

SMART SUPPLY CHAIN & INVENTORY TRACKING SYSTEM

Capstone Project Report

Submitted By: M. Sampath Kumar

Under the Guidance of: Nadeem Sir

Abstract

The Smart Supply Chain & Inventory Tracking System is a Salesforce-based solution designed to streamline inventory, order, and shipment management for businesses. Traditional supply chain operations face challenges such as stockouts, overstocking, delayed shipments, and lack of real-time visibility, which lead to inefficiencies and customer dissatisfaction.

This project leverages Salesforce CRM capabilities (Admin + Developer) to build a centralized system where:

Products, warehouses, and inventory are tracked in real time.

Orders automatically reduce inventory, with low-stock alerts triggering reorder requests.

Suppliers are notified instantly, and delivery agents can update shipment statuses.

Dashboards and reports provide warehouse managers with complete visibility into operations.

Automation, Apex triggers, Lightning Web Components (LWC), and integrations ensure smooth workflows and secure role-based access.

The solution is lightweight, customizable, and scalable—making it ideal for small to medium businesses seeking a smart alternative to costly ERP systems.

Phase 1: Problem Understanding & Industry Analysis

Companies struggle with stockouts, overstocking, shipment delays, and no single source of truth.

Our solution: A Salesforce app to manage Products, Warehouses, Inventory, Orders, Shipments, with automation and dashboards.

Stakeholders (Roles):

Admin:

Purpose: Full access and system ownership.

Responsibilities:

- Configure Salesforce org (setup, profiles, OWD, sharing).
- Create & manage users, roles, and permissions.
- Approve escalated Reorder Requests.
- Oversee all warehouses, orders, and shipments.
- Generate dashboards & reports for management.

Warehouse Manager:

Purpose: Manages inventory and orders in their assigned warehouse.

Responsibilities:

- Monitor **Inventory** stock levels.
- Approve **Reorder Requests** (up to certain quantity).
- Manage **Orders** (assign to Delivery Agents, track processing).
- Generate reports for warehouse performance.

Delivery Agent:

Purpose: Handles shipment and delivery of customer orders.

Responsibilities:

- View **Orders** assigned to them.
- Update **Shipment** records (status from “In Transit” → “Delivered”).

- Report delays (triggers escalation to Admin).
- Cannot modify inventory or create orders.

Supplier → receives reorder requests.

Customer → receives orders.

Phase 2: Org Setup & Configuration

Step 1: Get Salesforce Environment

- Created a **free Developer Org**:
developer.salesforce.com/signup

salesforce.com/form/developer-signup/?d=pb

Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud.

Sign up for your Developer Edition.

- ✓ Build apps fast with drag-and-drop tools
- ✓ Go further with Apex code
- ✓ Build AI agents with Agentforce
- ✓ Harmonize your data with Data Cloud
- ✓ Ground Agentforce with structured and unstructured data
- ✓ Integrate with anything using APIs

Sign up for your Developer Edition

A free Salesforce Platform environment with Agentforce and Data Cloud

First name Last name

Job title Work email

Company Country/Region

India

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

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

Step 2: Company Settings

- Setup → **Company Information**:
 - Company Name: *Smart Supply Chain Inc.*
 - Fiscal Year: Standard Gregorian.
 - Business Hours: 9 AM – 6 PM, Mon–Sat.

Step 3: Users & Roles

Created the role hierarchy:

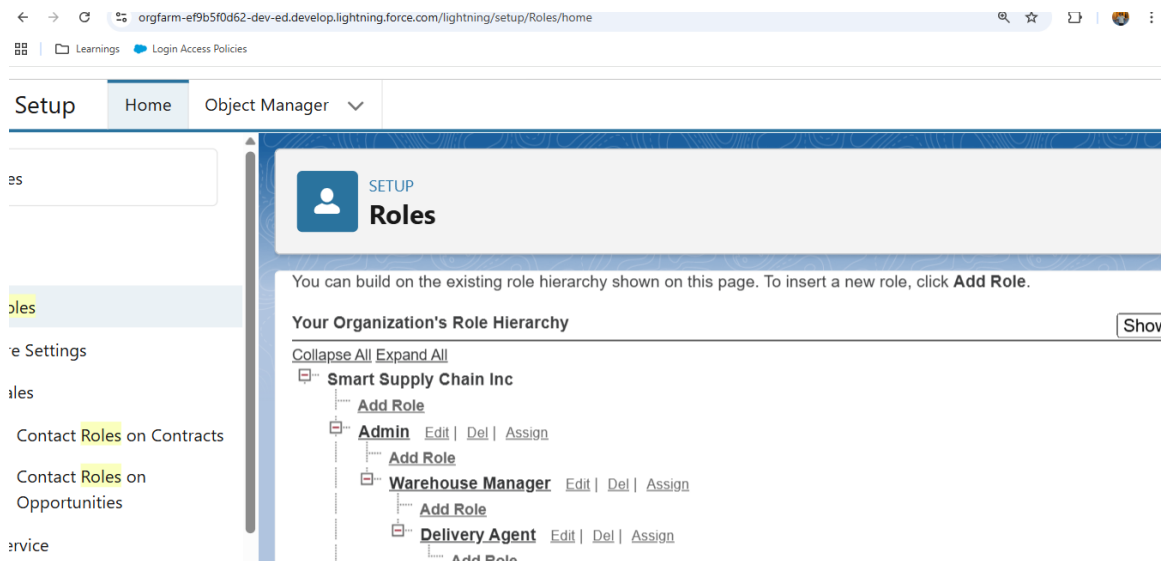
Admin

└ Warehouse Manager

└ Delivery Agent

- **Profiles:**

- Admin → System Administrator
- Warehouse Manager → Custom Profile (Modify All on Products/Warehouses, Read-Only Orders)
- Delivery Agent → Custom Profile (Read Orders, Update Shipments only)
- Supplier → (optional, read-only access via Experience Cloud)



- **Permission Sets:**

- “Reorder Approver” → Approve large purchase orders.
- “Shipment Tracker” → Can view Shipment dashboards.

