

PROJECT TITLE

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College Code: brubw

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1.INTRODUCTION

1.Project Overview

Medical Inventory Management

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.

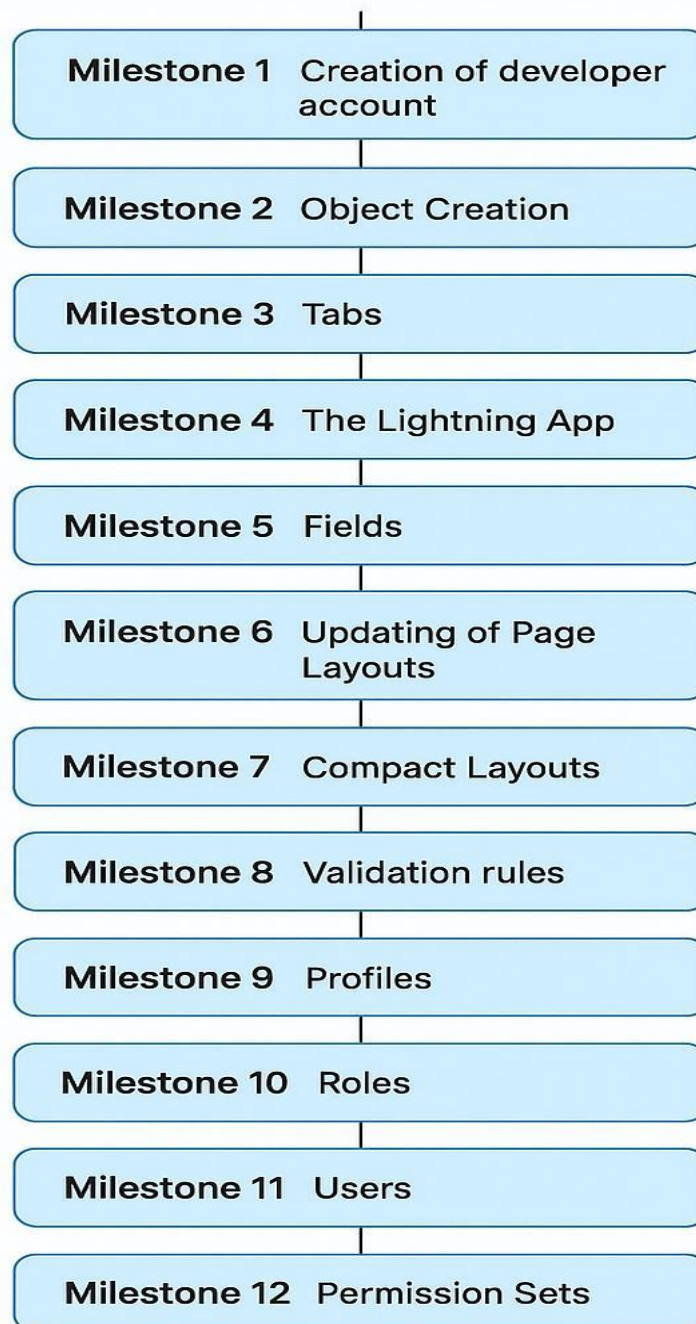
This project is a comprehensive Salesforce application to streamline and manage various operational aspects of medical inventory. The system aims to efficiently maintain supplier details, manage purchase orders, track product details and transactions, and monitor the expiry dates of products. Maintain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

Purpose :

To streamline and automate the process of tracking, managing, and monitoring medical supplies, ensuring that the right items are available at the right time, while reducing errors, costs, and Risks.

Medical Inventory Management


Project Flow



DEVELOPMENT PHASE

Creating Developer Account


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



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First name	Last name
<input type="text" value="Jasna"/>	<input type="text" value="A"/>

Job title	Work email
<input type="text" value="Developer"/>	<input type="text" value="23bcajasana@aca"/>


Company	Country/Region
<input type="text" value="Akshaya college o"/>	<input type="text" value="India"/>

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

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

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Sign Me Up

● Created Objects : Product, Purchase Order, Order Item, Inventory Transaction and Supplier objects.

