MEDICAL INVENTORY MANAGEMENT

COLLEGE NAME: CHIKKANNA GOVERNMENT ARTS COLLEGE,TIRUPUR

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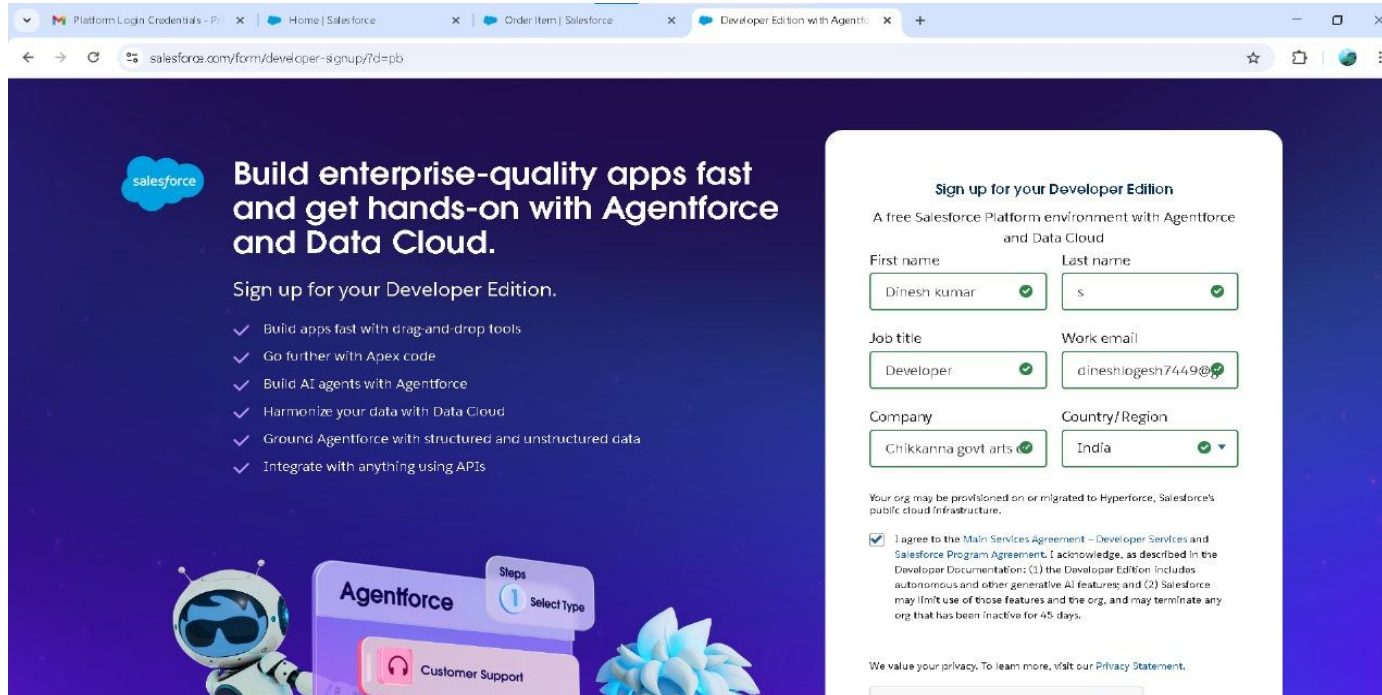**TEAM MEMBER: SARAVANAN T**

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● <u>INTRODUCTION:</u>

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.