Learnings Login Access Policies

Search Setup

Setup Home Object Manager

Search: permis

- Users
 - Permission Set Groups
 - Permission Sets
- Custom Code
 - Custom Permissions

Didn't find what you're looking for? Try using Global Search.

SETUP Permission Sets

On this page you can create, view, and manage permission sets.

All Permission Sets Edit Delete Create New View

New

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other All

Action	Permission Set Name	Description	L
Clone	RPAC2CPermSet		C
Del Clone	Reorder Approver		

1-2 of 2 0 Selected Previous Next Page 1 of 1

Step 4: Security Settings

- **OWD (Organization-Wide Defaults):**
 - Products: Public Read/Write.
 - Warehouses: Public Read/Write.
 - Orders: Private (only owner + shared users).
 - Shipments: Private.
- **Sharing Rules:**
 - Share Orders with Warehouse Manager role.
 - Share Shipments with Delivery Agent role.

Step 5: Login & Access

- Set **Password Policies**: Min length 8, expire 90 days.
- Set **Login Hours** for Delivery Agents: 7 AM – 10 PM only.

The screenshot shows the Salesforce Lightning Setup interface. The top navigation bar includes the 'Setup' link and the 'Object Manager' dropdown. The left sidebar contains a 'Quick Find' search bar and a list of setup categories: Setup Home, Salesforce Go, Service Setup Assistant, Commerce Setup Assistant, Field Service Setup Home (Beta), Performance Assistant, Release Updates, Salesforce Mobile App, Lightning Usage, Optimizer, Salesforce Cloud Everywhere, and Administration. The main content area is titled 'Company Information' and displays details for 'Smart Supply Chain Inc'. It includes links for 'User Licenses (110)', 'Permission Set Licenses (110)', 'Feature Licenses (111)', and 'User-based Entitlements (110)'. Below this, the 'Organization Detail' section is shown with an 'Edit' button. The details are organized into three columns: Organization Name, Primary Contact, and Phone. The first column lists various organizational details like Division, Address, Fiscal Year Starts In, Activate Multiple Currencies, Enable Data Translation, Newsletter, Admin Newsletter, and Hide Notices About System Maintenance. The second column lists the corresponding values for 'Smart Supply Chain Inc'. The third column lists contact information like Fax, Default Locale, Default Language, Default Time Zone, Currency Locale, Used Data Space, Used File Space, API Requests, and Streaming API Events.

orgfarm-ef9b5fd62-dev-ed.develop.lightning.force.com/lightning/setup/CompanyProfileInfo/home

Learnings Login Access Policies

Search Setup

Setup Home Object Manager

Quick Find

Setup

Company Information

Company Information

Smart Supply Chain Inc

The organization's profile is below.

User Licenses (110) | Permission Set Licenses (110) | Feature Licenses (111) | User-based Entitlements (110)

Organization Detail

Smart Supply Chain Inc

OrgFarm EPIC

Organization Name	Smart Supply Chain Inc	Phone
Primary Contact	OrgFarm EPIC	Fax
Division		Default Locale
Address	India	Default Language
Fiscal Year Starts In	April	Default Time Zone
Activate Multiple Currencies	<input type="checkbox"/>	Currency Locale
Enable Data Translation	<input type="checkbox"/>	Used Data Space
Newsletter	<input checked="" type="checkbox"/>	Used File Space
Admin Newsletter	<input checked="" type="checkbox"/>	API Requests, Last 24 Hours
Hide Notices About System Maintenance	<input type="checkbox"/>	Streaming API Events, Last 24 Hours

English (United States)

English

(GMT+05:30) India Standard Time (Asia/Kolkata)

Telugu (India) - IIIR

342 KB (7%) [View](#)

17 KB (0%) [View](#)

0 (15,000 max)

0 (10,000 max)

- **Account** → to represent **Suppliers & Customers**
- **User** → Admin, Warehouse Manager, Delivery Agent

Custom Objects created:

1. **Product** → to store product details
2. **Warehouse** → to store warehouse locations
3. **Inventory** → to track stock levels
4. **Order** → to represent customer orders
5. **Shipment** → to track deliveries
6. **Reorder Request** → (for suppliers when stock is low)

Step 2: Create Custom Objects

Path: Setup → Object Manager → Create → Custom Object → New Custom Object

For each:

Product

- Label: Product
- Plural: Products
- Record Name: Auto Number (e.g., PRD- {0000})
- Allow Reports, Track Field History

Warehouse

- Label: Warehouse
- Plural: Warehouses
- Record Name: Auto Number (WH- {000})

Inventory

- Label: Inventory
- Record Name: Auto Number (INV- {0000})

Order

- Label: Order

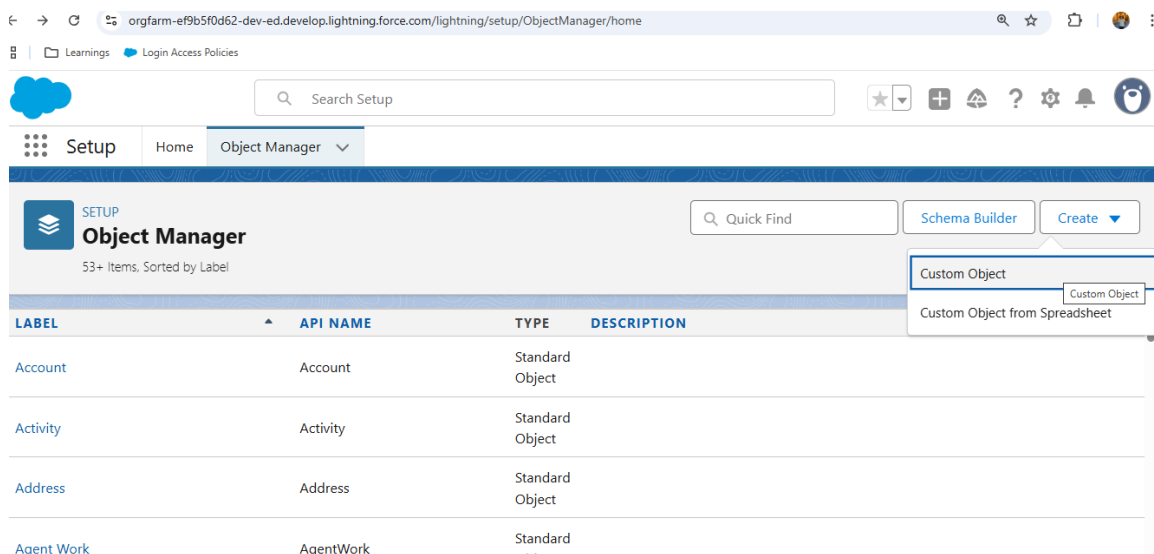
- Record Name: Auto Number (ORD- {0000})