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Product

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

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

Edit

Delete

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Purchase Order

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

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

Edit

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Order Item

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Buttons, Links, and Actions

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Field Sets

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Record Types

Related Lookup Filters

Details

Edit

Delete

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

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Details

Edit

Delete

Description

API Name

Inventory_Transaction__c

Custom

✓

Singular Label

Inventory Transaction

Plural Label

Inventory Transactions

Enable Reports

✓

Track Activities

Track Field History

Deployment Status

Deployed

Help Settings

Standard salesforce.com Help Window

- Create a 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 & Branding

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


App Details


* App Name ⓘ
Medical_Inventory_Management

* Developer Name ⓘ
Medical_Inventory_Management


Description ⓘ
Enter a description...

App Branding

Image ⓘ

Clear

Primary Color Hex Value ⓘ
 #0070D2

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

App Launcher Preview


● Configured fields and relationships

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Product

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Field

Quick Find

New

Deleted Fields

Field Dependencies

9 Items, Sorted by Field Label

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIEL
Created By	CreatedById	Lookup(User)	
Current Stock Level	Current_Stock_Level__c	Number(18, 0)	
Last Modified By	LastModifiedById	Lookup(User)	
Minimum Stock Level	Minimum_Stock_Level__c	Number(7, 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)	
Unit Price	Unit_Price__c	Currency(16, 2)	



Purchase Order

Details

Fields

Quick Find

New

Deleted Fields

Field Dependencies

11 Items, Sorted by Field Label

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

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
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)	
Product ID	Name	Text(80)	
Purchase Order Id	Purchase_Order_Id__c	Auto Number	
Supplier ID	Supplier_ID__c	Lookup(Supplier)	
Total Order Cost	Total_Order_Cost__c	Currency(18, 0)	



Setup

Home

Object Manager



SETUP > OBJECT MANAGER

Order Item

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Details

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 V](#)

SETUP > OBJECT MANAGER

Inventory Transaction

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Details

Description

API Name

Inventory_Transaction__c

Custom



Singular Label

Inventory Transaction

Plural Label

Inventory Transactions

Enable Reports



Track Activities

Track Field History

Deployment Status

Deployed

Help Settings

[Standard salesforce.com Help V](#)



Setup

Home

Object Manager ▾

SETUP > OBJECT MANAGER

Supplier

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

Fields

Quick Find

10 Items, sorted by Field Label

New

Deleted Fields

Field Dependencies

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD
Address	Address__c	Text Area(255)	
Contact Person	Contact_Person__c	Text(80)	
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	
Product ID	Name	Text(80)	
Supplier Id	Supplier_Id__c	Auto Number	
Supplier Name	Supplier_Name__c	Text(80)	

- Create a Compact Layout to a Product Object :

The screenshot shows the Salesforce Setup interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The main heading is 'Product'. On the left sidebar, the 'Compact Layouts' option is selected. The main content area is titled 'Product Compact Layout' with a 'Back to Product' link. Below this, the 'Compact Layout Detail' section shows the following information:

Compact Layout Detail		Object Name	
Label	Product Compact Layout	Product	
API Name	Product_Compact_Layout		
Included Fields	Current Stock Level Product Name Unit Price		
Created By	Jasna A, 8/29/2025, 6:59 AM	Modified By	Jasna A, 8/29/2

Buttons for 'Edit', 'Clone', 'Delete', and 'Compact Layout Assignment' are available at the top and bottom of the detail section.

