

PROJECT TITLE

Medical Inventory Management

College Name: KPR College of Arts Science and Research

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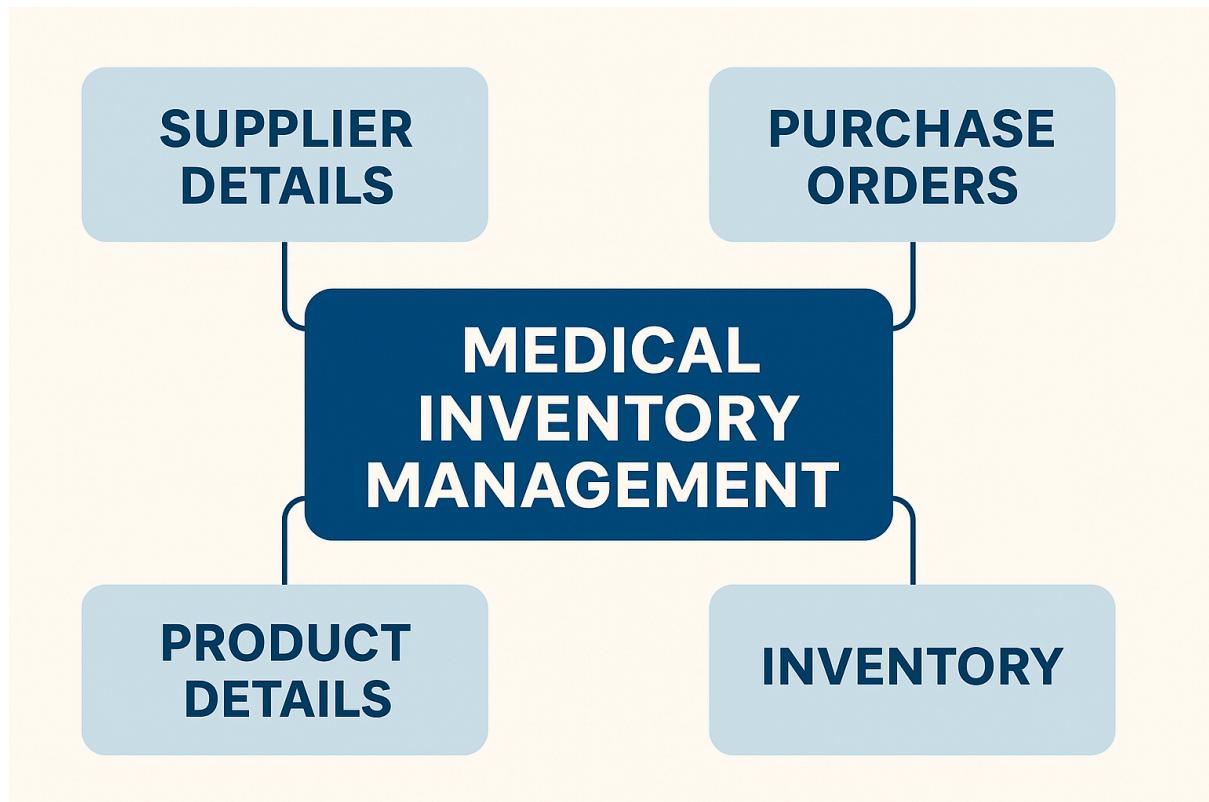
1. INTRODUCTION

1.1 Project Overview

The **Medical Inventory Management System** is a Salesforce-based application designed to simplify and automate the management of medical inventory operations. It helps maintain accurate supplier details, track purchase orders, and manage product information such as stock levels and expiry dates.