Shipment

- Label: Shipment
- Record Name: Auto Number (SHP- {0000})

Reorder Request

- Label: Reorder Request
- Record Name: Auto Number (REQ- {0000})



Step 3: Create Relationships

Go to **Object Manager** → [each object] → **Fields & Relationships** → **New**

1. Product → Inventory

- Relationship: **Master-Detail** (Product → Inventory)
- Each inventory record is linked to a single product.

2. Warehouse → Inventory

- Relationship: **Lookup** (Warehouse → Inventory)
- Inventory belongs to a warehouse, but warehouse can exist without inventory.

3. Order → Product

- Relationship: **Lookup** (Order → Product).
- (Or use a **Junction Object** Order Item_c if you want many products per order).

4. Order → Account

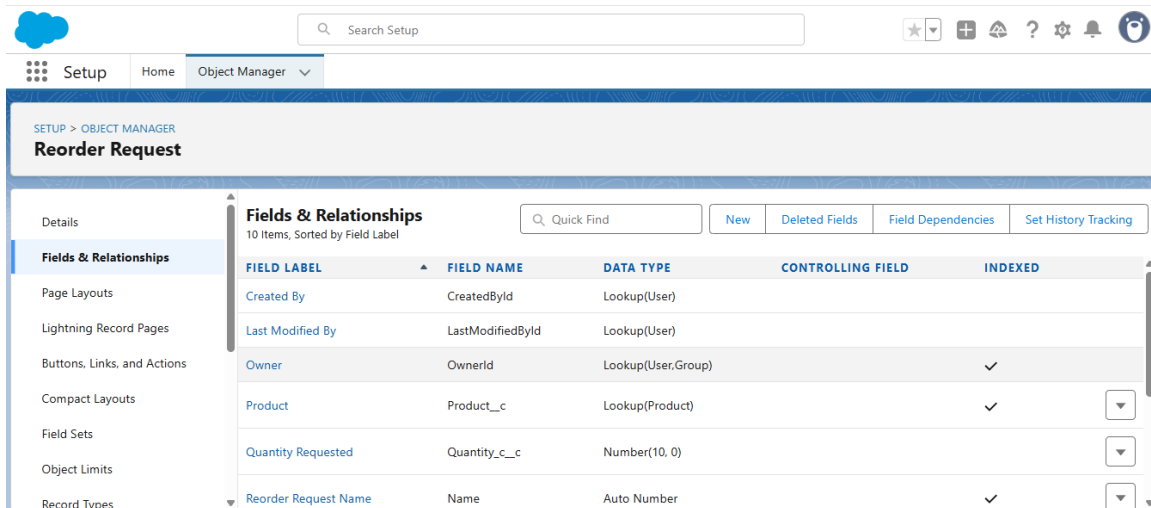
- Relationship: **Lookup** (Customer placing the order).

5. Shipment → Order

- Relationship: **Master-Detail** (Shipment tied to one Order).

6. Reorder Request → Supplier (Account)

- Relationship: **Lookup** (Reorder is raised against Supplier).



The screenshot shows the Salesforce Setup interface, specifically the Object Manager for the 'Reorder Request' object. The left sidebar contains navigation links: Details, Fields & Relationships (selected), Page Layouts, Lightning Record Pages, Buttons, Links, and Actions, Compact Layouts, Field Sets, Object Limits, and Record Types. The main content area is titled 'Fields & Relationships' and shows a table of 10 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The fields listed are: Created By (CreatedBy, Lookup(User)), Last Modified By (LastModifiedBy, Lookup(User)), Owner (OwnerId, Lookup(User,Group)), Product (Product_c, Lookup(Product)), Quantity Requested (Quantity_c_c, Number(10, 0)), and Reorder Request Name (Name, Auto Number). The 'Owner' field is marked as the controlling field and indexed. The 'Product' and 'Quantity Requested' fields are also indexed. The 'Reorder Request Name' field is indexed and has a dropdown arrow in the INDEXED column.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Created By	CreatedBy	Lookup(User)		
Last Modified By	LastModifiedBy	Lookup(User)		
Owner	OwnerId	Lookup(User,Group)		✓
Product	Product_c	Lookup(Product)		✓
Quantity Requested	Quantity_c_c	Number(10, 0)		✓
Reorder Request Name	Name	Auto Number		✓

Step 4: Record Types

- **Order**

- Record Type 1: Online Order
- Record Type 2: Bulk Order

- **Product**

- Record Type 1: Electronics
- Record Type 2: Groceries

The screenshot shows the Salesforce Object Manager interface for the 'Product' object. The left sidebar contains navigation links: Details, Fields & Relationships, Page Layouts, Lightning Record Pages, and Buttons, Links, and Actions. The main area displays 'Record Types' for 'Product', showing 2 items sorted by Record Type Label. A table lists the record types:

RECORD TYPE LABEL	DESCRIPTION	ACTIVE	MODIFIED BY
Electronics		✓	Sampath Kumar Mandala, 9/22/2025, 5:49 AM
Groceries			Sampath Kumar Mandala, 9/22/2025, 5:49 AM

Buttons for 'New' and 'Page Layout Assignment' are visible at the top right of the record types section.

Step 5: Page Layouts & Compact Layouts

- Customize **Page Layouts** for each object to show the most useful fields .
- Create **Compact Layouts** for mobile view.

Step 6: Schema Builder

1. Setup → Schema Builder.
2. Drag **Product**, **Warehouse**, **Inventory**, **Order**, **Shipment**, **Reorder Request** into the canvas.