The screenshot shows the Salesforce Setup interface for a Purchase Order Compact Layout. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The breadcrumb trail is 'SETUP > OBJECT MANAGER'. The main heading is 'Purchase Order'. On the left sidebar, the 'Compact Layouts' option is selected. The main content area is titled 'Purchase Order Compact Layout' with a 'Back to Purchase Order' link. Below this, the 'Compact Layout Detail' section shows the following information:

Compact Layout Detail		Object Name	
Label	Purchase Order Compact Layout	Purchase Order	
API Name	Purchase_Order_Compact_Layout		
Included Fields	Order Date Supplier ID Total Order Cost		
Created By	Jasna A, 8/29/2025, 7:03 AM	Modified By	Jasna A, 8/29/2

Buttons for 'Edit', 'Clone', 'Delete', and 'Compact Layout Assignment' are available at the top and bottom of the detail section.

- Create an Expected Delivery Date Validation rule to a Employee Object

Setup

Home

Object Manager

SETUP > OBJECT MANAGER

Purchase Order

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Purchase Order Validation Rule

Back to Purchase Order

Validation Rule Detail

Edit

Clone

Rule Name	Expected_Delivery_Date_Validation	Active	<input checked="" type="checkbox"/>
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	Jasna A, 8/29/2025, 7:08 AM	Modified By	Jasna A, 8/29/2025, 7:08 AM

Edit

Clone

● Create an Inventory Manager Profile :

The screenshot shows the Salesforce Setup interface. The left sidebar has a search bar with 'Profil' and a 'Users' dropdown menu. The 'Profiles' link is highlighted. The main content area is titled 'Profiles' and shows the 'Inventory Manager' profile. It includes a list of permissions (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, Custom Permissions) and a 'Profile Detail' table.

Profile Detail	
Name	Inventory Manager
User License	Salesforce
Description	
Created By	Jasna A. 8/29/2025, 7:10 AM
Modified By	Jasna A. 8/29/2025, 10:36 PM


● Create an Purchase Manager Profile :

The screenshot shows the Salesforce Setup interface. The left sidebar has a search bar with 'Profil' and a 'Users' dropdown menu. The 'Profiles' link is highlighted. The main content area is titled 'Profiles' and shows the 'Purchase Manager' profile. It includes a list of permissions (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, Custom Permissions) and a 'Profile Detail' table.

Profile Detail	
Name	Purchase Manager
User License	Salesforce
Description	
Created By	Jasna A. 8/29/2025, 7:13 AM
Modified By	Jasna A. 8/29/2025, 10:36 PM

- Create Roles (purchasing & Inventory manager)

Object Manager ▾



























SETUP
Roles

Creating the Role Hierarchy

You can build on the existing role hierarchy shown on this page. To increase the number of roles, click **Add Role**.

Your Organization's Role Hierarchy Show

[Collapse All](#) [Expand All](#)

-  **Akshaya**
 -  **Add Role**
 -  **CEO** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **CFO** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **COO** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **SVP, Customer Service & Support** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **Customer Support, International** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **Customer Support, North America** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **Installation & Repair Services** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **SVP, Human Resources** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **SVP, Sales & Marketing** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **Inventory Manager** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**
 -  **Purchasing Manager** [Edit](#) | [Del](#) | [Assign](#)
 -  **Add Role**

● Create a Permission Set :

The screenshot displays the Salesforce Setup interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The left sidebar shows a search bar with 'Perm' and a list of categories: Users, Permission Set Groups, Permission Sets (selected), and Custom Code. Below the sidebar, a message states: 'Didn't find what you're looking for? Try using Global Search.'

The main content area is titled 'Permission Sets' with a 'SETUP' icon. Below this, the specific permission set 'Purchase Manager Create Access' is shown. A 'Find Settings...' search bar is present, along with buttons for 'Clone', 'Edit Properties', 'Manage Assignments', and 'View Summary'. A 'Video Tutorial | Help for this Page' link is also available.

