inventory Transaction**

**Page Layouts**

Fields

Section	Created By	Last Modified By	Owner
Blank Space	Owner	Transaction Date	Sample_Text
Inventory Transac...	Purchase Order ID	Total Order Cost	\$123.45

Information (Header visible on edit only)

Inventory Transaction ID	Sample Text
Purchase Order ID	Sample Text
Transaction Type	Sample Text
Transaction Date	9/7/2025
Total Order Cost	\$123.45

System Information (Header visible on edit only)

Created By	Sample Text
Last Modified By	Sample Text

Custom Links (Header visible on edit only)

**Supplier**

**Page Layouts**

Fields

Section	Created By	Email	Phone Number
Blank Space	Supplier ID	Supplier Name	1-415-555-1212
Address	Last Modified By	Contact Person	Email: sarah.sample@company.com
Contact Person	Owner		Address: Sample Text
			Owner: Sample Text

Information (Header visible on edit only)

Supplier ID	Sample Text
Supplier Name	Sample Text
Contact Person	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)

- Defined compact views for Product and Purchase Order

The screenshot shows the Salesforce Setup interface for the Product object. The left sidebar lists various setup categories, and the main content area displays the 'Product Compact Layout' configuration. The layout detail table includes fields for Label (Product Compact Layout), API Name (Product\_Compact\_Layout), Included Fields (Product Name, Unit Price, Current Stock Level), and Created By (Neeraja Seshagiri). The table also shows the Object Name (Product) and Modified By (Neeraja Seshagiri).

	Label	API Name	Included Fields	Object Name	Modified By
Product Compact Layout	Product Compact Layout	Product_Compact_Layout	Product Name Unit Price Current Stock Level	Product	Neeraja Seshagiri, 9/6/2025, 11:36 PM

The screenshot shows the Salesforce Setup interface for the Purchase Order object. The left sidebar lists various setup categories, and the main content area displays the 'Purchase Order Compact Layout' configuration. The layout detail table includes fields for Label (Purchase Order Compact Layout), API Name (Purchase\_Order\_Compact\_Layout), Included Fields (Purchase Order ID, Order Date, Total Order Cost, Supplier ID), and Created By (Neeraja Seshagiri). The table also shows the Object Name (Purchase Order) and Modified By (Neeraja Seshagiri).

	Label	API Name	Included Fields	Object Name	Modified By
Purchase Order Compact Layout	Purchase Order Compact Layout	Purchase_Order_Compact_Layout	Purchase Order ID Order Date Total Order Cost Supplier ID	Purchase Order	Neeraja Seshagiri, 9/6/2025, 11:53 PM

- Create An Expected Delivery Date Validation Rule to Purchase Order Object

The screenshot shows the Salesforce Setup interface for the Purchase Order object. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main content area is titled "Purchase Order Validation Rule" and displays a "Validation Rule Detail" section. The rule is named "Expected\_Delivery\_Date\_Validation" and is active. The error condition formula is "(Expected\_Delivery\_Date\_\_c - Order\_Date\_\_c) > 7". The error message is "The Expected Delivery Date should not exceed 7 days." The description field is empty. The rule was created by Neeraja Seshagiri on 9/6/2025, 11:56 PM and modified by her on the same date at 11:56 PM.

- Defined profiles for Inventory Manager and Purchase Manager

The screenshot shows the Salesforce Setup interface for Profiles. The left sidebar has a search bar and lists "Users" and "Profiles". The main content area is titled "Profiles" and shows a "Profile Detail" section for the "Inventory Manager" profile. The profile has a custom license ("Salesforce"), is assigned to a "Custom Profile", and was created by Neeraja Seshagiri on 9/7/2025, 12:01 AM. The "Page Layouts" section shows standard object layouts for various objects like Global, Email Application, Home Page Layout, Account, Alternative Payment Method, etc., mapped to specific page layouts. For example, the Global object has a "Global Layout" assigned.