1.2 Purpose

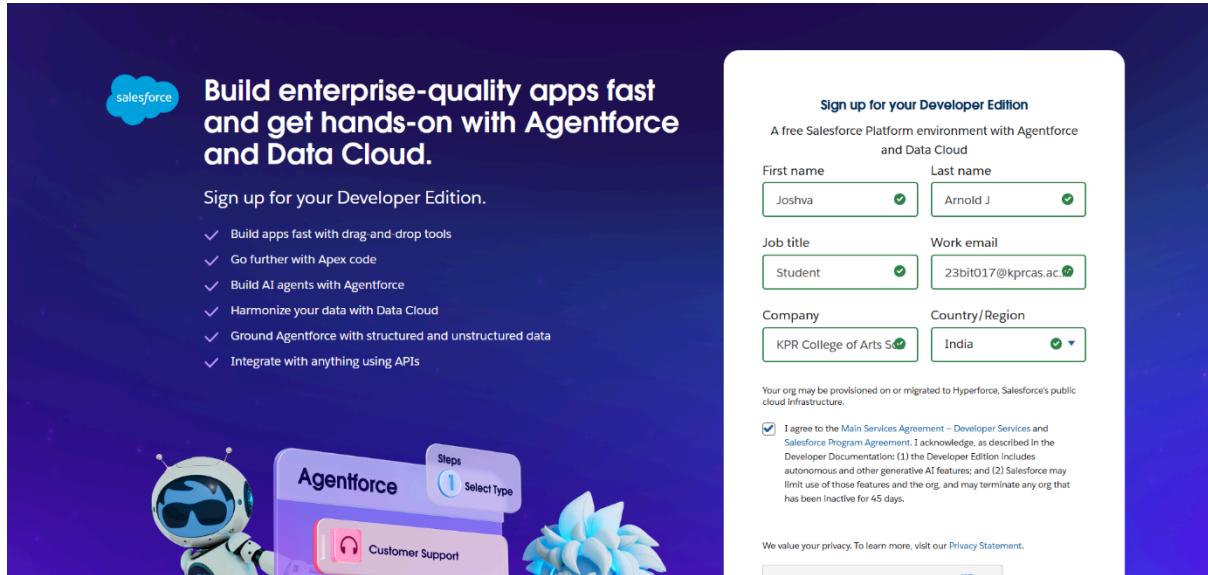
The purpose of this system is to ensure expired items are not used, improve operational efficiency, maintain data accuracy, and provide comprehensive insights through reports and dashboards for better decision-making in medical inventory management.



2.DEVELOPMENT PHASE

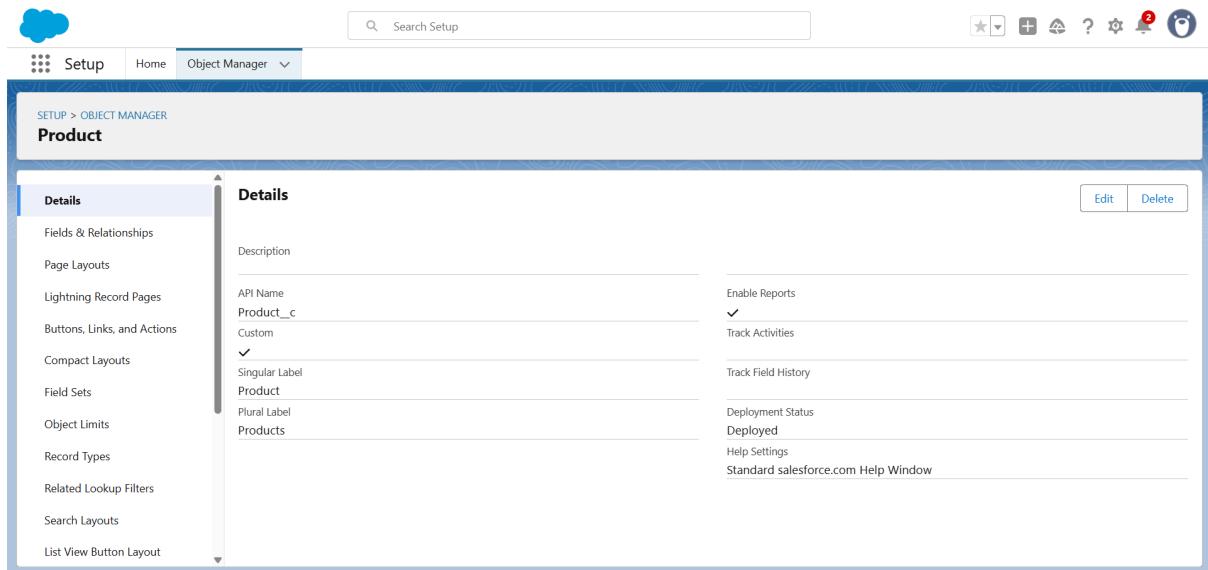
2.1 Creating Developer Account:

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



2.2 Created Custom Objects.

- Product:



Purchase Order :

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The page title is 'Purchase Order'. On the left, a sidebar lists various setup options like Fields & Relationships, Page Layouts, and Record Types. The main 'Details' section shows the object's API name as 'Purchase_Order__c', which is custom. It also displays singular and plural labels ('Purchase Order' and 'Purchase Orders'). Other settings include enabling reports and tracking activities, with deployment status set to 'Deployed'.