The 'Permission Set Overview' section contains the following details:

| Description | API Name |
|--------------------------------|------------------|
| Purchase Manager Create Access | Purchase_Manager |

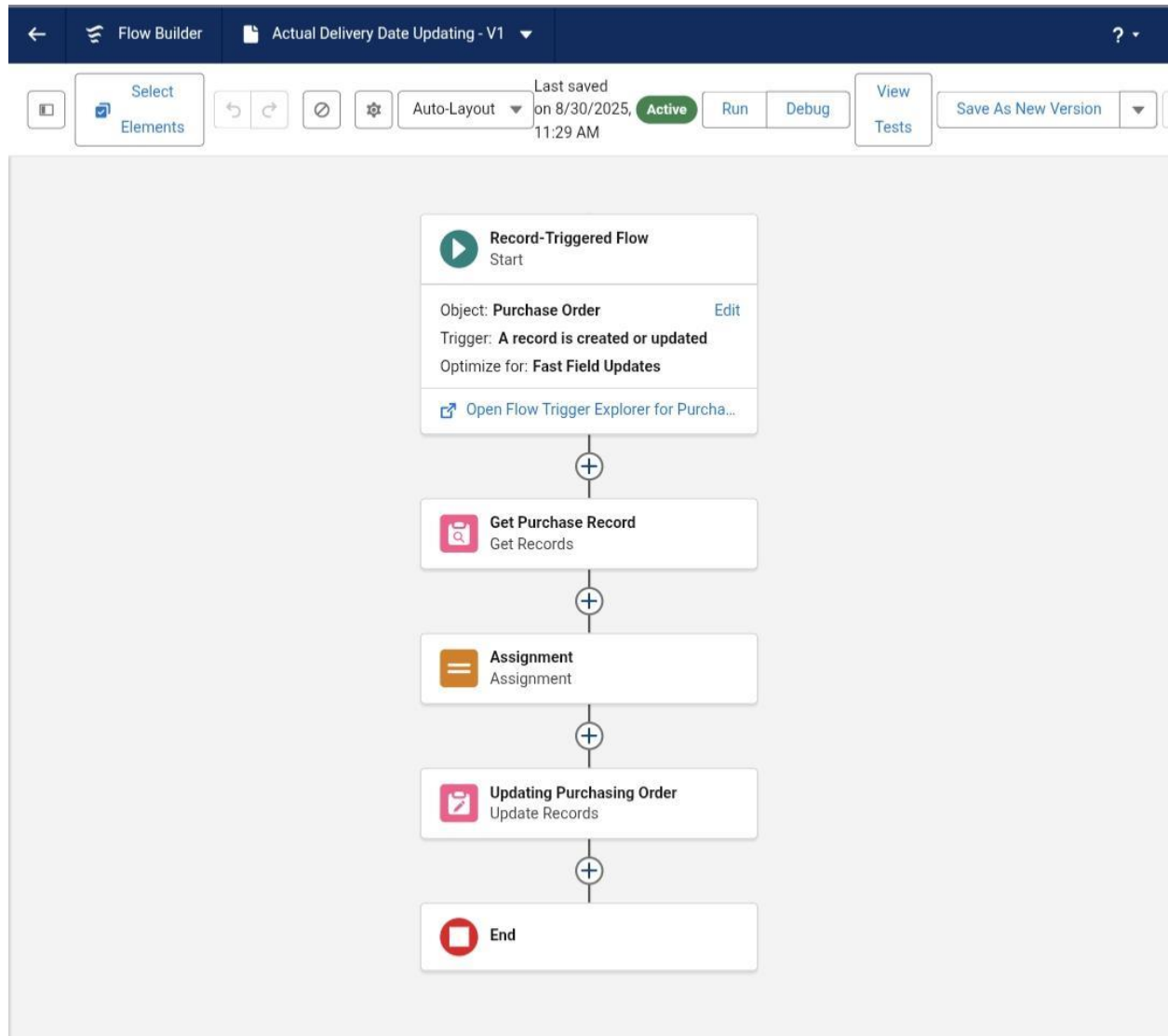
Additional configuration options include:

- License: (empty field)
- Namespace Prefix: (empty field)
- Session Activation Required: ☐
- Created By: [Jasna A.](#), 8/29/2025, 7:19 AM
- Permission Set Groups Added To: 0
- Last Modified By: [Jasna A.](#), 8/29/2025, 7:20 AM

At the bottom, there is a section labeled 'Apps'.