Profile Detail

Name	Purchase Manager	Custom Profile	<input checked="" type="checkbox"/>
User License	Salesforce		
Description			
Created By	Neeraja Seshagiri, 9/7/2025, 12:50 AM	Modified By	Neeraja Seshagiri, 9/7/2025, 12:52 AM

Page Layouts

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

Data Share & Dimensions

	Work Plan Templates	Work Step Templates	Work Types	Work Type Groups
Data Share Sagemaker Connections	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Share Snowflake Connection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Share Targets	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Share Target Connection	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Custom Object Permissions

Basic Access	Data Administration				Basic Access	Data Administration								
	Read	Create	Edit	Delete		View All Records	Modify All Records	View All Fields	Read	Create	Edit	Delete	View All Records	Modify All Records
Inventory Transactions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Order Items	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Products	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Session Settings

Session Times Out After	2 hours of inactivity	Session Security Level Required at Login
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Password Policies

User passwords expire in	Never expires
--------------------------	---------------

- Defined subordinate roles under SVP, Sales & Marketing: Purchasing Manager and Inventory Manager

The screenshot shows the Salesforce Setup Roles page. The left sidebar navigation includes 'Users' (with 'Roles' selected), 'Feature Settings', 'Sales' (with 'Contact Roles on Contracts' and 'Contact Roles on Opportunities'), 'Service' (with 'Case Teams' and 'Case Team Roles'), and 'Case Teams' (with 'Contact Roles on Cases'). A search bar at the top says 'Search Setup'. The main content area is titled 'SETUP Roles' and shows a tree view of roles. The root node is 'SVP, Sales & Marketing' (Edit | Del | Assign). It has three children: 'Inventory Manager' (Edit | Del | Assign), 'Purchasing Manager' (Edit | Del | Assign), and 'VP, International Sales' (Edit | Del | Assign). 'Inventory Manager' has one child: 'Add Role'. 'Purchasing Manager' has one child: 'Add Role'. 'VP, International Sales' has one child: 'Add Role'. The 'VP, International Sales' node then branches into 'VP, North American Sales' (Edit | Del | Assign) and 'VP, International Sales' (Edit | Del | Assign). 'VP, North American Sales' has one child: 'Add Role'. 'VP, International Sales' (Edit | Del | Assign) has three children: 'Director, Channel Sales' (Edit | Del | Assign), 'Channel Sales Team' (Edit | Del | Assign), and 'Add Role'. 'Director, Channel Sales' has one child: 'Add Role'. 'Channel Sales Team' has one child: 'Add Role'. The 'VP, International Sales' node (Edit | Del | Assign) also has three children: 'Director, Direct Sales' (Edit | Del | Assign), 'Eastern Sales Team' (Edit | Del | Assign), and 'Western Sales Team' (Edit | Del | Assign). 'Director, Direct Sales' has one child: 'Add Role'. 'Eastern Sales Team' has one child: 'Add Role'. 'Western Sales Team' has one child: 'Add Role'.

- Defined a new permission set

The screenshot shows the Salesforce Setup Permission Sets page. The left sidebar navigation includes 'Users' (with 'Permission Set Groups' and 'Permission Sets' selected), 'Custom Code' (with 'Custom Permissions'), and 'Custom Permissions'. A search bar at the top says 'Search Setup'. The main content area is titled 'SETUP Permission Sets'. It shows a 'Permission Set Overview' for 'Purchase Manager Create Access'. The 'Find Settings...' search bar is empty. Below it are buttons for 'Clone', 'Edit Properties', 'Manage Assignments', and 'View Summary'. The 'Permission Set Overview' section includes fields for 'Description' (empty), 'License' (empty), 'Session Activation Required' (unchecked), and 'Permission Set Groups Added To' (0). To the right, details are listed: 'API Name' is 'Purchase\_Manager', 'Namespace Prefix' is empty, 'Created By' is 'Neeraja Seshagiri, 9/7/2025, 12:58 AM', and 'Last Modified By' is 'Neeraja Seshagiri, 9/7/2025, 1:01 AM'. Below this is a 'Apps' section with sections for 'Assigned Apps', 'Assigned Connected Apps', 'Object Settings', 'App Permissions', and 'Apex Class Access'. Each section has a brief description and a link to 'Video Tutorial | Help for this Page'.

... > PERMISSION SET 'PURCHASE MANAGER CREATE ACCESS' > MANAGE ASSIGNMENT EXPIRATION

### Purchase Manager Create Access

Select Users to Assign

**Active Users**

Full Name	Role	Profile
Chatter Expert	Chatter Free User	
Integration User	Analytics Cloud Integration Us...	
<input checked="" type="checkbox"/> John PurchaseM	Purchasing Manager	Purchase Manager
Neeraja Seshagiri	System Administrator	

Cancel Next

... > PERMISSION SET 'PURCHASE MANAGER CREATE ACCESS' > MANAGE ASSIGNMENT EXPIRATION

### Purchase Manager Create Access

Select an Expiration Option For Assigned Users

No expiration date ?