● DEVELOPMENT PHASE :

Creating development account:
By using this url -https://developer.saleforce.com/signup

- **Creating objects: product, purchase order, order item, inventory transaction, supplier objects.**

Purchase Order

Details

Details

Edit | Delete

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

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

Details

Details   Edit   Delete

Description

API Name
Order_Item__c

Enable Reports
✓

Custom
✓

Track Activities
✓

Singular Label
Order Item

Track Field History
✓

Plural Label
Order Items

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Sidebar

- 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

Inventory Transaction

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

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

M Platform Login Credentials - Pri ✕ | 🗩 Home | Salesforce ✕ 🗩 Supplier | Salesforce ✕ 🔊 - Student ✕ | +

← → C 🔒 orgfarm-5a6e2463d6-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK0000021urq/Details/view ☆ 🗗 | 🌑 :

Q Search Setup

::: **Setup**   Home   Object Manager ⌄

SETUP > OBJECT MANAGER
Supplier

Details	Edit	Delete

Details

Details

Fields & Relationships

Page Layouts

Description

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

API Name
Supplier__c

Custom
✓

Singular Label
Supplier

Plural Label
Suppliers

Enable Reports
✓

Track Activities
✓

Track Field History
✓

Deployment Status
Deployed

Help Settings
Standard salesforce.com Help Window

Creating a tab for object:

- **Developed Lightning app:**

- **Configure fields and relationship:**

Fields & Relationships
16 Items, Sorted by Field Label

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

Order Date	Order_Date__c	Date		
Owner	OwnerId	Lookup(User,Group)	✓	
Product ID	Product_ID__c	Lookup(Product)	✓	
Product ID	name__c	Text(18)		
Purchase Order	Purchase_Order__c	Lookup(Purchase Order)	✓	
Purchase Order ID	Purchase_Order_ID__c	Text(18)		
Purchase Order ID	Name	Text(80)	✓	
Quantity Received	Quantity_Received__c	Lookup(Product)	✓	
Supplier ID	Supplier_ID__c	Lookup(Supplier)	✓	
Total Order Cost	Total_Order_Cost__c	Currency(16, 2)		

M Platform Login Credentials - Pri X | Home | Salesforce X | Order Item | Salesforce X | - Student X | +

C | orgfarm-5a6e2463c5-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK0000021vhR/FieldsAndRelationships/view

Q Search Setup

::: Setup   Home   Object Manager ∨

SETUP > OBJECT MANAGER
Order Item

Details						

Fields & Relationships
12 Items, Sorted by Field Label

Q Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

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

Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Order Item ID	Name	Text(80)	✓	▼
Product2Id	Product2Id__c	Text(18)		▼
Product_ID	Product_ID__c	Currency(18, 0)		▼
Product_ID__c	Product_ID_c__c	Formula (Text)		▼
Purchase Order	Purchase_Order__c	Master-Detail(Purchase Order)	✓	▼
Quantity Ordered	Quantity_Ordered__c	Number(18, 0)		▼
Quantity_Received	Quantity_Received__c	Currency(18, 0)		▼
Unit Price	Unit_Price__c	Currency(18, 0)		▼

Inventory Transaction

Fields & Relationships

9 Items, Sorted by Field Label

Q Quick Find | New | Deleted Fields | Field Dependencies | Set History Tracking

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	Currency(18, 0)			▼
Total Order Cost	Total_Order_Cost__c	Formula (Currency)			▼
Total_Order_Cost__c	Total_Order_Cost_c__c	Currency(18, 0)			▼
Transaction Date	Transaction_Date__c	Date			▼
Transaction Type	Transaction_Type__c	Picklist			▼

Left sidebar:
- 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

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Q Search Setup

Setup   Home   Object Manager ▾

SETUP > OBJECT MANAGER
Supplier

Fields & Relationships
9 Items, Sorted by Field Label

Q Quick Find   New   Deleted Fields   Field Dependencies   Set History Tracking

FIELD LABEL ▲	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED	
Details					
Fields & Relationships					
Page Layouts	Address	Address__c	Text Area(255)		▾
Lightning Record Pages					
Buttons, Links, and Actions	Contact Person	Contact_Person__c	Text(18)		▾
Compact Layouts	Created By	CreatedById	Lookup(User)		
Field Sets	Email	Email__c	Email		▾
Object Limits	Last Modified By	LastModifiedById	Lookup(User)		
Record Types	Owner	OwnerId	Lookup(User,Group)	✓	
Related Lookup Filters	Phone Number	Phone_Number__c	Phone		▾
Search Layouts	Supplier ID	Name	Text(80)	✓	▾
List View Button Layout					
Restriction Rules	Supplier Name	Supplier_Name__c	Text(18)		▾
Scoping Rules					