The screenshot shows the Salesforce Schema Builder interface. The left sidebar contains a list of objects to be added to the canvas: Inventory, Order, Product, Reorder Request, Shipment, and Warehouse. The main area displays a canvas with two object cards: 'Order' and 'Shipment'. A legend on the right side of the canvas defines the relationship types: Lookup Relationship (blue line), Master-Detail Relationship (red line), and Required Field (red vertical bar). The 'Order' card shows fields like Order ID, Order Date, Order Status, Order Type, Order Amount, and Order Date. The 'Shipment' card shows fields like Shipment ID, Shipment Date, Shipment Status, Shipment Type, Shipment Amount, and Shipment Date.

Over all of phase:

Warehouse (Custom) —< Inventory (Custom) >— Product (Custom)

Account (Standard: Customer/Supplier) —< Order (Custom) >— Shipment (Custom)

└—< Reorder Request (Custom)

Phase 4: Process Automation

Step 1: Validation Rules

1. Inventory cannot go negative

- Object: Inventory
- Rule: Quantity < 0
- Error Message: "Inventory quantity cannot be negative."

2. Reorder quantity must be greater than zero

- Object: Reorder Request
- Rule: Quantity <= 0
- Error Message: "Reorder quantity must be positive."

SetupHomeObject Manager

SETUP > OBJECT MANAGER

Inventory

DetailsFields & RelationshipsPage LayoutsLightning Record PagesButtons, Links, and ActionsCompact LayoutsField Sets

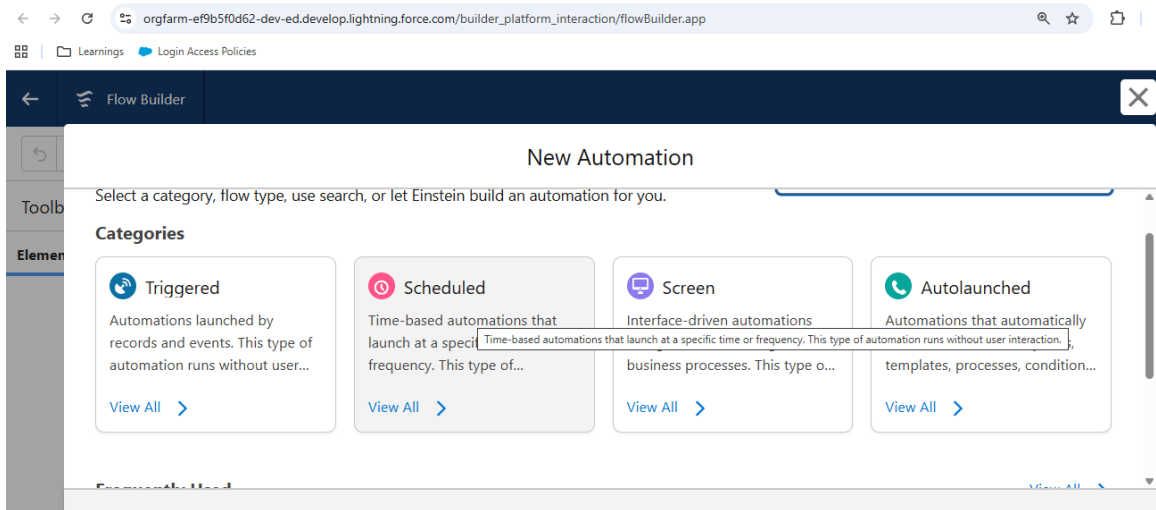
Validation Rules

1 Items, Sorted by Rule Name

RULE NAME	ERROR LOCATION	ERROR MESSAGE	ACTIVE	MODIFIED BY
No_Negative_Inventory	Quantity Available	Inventory quantity cannot be negative.	✓	Sampath Kumar Mandala, 9/22/2025, 6:29 AM

New

Step 2: Flows



1. Auto Reorder Trigger

- Object: Inventory
- Flow Type: Record-Triggered Flow
- When: After Save
- Condition: Quantity <= Reorder Level
- Action: Create a new Reorder Request record.
 - Fill in Product, Warehouse, Quantity Needed.

2. Auto Update Order Status

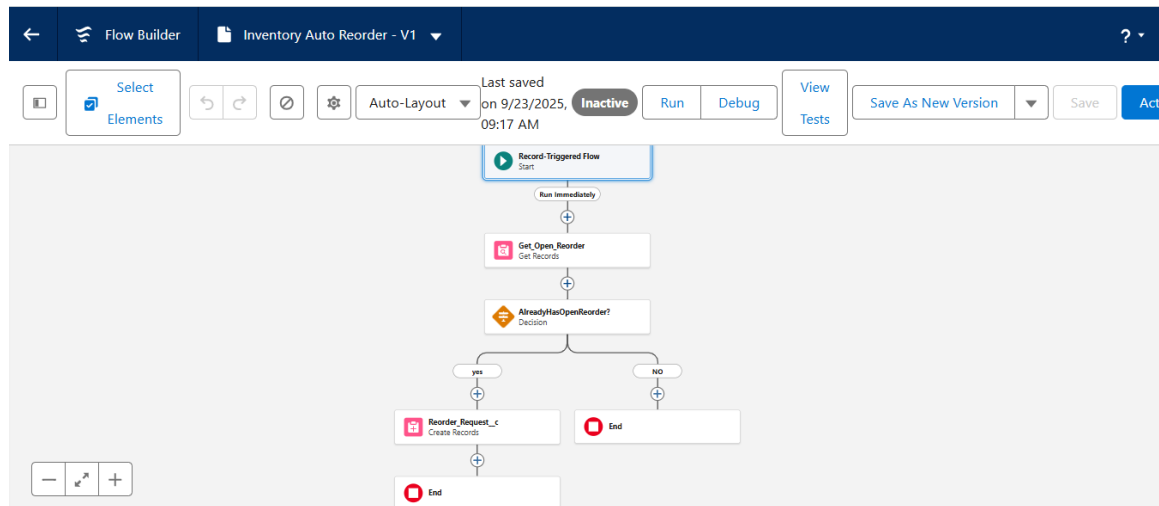
- Object: Shipment
- Flow Type: Record-Triggered Flow
- When: After Save
- Condition: Status = 'Delivered'
- Action: Update related Order → Status = 'Delivered'.