Specify the expiration date

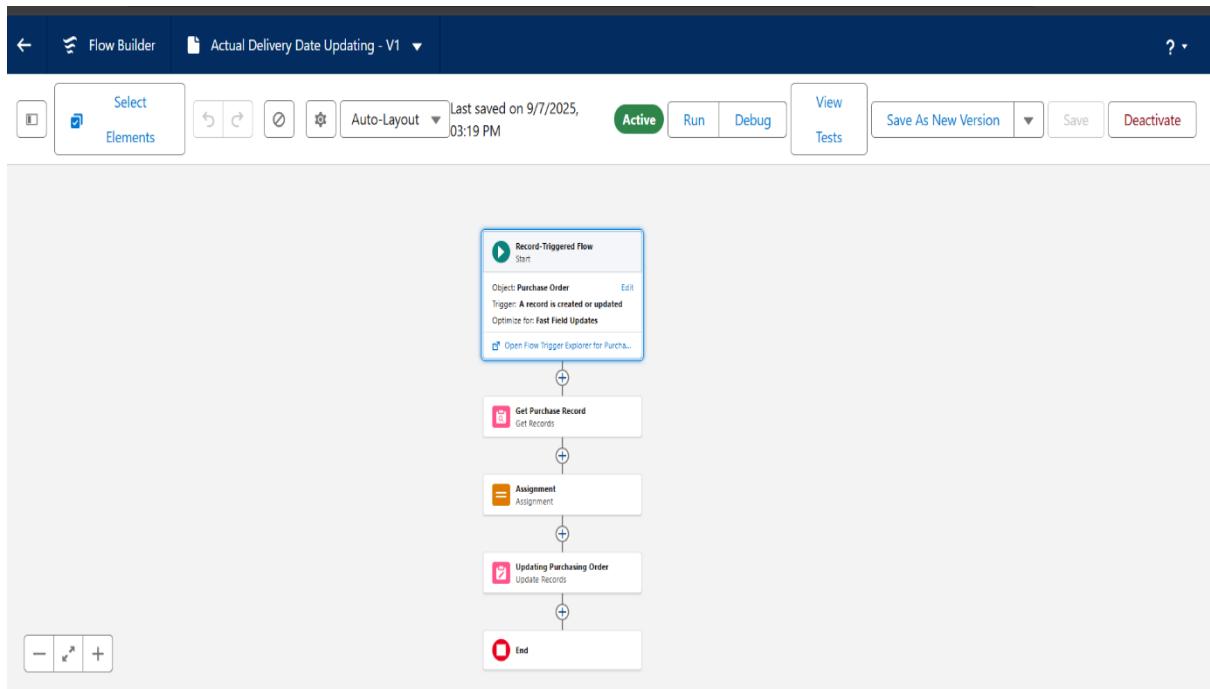
Time Zone  
Select a time zone...

**Selected Users**

Full Name	Role	Profile	Active	User License	Expires On
John PurchaseM	Purchasing Manager	Purchase Manager	✓	Salesforce	Never Expires

Cancel Back Assign

- Implemented Flows to update the actual delivery date



- Added Apex trigger

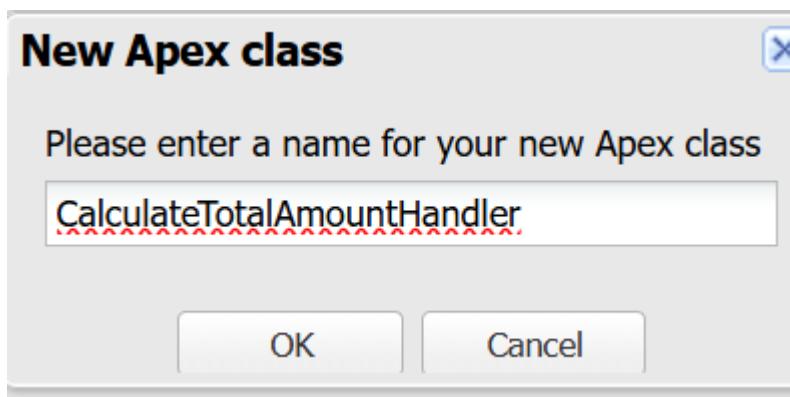
### New Apex Trigger

Name:	CalculateTotalAmountTrigger
sObject:	Order_Item__c
<input type="button" value="Submit"/>	