- **Developed page layouts:**

orgfarm-5a6e2463d5-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK0000021vfp/PageLayouts/00hgK000006skSDQAY/view

Q Search Setup

Setup   Home   Object Manager ∨

SETUP > OBJECT MANAGER
Purchase Order

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

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

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

Quick Find Field Name ✕

➕ Section	Created By	Order Date	Purchase Order	Supplier ID
➕ Blank Space	Expected Delivery...	Owner	Purchase Order ID	Total Order Cost
Actual Delivery Date	Last Modified By	Product ID	Purchase Order ID	
Amount	Order Count	Product ID	Quantity Received	

Purchase Order 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)

★ ● Purchase Order ID   Sample Text
  ★ ● Supplier ID   Sample Text
    ★ Order Date   9/6/2025
Expected Delivery Date   9/6/2025
   Purchase Order ID   Sample Text   ➖ 🔧
        Product ID   Sample Text
        Product ID   Sample Text
  Quantity Received   Sample Text
         Amount   Sample Text

Actual Delivery Date   9/6/2025
🔒 Order Count   47,310
🔒 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)

orgfarm-5a6e2463d5-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01lgK0000021vhR/PageLayouts/00hgK000006skTpQAI/view

Q Search Setup

Setup   Home   Object Manager ∨

SETUP > OBJECT MANAGER
Order Item

Details

Fields & Relationships

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

List View Button Layout

Restriction Rules

Scoping Rules

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

Fields	Quick Find Field Name	✕		
Buttons	→ Section	Last Modified By	Product2Id	Unit Price
Quick Actions	Blank Space	Order Item ID	Purchase Order	Unit Price2
Mobile & Lightning Actions	Amount	Product_ID	Quantity_Received	
Expanded Lookups	Created By	Product_ID__c	Quantity Ordered	
Related Lists				
Report Charts				

Order Item Detail

Standard Buttons
Edit | Delete | Clone | Change Owner | Change Record Type | Printable View | Edit Labels

Custom Buttons

Information (Header visible on edit only)

- ★ ● Order Item ID   Sample Text
- ⚠ Amount $123.45
- Product_ID $123.45
- ★ ● Unit Price $123.45
- Product2Id   Sample Text
- ⚠ Product_ID__c   Sample Text

- ★ ● Purchase Order   Sample Text
- Quantity Ordered   77,319
- Quantity_Received $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)

Mobile Cards (Salesforce mobile only) ⓘ

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Q Search Setup

Setup   Home   Object Manager ∨

SETUP > OBJECT MANAGER
Inventory Transaction

Details	Save ▼ Quick Save Preview As... ▼ Cancel	🔄 Undo 🔄 Redo	📋 Layout Properties

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

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

🔍 Quick Find Field Name ✖

→■Section	Last Modified By	Total Order Cost
+▣ Blank Space	Owner	Transaction Date
Created By	Purchase_Order_ID	Transaction Type
Inventory Transac...	Total_Order_Cost__c	

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)

⭐ 🔵 Inventory   Sample Text   Owner   Sample Text
   Transaction ID
Purchase_Order_ID $123.45
Transaction Type   Sample Text
Transaction Date   9/6/2025
⚠ 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)

Mobile Cards (Salesforce mobile only) ℹ

Q Search Setup

::: Setup   Home   Object Manager ∨

SETUP > OBJECT MANAGER
Supplier

Save ▼ | Quick Save | Preview As... ▼ | Cancel | ⟲ Undo | ⟳ Redo | 🗒 **Layout Properties**

Details		🔍 **Quick Find** Field Name ⊗
Fields & Relationships	**Fields**	
	Buttons	+⬛Section Created By Phone Number
Page Layouts	Quick Actions	+⬛Blank Space Email Supplier ID
	Mobile & Lightning Actions	Address Last Modified By Supplier Name
Lightning Record Pages	Expanded Lookups	Contact Person Owner
	Related Lists	
	Report Charts	
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