Step 3: Approval Process

For **Reorder Requests**:

- Object: Reorder Request

- Entry Criteria: Quantity > 500
- Approver: Warehouse Manager → Admin
- Action: If Approved → Status = Approved. If Rejected → Status = Rejected.



Step 4: Assignment Rules

For **Orders**:

- Setup → Assignment Rules → Orders
- Rule: If Product ->Category = 'Groceries', assigned to **Warehouse Manager 1**.
- If Product->Category = 'Electronics', assigned to **Warehouse Manager 2**.

Step 5: Escalation Rule

For **Shipments**:

- If Status = In Transit for more than **7 days**, escalate case to Admin.

Setup Home Object Manager

Q esc

Feature Settings

- Service
 - Escalation Rules
- Environments
 - Monitoring
 - Case Escalations

Didn't find what you're looking for? Try using Global Search.

SETUP

Case Escalation Rule

Shipment_Escalation

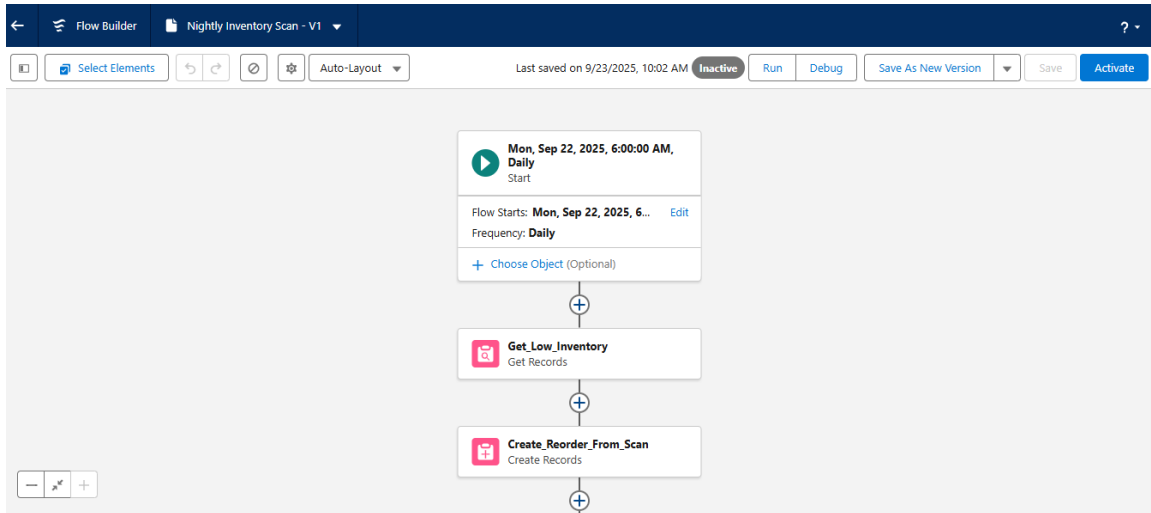
Add rule entries that specify the criteria used to escalate cases. You can reorder rule entries on this page after you create them.

Rule Detail

Rule Name	Shipment_Escalation	Active	✓
Created By	Sampath Kumar Mandala	9/22/2025, 9:45 PM	Modified By Sampath Kumar Mandala, 9/22/2025, 9:49 PM

Step 6: Scheduled Flow

- Object: Inventory
- Run daily at 6 AM.
- Check all Inventory where Quantity < Reorder Level.
- If found, send email alert to Warehouse Manager.



Phase 5: Apex Programming

Apex Classes: Inventory Service, Order Assignment. Triggers for Reorders & Shipments. Batch Apex, Queueable Apex, Scheduled Apex, Test Classes.

Apex File	Type	Purpose
Inventory Service.cls	Class	Handles inventory updates & auto reorders
ReorderRequestTrigger.trigger	Trigger	Creates reorder requests when stock is low
ShipmentTrigger.trigger	Trigger	Updates order status when shipment delivered
OrderAssignment.cls	Class	Assigns orders to correct warehouse manager
EscalationJob.cls	Class (Schedulable)	Escalates delayed shipments (> 7 days)