The screenshot shows the Salesforce Apex Editor interface. The top navigation bar includes links for File, Edit, Debug, Test, Workspace, Help, and a Go To button. The main editor area displays the code for the `CalculateTotalAmountTrigger.apxt` trigger:

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

The bottom navigation bar features tabs for Logs, Tests, Checkpoints, Query Editor, View State, Progress, and Problems, with the Problems tab currently selected. A status bar at the bottom indicates "Code Coverage: None" and "API Version 64".

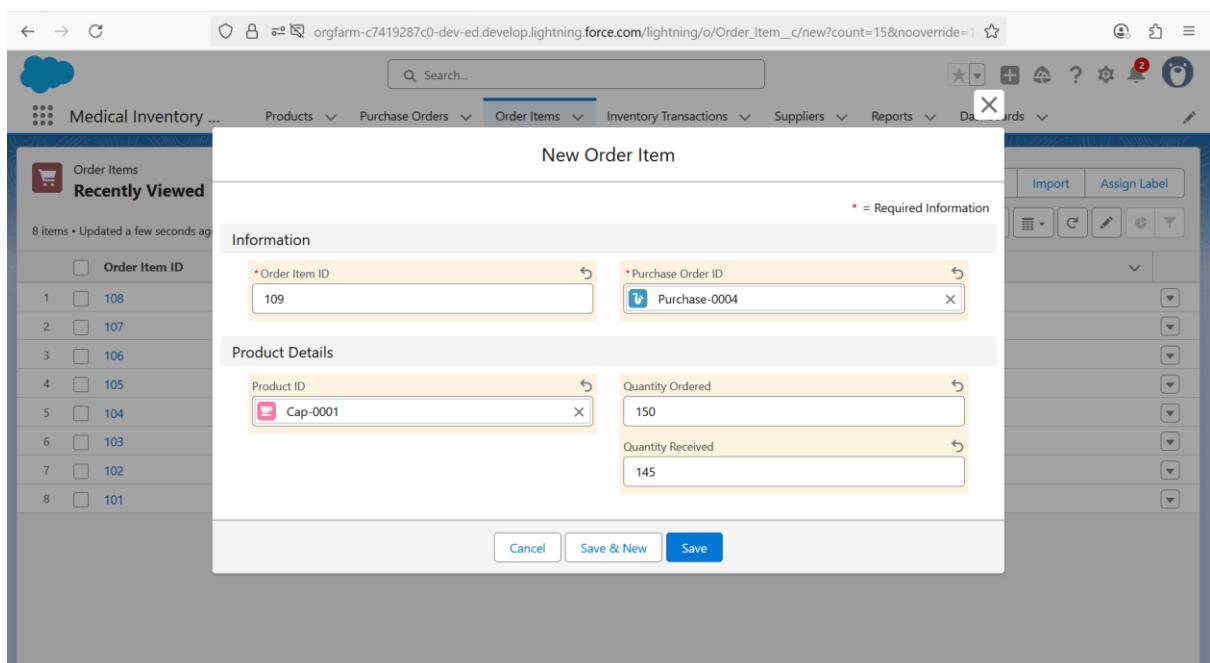


The screenshot shows the Salesforce Apex code editor with the file CalculateTotalAmountHandler.apxc open. The code implements a class to calculate the total amount for Purchase Orders based on related Order Items. It includes methods for calculating totals and collecting purchase order IDs affected by changes in Order Item records. The API version is set to 64.

```
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
8
9
10    // Collect Purchase Order IDs affected by changes in Order_Item__c records
11
12    Set<Id> parentIds = new Set<Id>();
13
14
15
16    // For insert, update, and undelete scenarios
17
18    if (isInsert || isUpdate || isUndelete) {
19
20
```

## FUNCTIONAL AND PERFORMANCE TESTING

1. Create a new order by specifying purchase order, product, quantity ordered, and quantity received.
2. Create new records for purchase orders, products, suppliers, and inventory transactions using similar steps.