Supplier Detail

Standard Buttons   Custom Buttons
Edit | Delete | Clone | Change Owner | Change Record Type | Printable View | Sharing | Sharing Hierarchy | Edit Labels

Information (Header visible on edit only)
⭐ 🔵 **Supplier ID**   Sample Text   ⭐ 🔵 **Phone Number**   1-415-555-1212
Supplier Name   Sample Text   **Email**   sarah.sample@company.com
Contact Person   Sample Text   **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) ℹ️

- **Developed compact layouts:**

M Platform Login Credentials - Pr... ✕ | 🍃 Home | Salesforce ✕ | 🍃 Purchase Order | Salesforce ✕ | 🔲 - Student ✕ | +

← → C ⬠ orgfarm-5a6e2463d5-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01IgK0000021vfp/CompactLayouts/0AHgK000000GTKb/view

Q Search Setup

Setup   Home   Object Manager ⌄

SETUP > OBJECT MANAGER
Purchase Order

Purchase Order Compact Layout
Purchase Order Compact Layout   Help for this Page ❓
« Back to Purchase Order

Compact Layout Detail   Edit   Clone   Delete   Compact Layout Assignment

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	Dinesh kumar s, 9/5/2025, 1:11 AM	Modified By	Dinesh kumar s, 9/5/2025, 1:11 AM

Edit   Clone   Delete   Compact Layout Assignment

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

- **To create an expected delivery date validation rule to an employee object:**

- **To create profiles:**

Roles :

- **Create a permission set :**

- **Create flow to update the actual:**

M Platform Login Credentials - Pr. × | ● Home | Salesforce × | ● Flows | Salesforce × | ● Actual Delivery Date Updating × | 🖼 - Student × | +

← → C 🔒 orgfarm-5a6e2463c6-dev-ed.develop.lightning.force.com/builder_platform_interaction/flowBuilder.app?flowId=301gK00000J3wXaQAJ ☆ ⬆ ● :

← ➤ Flow Builder 📄 Actual Delivery Date Updating - V1 ▾ ? ▾

▭ 🗗 Select Elements ⤺ ⤻ ⊘ ⚙ Auto-Layout ▾ Last saved on 9/5/2025, 02:36 PM **Active** Run Debug View Tests Save As New Version ▾ Save Deactivate

Record-Triggered Flow
Start

Object: **Purchase Order** Edit
Trigger: **A record is created or updated**
Optimize for: **Fast Field Updates**

🗗 Open Flow Trigger Explorer for Purchas...

⊕

Get Purchase Record
Get Records

⊕

Assignment
Assignment

⊕

Updating Purchasing Order
Update Records

⊕

⬤ **End**

− ⤢ +

- **Create a trigger to calculate total amount on order item:**

```
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);

}
```