https://login.salesforce.com/?startURL=%2Fsetup%2Fsecur%2FRemoteAccessAu



Username

mandalasampath560503@agentforce.com

Password

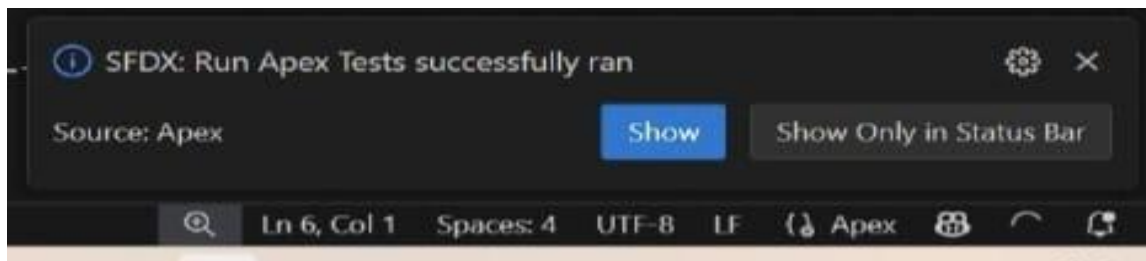
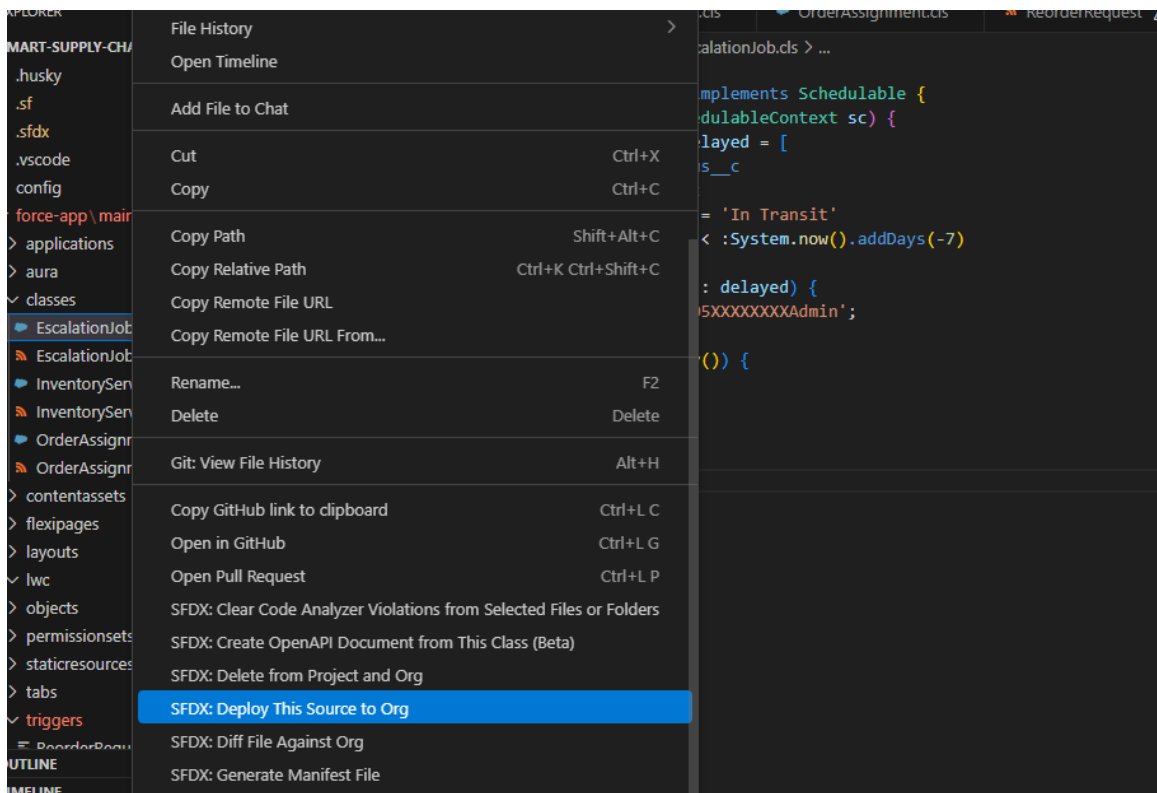
.....

Log In

☐ Remember me

[Forgot Your Password?](#)

[Use Custom Domain](#)



Phase 6: User Interface Development

Step 1: Create a Custom Lightning App

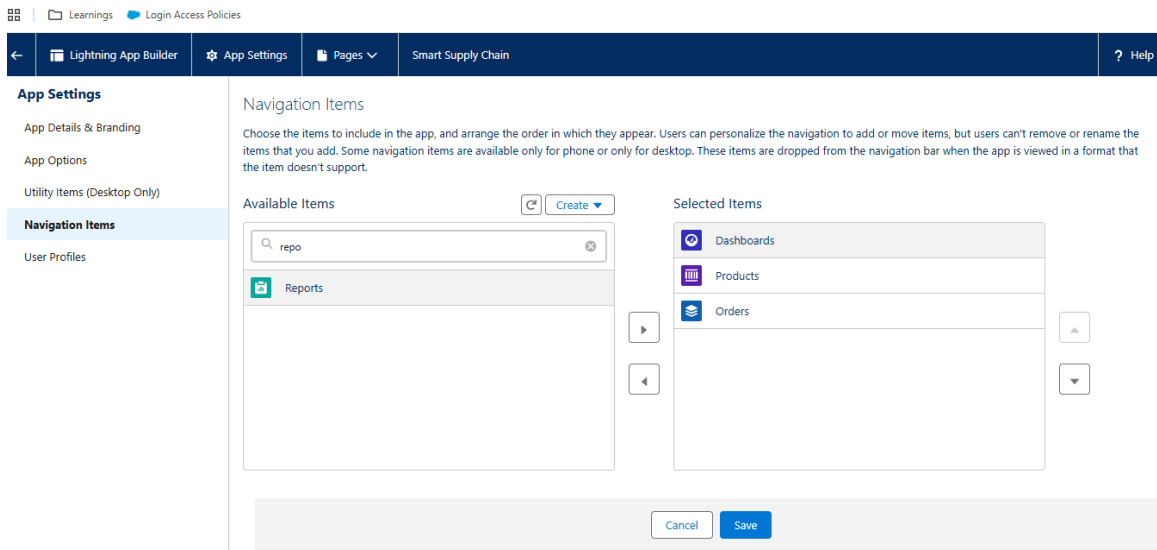
1. Go to **Setup** → **App Manager**.
2. Click **New Lightning App**.
3. Enter:
 - **App Name:** Smart Supply Chain
 - **Developer Name:** Smart_ Supply_ Chain
 - **Navigation Style:** Standard Navigation
4. Add **Utility Items** (bottom toolbar): Reports, Dashboards, Notifications.

5. Assign to **Profiles** → Admin, Warehouse Manager, Delivery Agent.
6. Save.

The screenshot shows the 'App Settings' page in the Lightning App Builder. The left sidebar contains a menu with 'App Settings' selected, and sub-items: 'App Details & Branding' (highlighted), 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area is titled 'App Details & Branding' and includes a subtitle: 'Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.' The page is divided into two columns: 'App Details' and 'App Branding'. In the 'App Details' column, there are three input fields: '* App Name' (containing 'Smart Supply Chain'), '* Developer Name' (containing 'Smart_Supply_Chain'), and 'Description' (with a placeholder 'Enter a description...'). In the 'App Branding' column, there is an 'Image' upload section with an 'Upload' button, a 'Primary Color Hex Value' dropdown set to '#0070D2', and an 'Org Theme Options' checkbox labeled 'Use the app's image and color instead of the org's custom theme'. At the bottom, there is an 'App Launcher Preview' showing a blue square with 'SS' and the text 'Smart Supply Chain'.

Step 2: Add Tabs to App

1. In App Manager → Edit Smart Supply Chain.
2. Go to **Navigation Items**.
3. Add Tabs:
 - Products
 - Inventory
 - Orders
 - Shipments
 - Reorder Requests
 - Dashboards
4. Save.