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

Products Recently Viewed

4 items • Updated a few seconds ago

	Product ID
1	Gen-0001
2	IV-0001
3	Cap-0001
4	Syr-0001

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

Suppliers Recently Viewed

2 items • Updated a few seconds ago

	Supplier ID
1	Supplier-002
2	Supplier-001

Purchase Orders

Recently Viewed

5 items • Updated a few seconds ago

	Purchase Order ID
1	Purchase-0004
2	Purchase-0002
3	Purchase-0005
4	Purchase-0003
5	Purchase-0001

## RESULTS

### Output Screenshots

#### Purchase Orders Based on Suppliers

The report is generated with Supplier ID, Purchase Order: Purchase Order ID for group rows and Order Count, Total Order Cost for columns. In this way we are making a Summary Report.

Purchase Orders based on Suppliers

REPORT

Purchase Orders

Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
Supplier-001 (4)	Purchase-0001 (1) Purchase-0003 (1) Purchase-0004 (1) Purchase-0005 (1)	1 1 1 2	\$3,000.00 \$1,500.00 \$12,250.00 \$2,725.00
Supplier-002 (1)	Purchase-0002 (1)	3	\$1,160.00
<b>Total (5)</b>		<b>8</b>	<b>\$20,635.00</b>

Same wise, we are creating complete Purchase Details Report

The screenshot shows a Salesforce Lightning report titled "Report: Purchase Orders with Order Items and Product ID Complete Purchase Details Report". The report displays the following summary data:

Total Records	Total Order Count	Total Quantity Received	Total Amount
8	8	1,970	\$222,750.00

The main table lists purchase details by supplier, delivery date, and purchase order, with subtotals for each group. The columns include Supplier ID, Actual Delivery Date, Purchase Order, Product ID, Order Count, Product Name, Quantity Received, and Amount.

Supplier ID	Actual Delivery Date	Purchase Order	Product ID	Order Count	Product Name	Quantity Received	Amount
Supplier-001 (5)	7/4/2025 (2)	Purchase-0005 (2)	Cap-0001	2	Cap-0001	145	\$14,500.00
			IV-0001	2	IV-0001	400	\$20,000.00
				2		545	\$34,500.00
				2		545	\$34,500.00
	7/10/2025 (1)	Purchase-0001 (1)	Gen-0001	1	Gen-0001	300	\$30,000.00
				1		300	\$30,000.00
				1		300	\$30,000.00
	8/2/2025 (1)	Purchase-0003 (1)	Cap-0001	1	Cap-0001	300	\$30,000.00
				1		300	\$30,000.00
				1		300	\$30,000.00
	8/4/2025 (1)	Purchase-0004 (1)	IV-0001	1	IV-0001	245	\$12,250.00
				1		245	\$12,250.00
				1		245	\$12,250.00

At the bottom, there are checkboxes for Row Counts, Detail Rows, Subtotals, and Grand Total.

## DASHBOARD

The screenshot shows a Salesforce Lightning dashboard titled "Dashboard Medical Inventory DashBoard". The dashboard includes the following information:

- Sum of Total Order Cost:** \$21k
- Supplier ID:** Supplier-001, Supplier-002
- Last Update:** As of Sep 10, 2025, 10:05 AM
- User Information:** Viewing as Neeraja Seshagiri

The dashboard also features a link to "View Report (Purchase Orders ba...)" and a timestamp "As of Sep 10, 2025, 10:05 AM".

After adding an another data

Screenshot of the Purchase Orders based on Suppliers report in Salesforce Lightning.

**Report: Purchase Orders**  
**Purchase Orders based on Suppliers**

Total Records: 5 Total Order Count: 9 Total Total Order Cost: \$35,135.00

Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
Supplier-001 (4)	Purchase-0001 (1) Purchase-0003 (1) Purchase-0004 (1) Purchase-0005 (1)	1 1 2 2	\$3,000.00 \$1,500.00 \$26,750.00 \$2,725.00
Supplier-002 (1)	Purchase-0002 (1)	3	\$1,160.00
<b>Total (5)</b>		<b>9</b>	<b>\$35,135.00</b>

Row Counts:  Detail Rows:  Subtotals:  Grand Total:

Screenshot of the Medical Inventory DashBoard.