Order Item :

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The page title is 'Order Item'. The sidebar and main details section are identical to the Purchase Order setup, showing the API name 'Order_Item__c' as custom, with singular and plural labels ('Order Item' and 'Order Items'), and deployment status set to 'Deployed'.

Inventory Transaction :

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The page title is 'SETUP > OBJECT MANAGER' and the object name is 'Inventory Transaction'. The left sidebar lists various setup categories like Fields & Relationships, Page Layouts, and Record Types. The main 'Details' section shows the following configuration:

Setting	Value
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

Buttons at the top right include 'Edit' and 'Delete'.

Supplier :

The screenshot shows the Salesforce Setup interface with the 'Object Manager' selected. The page title is 'SETUP > OBJECT MANAGER' and the object name is 'Supplier'. The left sidebar lists various setup categories. The main 'Details' section shows the following configuration:

Setting	Value
Description	
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

Buttons at the top right include 'Edit' and 'Delete'.

2.3 Created Tabs for custom objects.

The screenshot shows the Salesforce Setup page under the 'Tabs' section. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. A search bar at the top right says 'Search Setup'. Below the navigation, there's a sidebar with 'User Interface' and 'Rename Tabs and Labels' sections, and a 'Tabs' section which is currently selected. A message at the bottom of the sidebar says 'Didn't find what you're looking for? Try using Global Search.' The main content area is titled 'Custom Tabs' and contains a sub-section 'Custom Object Tabs'. It lists several tabs with their labels and styles:

Action	Label	Tab Style	Description
Edit Del	Inventory Transactions	Balls	
Edit Del	Order Items	Apple	
Edit Del	Products	Airplane	
Edit Del	Purchase Orders	Alarm clock	
Edit Del	Suppliers	Bank	

Below this is a 'Web Tabs' section which states 'No Web Tabs have been defined'.

2.4 Developed Lightning App with relevant tabs.

The screenshot shows a Lightning App interface for 'Medical Inventory ...'. The top navigation bar includes 'Products', 'Purchase Orders', 'Order Items', 'Inventory Transactions', 'Suppliers', 'Reports', and 'Dashboards'. The main content area has a header 'Recently Viewed' with a refresh icon. Below it, a message says '1 item • Updated 26 minutes ago'. A table lists one item:

Product ID	Property
1	Property

At the top right of the content area are buttons for 'New', 'Import', 'Change Owner', and 'Assign Label'. There are also search and filter icons at the bottom right.

2.5 Configured fields and relationships.

□ Product :

The screenshot shows the Salesforce Object Manager interface for the 'Product' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main area is titled 'Fields & Relationships' and displays 10 items sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The indexed column contains several checkmarks. The fields listed are:

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

The screenshot shows the Salesforce Object Manager interface for the 'Purchase Order' object. The left sidebar lists various setup options. The main area is titled 'Fields & Relationships' and displays 10 items sorted by Field Label. The table columns are FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The indexed column contains several checkmarks. The fields listed are:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Actual Delivery Date	Actual_Delivery_Date__c	Date		
Created By	CreatedById	Lookup(User)		
Expected Delivery Date	Expected_Delivery_Date__c	Date		
Last Modified By	LastModifiedById	Lookup(User)		
Order Count	Order_Count__c	Roll-Up Summary (COUNT Order Item)		
Order Date	Order_Date__c	Date		
Owner	OwnerId	Lookup(User,Group)		✓
Purchase Order ID	Name	Text(80)		✓
Supplier ID	Supplier_ID__c	Lookup(Supplier)		✓
Total Order Cost	Total_Order_Cost__c	Currency(16, 2)		

Order Item :

The screenshot shows the Salesforce Object Manager interface for the 'Order Item' object. The left sidebar lists various setup options like Page Layouts, Lightning Record Pages, and Field Sets. The main content area displays the 'Fields & Relationships' section, which includes a table with columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The table contains the following data:

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Amount	Amount_c	Formula (Currency)		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Order Item ID	Name	Text(80)		✓
Product ID	Product_ID_c	Lookup(Product)		✓
Purchase Order ID	Purchase_Order_ID_c	Master-Detail(Purchase Order)		✓
Quantity Ordered	Quantity_Ordered_c	Number(18, 0)		
Quantity Received	Quantity_Received_c	Number(18, 0)		
Unit Price	Unit_Price_c	Formula (Currency)		

Inventory Transaction:

The screenshot shows the Salesforce Object Manager interface for the 'Inventory Transaction' object. The left sidebar lists various setup options. The main content area displays the 'Fields & Relationships' section, which includes a table with columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The table contains the following data:

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 Date	Transaction_Date_c	Date		
Transaction Type	Transaction_Type_c	Picklist		

□ Supplier:

The screenshot shows the Salesforce Object Manager interface for the 'Supplier' object. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Field Sets. The main content area displays a table titled 'Fields & Relationships' with 9 items, sorted by Field Label. The table columns include FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. Key fields shown include Address, Contact Person, Created By, Email, Last Modified By, Owner, Phone Number, Supplier ID, and Supplier Name.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address_c	Text Area(255)		
Contact Person	Contact_Person_c	Text(255)		
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)		✓
Supplier Name	Supplier_Name_c	Text(255)		

2.6 Customizing Page Layout.

□ Product Layout:

The screenshot shows the Salesforce Object Manager interface for the 'Product' object. The left sidebar lists various setup categories. The main content area shows the 'Page Layouts' configuration for the Product object. It includes sections for Fields (Buttons, Quick Actions, Mobile & Lightning Actions, Expanded Lookups, Related Lists, Donut Charts), Product Detail (Information, System Information, Custom Links), and Standard Buttons (Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels). A 'Layout Properties' tab is also visible at the top.

□ Purchase Order Layout:

The screenshot shows the Salesforce Setup interface for editing a page layout. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main title is 'Purchase Order'. On the left, a sidebar lists various layout options under 'Page Layouts'. The right pane displays the 'Purchase Order Detail' layout. At the top of the layout editor are standard buttons: 'Save', 'Quick Save', 'Preview As...', 'Cancel', 'Undo', 'Redo', and 'Layout Properties'. A 'Fields' section contains a 'Quick Find' field and a list of fields: 'Section', 'Blank Space', 'Actual Delivery Date', 'Order Count', 'Supplier ID', 'Created By', 'Order Date', and 'Total Order Cost'. Below this is a toolbar with 'Edit', 'Delete', 'Clone', 'Change Owner', 'Change Record Type', 'Printable View', 'Sharing', 'Sharing Hierarchy', and 'Edit Labels'. The layout itself is divided into sections: 'Information' (Purchase Order ID, Supplier ID, Order Date, Actual Delivery Date, Order Count, Total Order Cost), 'System Information' (Created By, Last Modified By), and 'Custom Links'.

□ Order Item Layout:

The screenshot shows the Salesforce Setup interface for editing a page layout. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main title is 'Order Item'. The left sidebar lists layout options. The right pane displays the 'Order Item Detail' layout. The layout editor features 'Save', 'Quick Save', 'Preview As...', 'Cancel', 'Undo', 'Redo', and 'Layout Properties' buttons. A 'Fields' section shows a 'Quick Find' field and a list of fields: 'Section', 'Blank Space', 'Order Item ID', 'Product ID', 'Purchase Order ID', 'Amount', 'Created By', 'Quantity Ordered', 'Label_Quantity_Ordered', 'Unit Name_Quantity_Ordered', 'Type', 'Number', 'Length: 18', and 'Decimal Places: 0'. A note states 'This item is currently in use (click to locate)'. Below the fields is a toolbar with 'Edit', 'Delete', 'Clone', 'Change Owner', 'Change Record Type', 'Printable View', 'Edit Labels', and 'Custom Buttons'. The layout includes sections for 'Information' (Order Item ID, Amount, Purchase Order ID), 'Product details' (Product ID, Unit Price), and 'System Information' (Created By, Last Modified By).

□ Inventory Transaction Layout:

The screenshot shows the Salesforce Setup interface with the following details:

- Header:** Search Setup, Home, Object Manager
- Page Title:** SETUP > OBJECT MANAGER
Inventory Transaction
- Left Sidebar (Page Layouts):**
 - Details
 - Fields & Relationships
 - Page Layouts** (selected)
 - Lightning Record Pages
 - Buttons, Links, and Actions
 - Compact Layouts
 - Field Sets
 - Object Limits
 - Record Types
 - Related Lookup Filters
 - Search Layouts
 - List View Button Layout
- Layout Editor:**
 - Fields:** Buttons, Quick Actions, Mobile & Lightning Actions, Expanded Lookups, Related Lists, Report Charts.
 - Section Headers:** Information (Header visible on edit only), System Information (Header visible on edit only), Custom Links (Header visible on edit only).
 - Content:** Fields like Inventory Transaction ID, Purchase Order ID, Transaction Type, Transaction Date, Total Order Cost, Created By, Last Modified By, and Owner, each with Sample Text values.
 - Buttons:** Standard Buttons (Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels).