● Create Flow to update the Actual Delivery

Date :



- Create a Trigger to Calculate total amount on Order Item :

Create an Apex Trigger:

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

    // Call the handler class to handle the logic
    CalculateTotalAmountHandler.calculateTotal(Trigge
r.new, Trigger.old, Trigger.isInsert, Trigger.isUpdate,
Trigger.isDelete, Trigger.isUndelete);
}
```

- Choose Apex Class: Name it as CalculateTotalAmountHandler :

```
Public class CalculateTotalAmountHandler {  
  
    // Method to calculate the total amount for  
    Purchase Orders based on related Order Items  
  
    Public static void  
    calculateTotal(List<Order_Item__c> newItems,  
    List<Order_Item__c> oldItems, Boolean isInsert,  
    Boolean isUpdate, Boolean isDelete, Boolean  
    isUndelete) {  
  
        // Collect Purchase Order IDs affected by changes  
        in Order_Item__c records  
  
        Set<Id> parentIds = new Set<Id>();
```

```
// For insert, update, and undelete scenarios

If (isInsert || isUpdate || isUndelete) {

    For (Order_Item__c ordItem : newItems) {

        parentId.add(ordItem.Purchase_Order_Id__c);

    }

}

// For update and delete scenarios

If (isUpdate || isDelete) {

    For (Order_Item__c ordItem : oldItems)

    {

        parentId.add(ordItem.Purchase_Order_Id__c);

    }

}
```

```
// Calculate the total amounts for affected
Purchase Orders

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

    ];
```

```
// Map the result to Purchase Order IDs

For (AggregateResult aggr : aggrList) {

    Id purchaseOrderId =
    (Id)aggr.get('Purchase_Order_Id__c');

    Decimal totalAmount =
    (Decimal)aggr.get('totalAmount');

    purchaseToUpdateMap.put(purchaseOrderId,
    totalAmount)

}

// Prepare Purchase Order records for update

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);
}

// Update Purchase Orders if there are any
changes

    If (!purchaseToUpdate.isEmpty()) {
Update purchaseToUpdate;