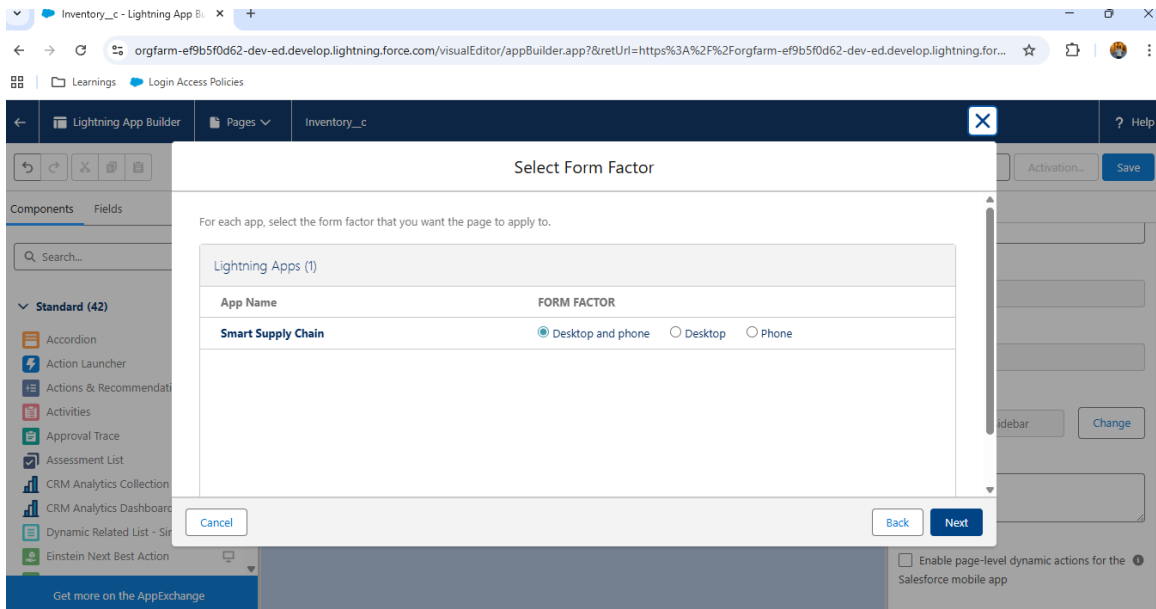
Step 3: Customize Record Pages

For each custom object (Inventory, Order, Shipment):

1. Open **Object Manager** → **[Object]** → **Lightning Record Pages**.
2. Click **New Page** → **Record Page**.

Inventory:

- Layout: Header → Stock details.
 - Tabs: Details, Related, Activity.
 - Add Components:
 - **Highlights Panel** → Show Product, Quantity, Reorder Level.
 - **Related List** → Reorder Requests.
3. Save & **Activate for App, Record Type, Profile** → Choose Smart Supply Chain app.



Step 4: Build LWC Components

a) Inventory Dashboard LWC

- Shows stock levels in a bar chart.
- Fetch data with @wire from Inventory.

b) Shipment Tracker LWC

- Shows shipments with colour codes:
 - Green = Delivered
 - Orange = In Transit
 - Red = Delayed

c) Reorder Approval LWC

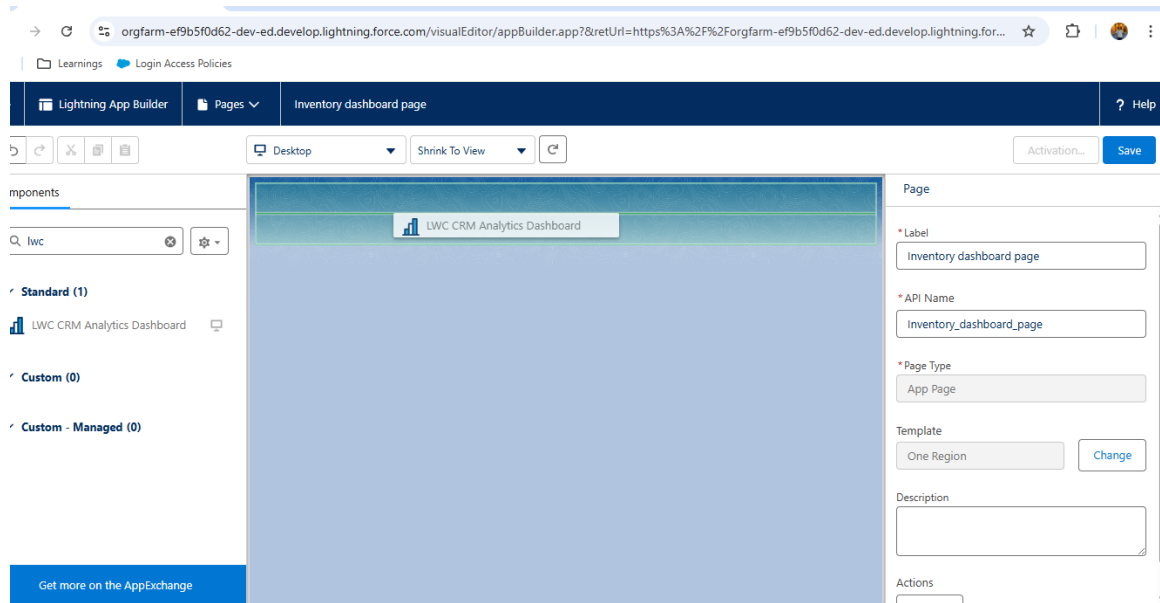
- Approver can approve/reject reorder requests directly from the component.

Step 5: Home Page Customization

1. Go to **App Builder** → **Home Page** → **Clone Standard Home Page**.
2. Add:
 - **Dashboard Component**

- **List View** (Pending Reorders).
- **News/Tips**.