- **Calculate total amount handler:**

```
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) {
```
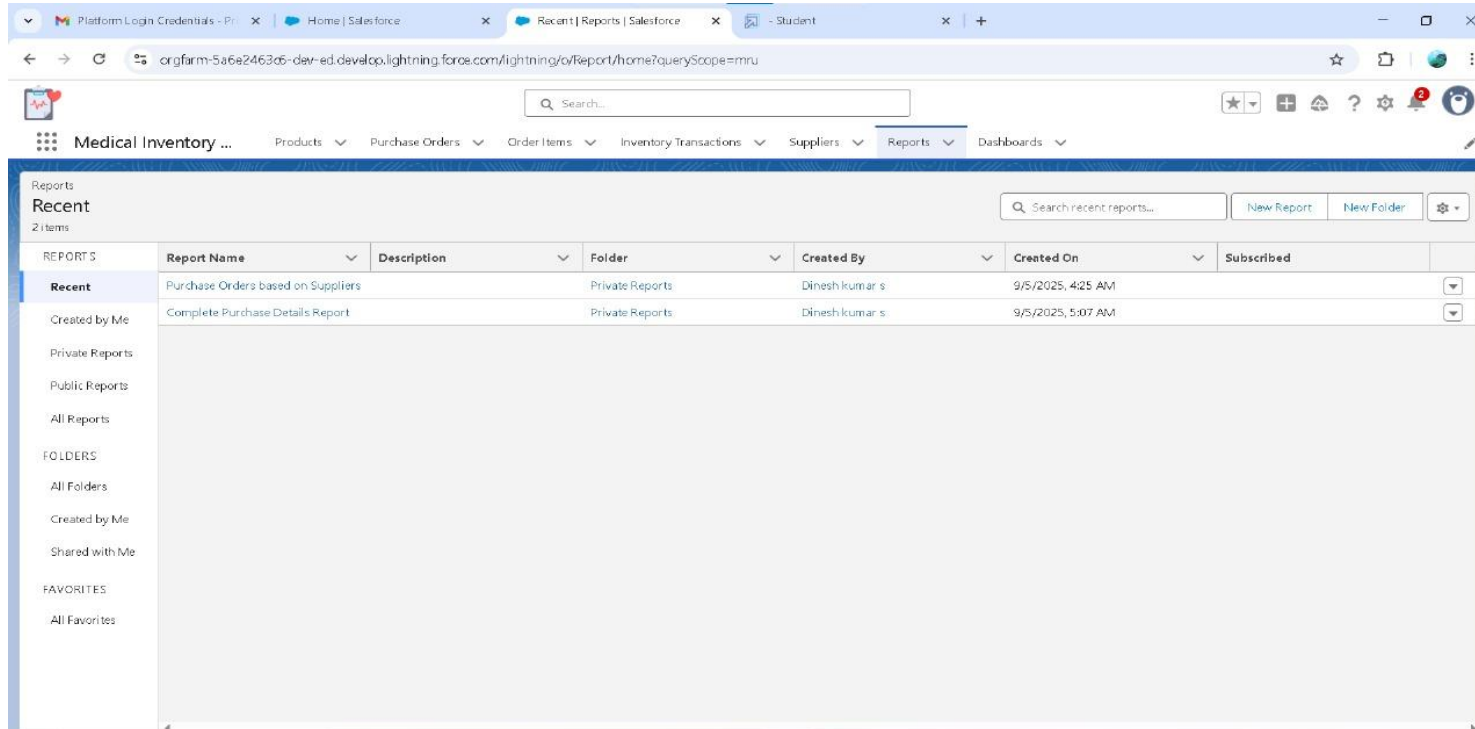
```apex
// Collect Purchase Order IDs affected by changes in Order_Item__c records
    Set<Id> parentIds = new Set<Id>();
// For insert, update, and undelete scenarios
  if (isInsert || isUpdate || isUndelete) {
 for (Order_Item__c ordItem : newItems) {
parentIds.add(ordItem.Purchase_Order_Id__c);    }
  }
// For update and delete scenarios
if (isUpdate || isDelete) {
  for (Order_Item__c ordItem : oldItems) {
parentIds.add(ordItem.Purchase_Order_Id__c);
 }
}
  // Calculate the total amounts for affected Purchase Orders
Map<Id, Decimal> purchaseToUpdateMap = new Map<Id, Decimal>();
```

```apex
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);
    }
```

```apex
// 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 a orders based on suppliers (summary) report and create a complete purchase details report:**

- **Created Dashboard:**

- ## <u>CONCLUSION:</u>

The implementation of a medical inventory management system plays a vital role in ensuring efficiency, accuracy, and reliability within healthcare facilities. By streamlining the tracking of medical supplies, equipment, and medicines, such a system minimizes errors, prevents stockouts, and reduces wastage. It not only supports cost-effective operations but also ensures that critical resources are available when needed, ultimately safeguarding patient care. Furthermore, automation and digital record-keeping enhance transparency, accountability, and decision-making.