        }

    }

}
```


● Create Reports :

Medical Inventory ...

Products ▾ Purchase Orders ▾ Order Items ▾ Reports ▾ More ▾

Reports

Recent

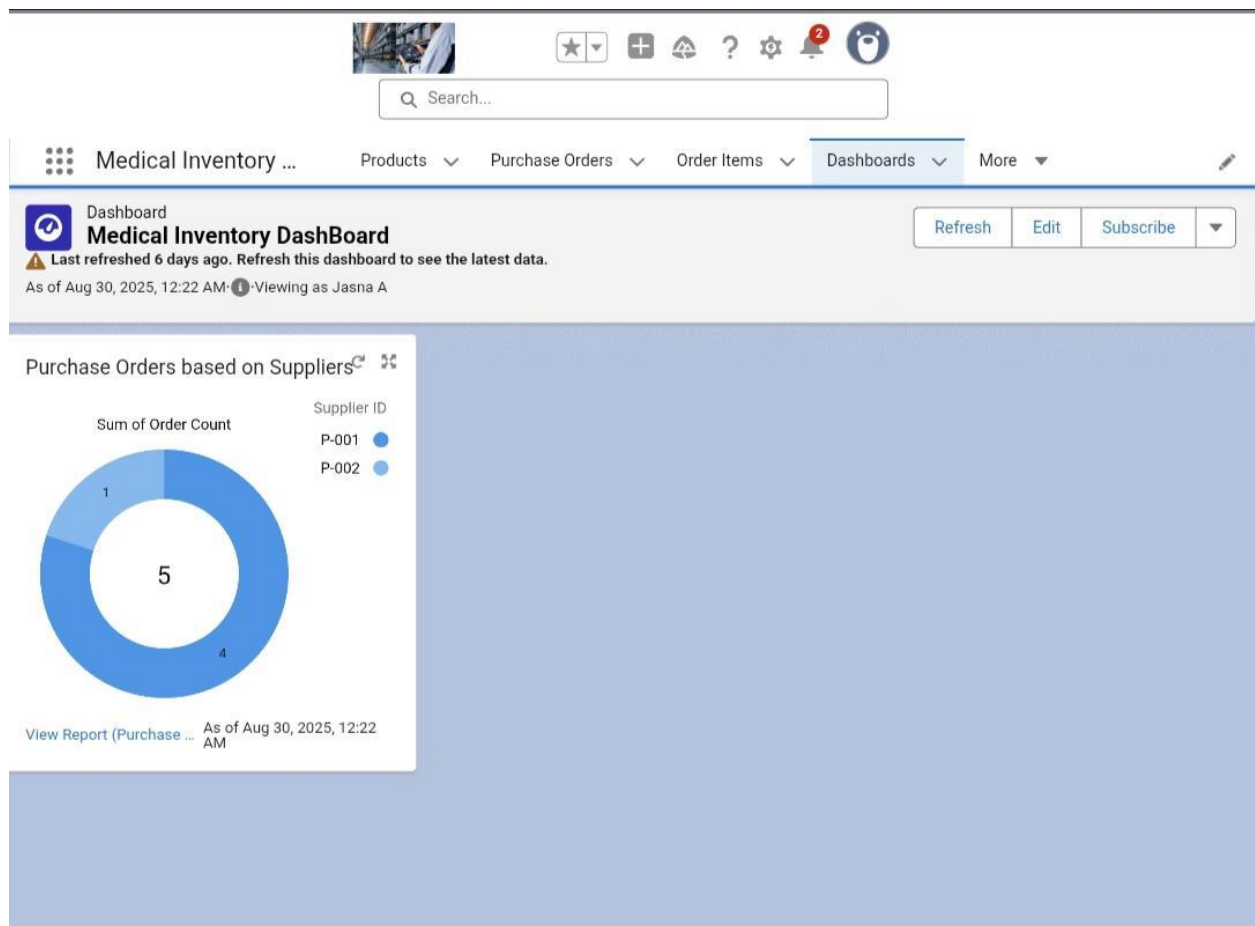
2 Items

New Report

New Folder

| REPORTS | Report Name ▾ | Description ▾ | Folder ▾ | Creat... ▾ | Created On ▾ | Subscribed |
|-----------------|------------------------------------|---------------|-----------------|------------|---------------------|------------|
| Recent | Purchase Orders based on Suppliers | | Private Reports | Jasna A | 8/30/2025, 11:41 AM | ▾ |
| Created by Me | Complete Purchase Details Report | | Private Reports | Jasna A | 8/30/2025, 12:13 PM | ▾ |
| Private Reports | | | | | | |
| Public Reports | | | | | | |
| All Reports | | | | | | |

● Dashboards :



● ADVANTAGES & DISADVANTAGES

Medical inventory management has several advantages and disadvantages. On the positive side, it helps healthcare facilities maintain accurate stock levels, avoid shortages of critical medicines and supplies, reduce wastage from expired products, and streamline purchasing, which saves both time and costs. It also improves patient safety by ensuring that the right products are available when needed. However, the disadvantages include high implementation costs for digital inventory systems, the need for continuous staff training, and potential technical issues such as software errors or system downtime.

Additionally, if not managed properly, over-reliance on automated systems can lead to errors being overlooked, and strict monitoring can sometimes slow down workflows. Overall, effective medical inventory management provides significant benefits but requires proper planning, resources, and monitoring to overcome its challenges.

● CONCLUSION

In conclusion, medical inventory management is vital for ensuring the smooth functioning of healthcare facilities. It improves efficiency, reduces waste, and enhances patient safety. However, it also involves challenges like high costs and technical dependencies. With proper planning and monitoring, its benefits far outweigh the drawbacks.