□ Supplier Layout:

The screenshot shows the Salesforce Setup interface with the following details:

- Header:** Search Setup, Home, Object Manager
- Page Title:** SETUP > OBJECT MANAGER
Supplier
- Left Sidebar (Page Layouts):**
 - Details
 - Fields & Relationships
 - Page Layouts** (selected)
 - Lightning Record Pages
 - Buttons, Links, and Actions
 - Compact Layouts
 - Field Sets
 - Object Limits
 - Record Types
 - Related Lookup Filters
 - Search Layouts
 - List View Button Layout
- Layout Editor:**
 - Fields:** Buttons, Quick Actions, Mobile & Lightning Actions, Expanded Lookups, Related Lists, Report Charts.
 - Section Headers:** Information (Header visible on edit only), System Information (Header visible on edit only), Custom Links (Header visible on edit only).
 - Content:** Fields like Supplier ID, Supplier Name, Contact Person, Phone Number, Email, Address, and Owner, each with Sample Text values.
 - Buttons:** Standard Buttons (Edit, Delete, Clone, Change Owner, Change Record Type, Printable View, Sharing, Sharing Hierarchy, Edit Labels).

2.7 Created Compact Layout.

□ Product Layout:

The screenshot shows the Salesforce Setup interface for creating a compact layout for the Product object. The top navigation bar includes a cloud icon, 'Search Setup', and various global buttons. The main header says 'SETUP > OBJECT MANAGER' and 'Product'. On the left, a sidebar lists options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, and a selected 'Compact Layouts' tab. The main content area is titled 'Product Compact Layout' and shows the 'Compact Layout Detail' section. It includes fields for Label ('Product Compact Layout'), API Name ('Product_Compact_Layout'), and Included Fields ('Product Name', 'Unit Price', 'Current Stock Level'). It also shows 'Created By' as 'Joshua Arnold J.' and 'Modified By' as 'Joshua Arnold J.' with the date '9/2/2025, 11:03 AM'. Action buttons at the bottom include 'Edit', 'Clone', 'Delete', and 'Compact Layout Assignment'. A note at the top right says 'Help for this Page' with a question mark icon.

□ Purchase Order Compact Layout:

The screenshot shows the Salesforce Setup interface for creating a compact layout for the Purchase Order object. The top navigation bar includes a cloud icon, 'Search Setup', and various global buttons. The main header says 'SETUP > OBJECT MANAGER' and 'Purchase Order'. On the left, a sidebar lists options like Details, Fields & Relationships, Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, and a selected 'Compact Layouts' tab. The main content area is titled 'Purchase Order Compact Layout' and shows the 'Compact Layout Detail' section. It includes fields for Label ('Purchase Order Compact Layout'), API Name ('Purchase_Order_Compact_Layout'), and Included Fields ('Purchase Order ID', 'Order Date', 'Total Order Cost', 'Supplier ID'). It also shows 'Created By' as 'Joshua Arnold J.' and 'Modified By' as 'Joshua Arnold J.' with the date '9/2/2025, 11:04 AM'. Action buttons at the bottom include 'Edit', 'Clone', 'Delete', and 'Compact Layout Assignment'. A note at the top right says 'Help for this Page' with a question mark icon.

2.8 Created a Validation Rule.

Purchase Order Validation Rule:

The screenshot shows the Salesforce Setup interface for the Purchase Order object. On the left, a sidebar lists various configuration options like Object Limits, Record Types, and Validation Rules. The main area displays the 'Purchase Order Validation Rule' detail page. The rule is named 'Expected_Delivery_Date_Validation' and has the formula '(Expected_Delivery_Date__c - Order_Date__c) > 7'. It is active and located at the top of the page. The 'Validation Rule Detail' section includes fields for Rule Name, Error Condition Formula, Error Message, Description, Created By, Active status, Error Location, Modified By, and Help for this Page.

2.9 Created Profiles.

Inventory Manager:

The screenshot shows the Salesforce Setup interface for Profiles. The sidebar indicates the user is looking for 'Profiles'. The main area shows the 'Inventory Manager' profile detail page. The profile name is 'Inventory Manager', assigned to the 'Salesforce' user license, and is a 'Custom Profile'. It was created by 'Joshua Arnold J.' on 9/2/2025, 11:09 AM. The 'Profile Detail' section includes fields for Name, User License, Description, and Created By. The 'Page Layouts' section shows standard object layouts for Global, Email Application, and Home Page Layout, along with location group assignments for Global Layout, Macro Layout, and Object Milestone.