**Dashboard**  
**Medical Inventory DashBoard**

As of Sep 10, 2025, 10:03 AM - Viewing as Neeraja Seshagiri

**Purchase Orders based on Suppliers**

Sum of Total Order Cost: \$35k

Supplier ID:

- Supplier-001
- Supplier-002

View Report (Purchase Orders ba... As of Sep 10, 2025, 10:03 AM

## **ADVANTAGES & DISADVANTAGES**

### **ADVANTAGES:**

**Real-Time Inventory Tracking** Custom objects and dashboards provide instant visibility into stock levels, expiry dates, and supplier performance.

**Automated Calculations** Formula fields (e.g., Unit Price, Amount, Total Order Cost) reduce manual errors and ensure financial accuracy across transactions.

**Streamlined Workflow Management** Flows and triggers automate updates like actual delivery dates, improving operational efficiency and reducing delays.

**Role-Based Access Control** Defined roles and permission sets (e.g., Inventory Manager, Purchase Manager) ensure secure and relevant data access.

**Comprehensive Reporting** Summary reports and dashboards allow stakeholders to analyse purchase trends, supplier reliability, and inventory movement.

**Scalable Object Design** Modular structure with objects like Product, Supplier, and Inventory Transaction supports future expansion and customization.

### **DISADVANTAGES:**

**Complex Setup and Configuration** Initial setup—including custom fields, relationships, and Apex triggers—requires technical expertise and time investment.

**User Training Requirements** Non-technical users may struggle with navigating tabs, understanding object relationships, or interpreting formula-driven fields.

**Data Entry Dependency** Accuracy relies heavily on consistent and correct manual input, especially for quantities and dates.

**Limited Offline Access** Salesforce's cloud-based nature may hinder access in low-connectivity environments, affecting field operations.

**Customization Maintenance** Ongoing updates to flows, triggers, and layouts require regular testing to avoid system conflicts or data inconsistencies.

## CONCLUSION

The Salesforce-based medical inventory system delivers a structured, scalable solution for managing healthcare supplies with precision and accountability. Its strengths—automated calculations, role-based access, and real-time dashboards—enable efficient tracking and decision-making across departments. However, the system's effectiveness depends on disciplined data entry, ongoing configuration maintenance, and user familiarity with its interface and workflows. By proactively addressing its limitations through training, validation rules, and layout optimization, the system can evolve into a reliable backbone for clinical inventory control—supporting both operational excellence and patient safety.

## APPENDIX

Source Code: Provided in Apex Classes and Triggers

Test.apxt:

```
trigger test on Tenant__c (before insert) { if  
(trigger.isInsert && trigger.isBefore){  
    testHandler.preventInsert(trigger.new);  
} }
```

testHandler.apxc:

```
public class  
testHandler {  
    public static void  
    preventInsert(List<  
        Tenant__c> newlist)  
    { Set<Id>  
        existingPropertyIds  
        = new Set<Id>()
```

```
for (Tenant__c existingTenant : [SELECT Id, Property__c FROM Tenant__c  
WHERE Property__c != null]) {  
  
existingPropertyIds.add(existingTenant.Property__c;  
  
} for (Tenant__c newTenant :  
  
newlist) {  
  
if (newTenant.Property__c != null &&  
  
existingPropertyIds.contains(newTenant.Property__c)) { newTenantaddError('A  
tenant can have only one property');  
  
}  
  
}  
  
}  
  
}  
  
}
```

MothlyEmailScheduler.apxc:

```
global class MonthlyEmailScheduler implements Schedulable {  
  
global void execute(SchedulableContext sc) { Integer  
currentDay = Date.today().day(); if (currentDay == 1) {  
  
sendMonthlyEmails();  
  
}  
  
} public static void  
  
sendMonthlyEmails() { List<Tenant__c>  
  
tenants = [SELECT Id, Email__c FROM  
  
Tenant__c]; for (Tenant__c tenant :  
  
tenants) {  
  
String recipientEmail = tenant.Email__c;
```

```
String emailContent = 'I trust this email finds you well. I am writing to remind you  
that the monthly rent is due Your timely payment ensures the smooth functioning of our  
rental arrangement and helps maintain a positive living environment for all.';  
  
String emailSubject = 'Reminder: Monthly Rent Payment Due';  
  
Messaging.SingleEmailMessage email = new  
Messaging.SingleEmailMessage(); email.setToAddresses(new  
String[]{recipientEmail}); email.setSubject(emailSubject);  
email.setPlainTextBody(emailContent);  
  
Messaging.sendEmail(new Messaging.SingleEmailMessage[]{email});  
}  
}  
}
```