Purchase Manager:

The screenshot shows the Salesforce Setup interface with the 'Profiles' page selected. The profile 'Purchase Manager' is displayed, which includes the following details:

- Name:** Purchase Manager
- User License:** Salesforce
- Description:** None
- Created By:** Joshua Arnold J. on 9/2/2025, 11:13 AM
- Modified By:** Joshua Arnold J. on 9/2/2025, 11:15 AM

Page Layouts

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

2.10 Created Roles.

The screenshot shows the Salesforce Setup interface with the 'Roles' list selected. The roles listed include:

- CUSTOMER SUPPORT, INTERNATIONAL
- Customer Support, North America
- Installation & Repair Services
- SVP, Human Resources
- SVP, Sales & Marketing
- Inventory Manager
- Purchasing Manager
- VP, International Sales
- VP, Marketing
- Marketing Team
- VP, North American Sales

2.11 Created a Permission Set.

The screenshot shows the Salesforce Setup interface. In the left sidebar, under 'Users', 'Permission Sets' is selected. A search bar at the top left shows 'permisso'. The main area is titled 'Purchase Manager Create Access' and displays the 'Current Assignments' table. The table has columns: Full Name, Active, Role, Profile, User License, and Expires On. One row is listed: 'Joshua Arnold J' (Active), 'Purchasing Manager' (Role), 'System Administrator' (Profile), 'Salesforce' (User License). A button 'Add Assignment' is visible at the top right of the table. The status bar at the bottom of the page indicates 'Last saved on 9/5/2025, 07:36 PM'.

2.12 Created a Flow.

The screenshot shows the Salesforce Flow Builder interface. The flow is titled 'Record-Triggered Flow' for 'Purchase Order' object, triggered by 'A record is created or updated' and optimized for 'Fast Field Updates'. The flow consists of the following steps: 'Get Purchase Record' (Get Records), 'Assignment' (Assignment), and 'Updating Purchasing Order' (Update Records). The flow starts with the 'Start' icon and ends with the 'End' icon. The status bar at the bottom of the page indicates 'Last saved on 9/5/2025, 07:36 PM'.

2.13 Created Apex Trigger.

The screenshot shows the Salesforce IDE interface with the code editor open. The tab bar at the top has 'CalculateTotalAmountTrigger.apxt' selected. The code editor displays the following 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(Trigger.new, Trigger.old, Trigger.isInsert, Trigger.isUpdate);
}
```

The screenshot shows the Salesforce IDE interface with two tabs open: 'CalculateTotalAmountTrigger.apxt' and 'CalculateTotalAmountHandler.apxc'. The tab bar at the top has 'CalculateTotalAmountHandler.apxc' selected. The code editor displays the following Apex class:

```
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 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) {
                ...
            }
        }
    }
}
```

2.14 Created Reports.

- Purchase Orders based on Suppliers:

The screenshot shows a report titled "Purchase Orders based on Suppliers". The report header includes a search bar and various navigation links. The main content displays a table with the following data:

Total Records	Total Order Count	Total Total Order Cost	
3	1	\$2,666.09	
Supplier ID	Purchase Order: Purchase Order ID	Order Count	Total Order Cost
Supplier1 (3)	Property (1)	0	\$666.55
	Subtotal	0	\$666.55
	Purchasing Manager (2)	1	\$999.99
		0	\$999.55
	Subtotal	1	\$1,999.54
Subtotal		1	\$2,666.09
Total (3)		1	\$2,666.09

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

- Complete Purchase Details Report:

The screenshot shows a report titled "Complete Purchase Details Report". The report header includes a search bar and various navigation links. The main content displays a table with the following data:

Total Records	Total Order Count	Total Quantity Received	Total Amount				
1	1	1	\$999.99				
Supplier ID	Actual Delivery Date	Purchase Order: Purchase Order ID	Product ID: Product ID	Product ID: Product Name	Order Count	Quantity Received	Amount
Supplier1 (1)	9/26/2025 (1)	Purchasing Manager (1)	Property	Property	1	1	\$999.99
		Subtotal			1	1	\$999.99
		Subtotal			1	1	\$999.99
Subtotal					1	1	\$999.99
Total (1)					1	1	\$999.99

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

2.15 Created DashBoard.