3. Save & Activate for **Smart Supply Chain App**.



Step 6: Utility Bar Setup

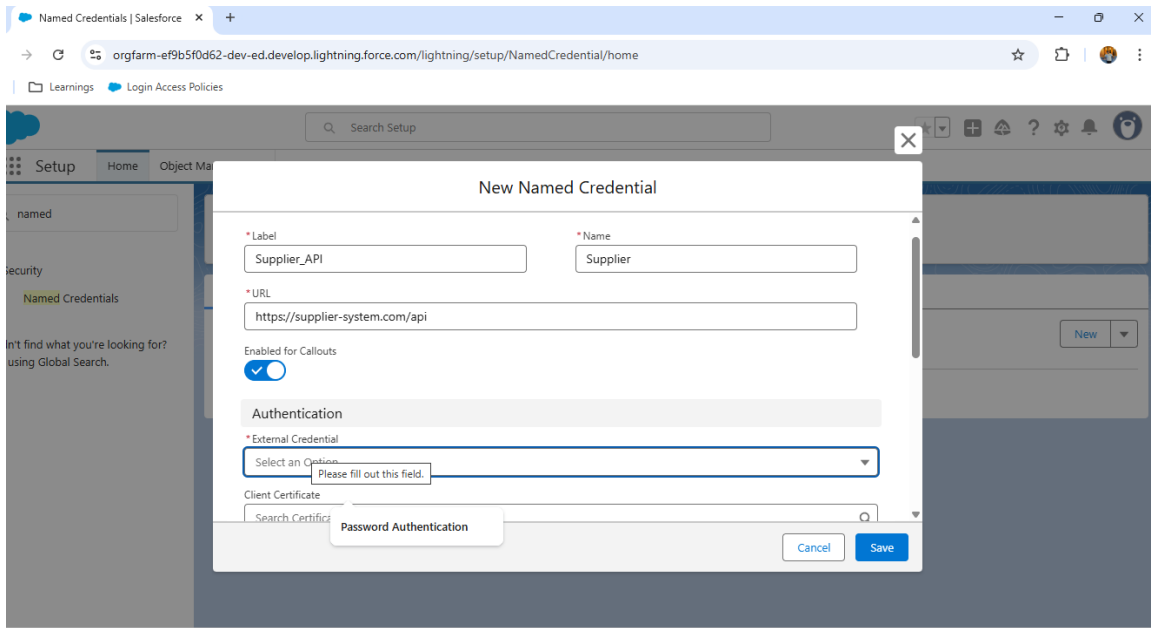
In **App Builder** → **Utility Items**:

- Add **Reports** → Quick access.
- Add **Dashboard** → Real-time KPI view.
- Add **Chatter** → Communication.

Phase 7: Integration & External Access

Step 1: Configure Named Credentials

1. Go to **Setup** → **Named Credentials**.
2. Click **New Named Credential**.
 - **Label:** Supplier_ API
 - **URL:** https://supplier-system.com/api
 - **Identity Type:** Named Principal
 - **Authentication Protocol:** Password Authentication
3. Save.



Step 2: Remote Site Settings

1. **Setup** → **Remote Site Settings** → **New Remote Site**
 - Name: Supplier_ API
 - URL: https://supplier-system.com
 - Active: ☒

Remote Site Settings

All Remote Sites
[Help for this Page](#)

Remote Access

Below is the list of Web addresses that your organization can invoke from salesforce.com. To add another Web address, click New Remote Site.

View: **All Remote Sites** [Create New View](#)

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | Other | **All**

Action	Remote Site Name ↑	Namespace Prefix	Remote Site URL	Active	Created By	Created Date	Last Modified By	Last Modified Date
Edit Del	ApexDevNet	-	http://www.apexdevnet.com	✓	EPIC_OrgFarm	9/10/2025, 9:52 PM	EPIC_OrgFarm	9/10/2025, 9:52 PM
Edit Del	Supplier_API	-	https://supplier-system.com	✓	Mandala_Sampath Kumar	9/24/2025, 11:00 PM	Mandala_Sampath Kumar	9/24/2025, 11:00 PM

Step 3: REST Callout (Apex)

When stock is low, send reorder details to supplier system.

Example Apex class:

```
public with sharing class Supplier Integration {

    public static void sendReorder(Reorder_Request__c req) {

        Http http = new Http();

        HttpRequest request = new HttpRequest();

        request.setEndpoint('callout:Supplier_API/reorders');

        request.setMethod('POST');

        request.setHeader('Content-Type', 'application/json');

        Map<String, Object> body = new Map<String, Object>{

            'productId' => req.Product__c,

            'warehouseId' => req.Warehouse__c,

            'quantity' => req.Quantity__c

        };

        request.setBody(JSON.serialize(body));

        HttpResponse response = http.send(request);

        System.debug('Supplier Response: ' + response.getBody());
    }
}
```



```
}  
  
}
```

Step 4: Platform Events

1. Go to **Setup** → **Platform Events** → **New Platform Event**.
 - Label: Shipment_ Update
 - Fields: Order__ c (Lookup), Status__ c
2. Publish event from Apex when shipment updates.
3. External system can subscribe to these events via API → get notified instantly when Salesforce updates a shipment.

Step 5: Salesforce Connect

If warehouse data is stored in an external database, you can view it inside Salesforce without copying data.

1. Setup → External Data Sources → New.
2. Type: OData 2.0/4.0.
3. Provide endpoint (https://warehouse-system.com/odata).
4. Validate & sync external objects.

The screenshot shows the 'New External Data Source' configuration page in Salesforce. The page header includes the 'SETUP' icon and the title 'External Data Sources'. The main heading is 'New External Data Source', with a subtext 'Connect to another Salesforce org or a third-party database or content system.' and a 'Help for this Page' link. At the top of the form are buttons for 'Save', 'Save and New', and 'Cancel'. The form fields are as follows: 'External Data Source' with the value 'supply chain', 'Name' with the value 'supply_chain', and 'Type' set to 'Salesforce Connect: OData 2.0'. A 'Parameters' section is expanded, showing a 'URL' field with the value 'https://warehouse-system.com/odata'. Below this is a 'Connection Timeout (Seconds)' field with the value '120'. At the bottom, there is a 'Writable External Objects' checkbox which is currently unchecked.

Phase 8: Data Management & Deployment

Step 1: Data Import Wizard

- Go to **Setup** → **Data Import Wizard**.
- Use it for **small data loads** (Products, Warehouses, Orders).

The screenshot shows the Salesforce Data Import Wizard setup page. At the top, the browser address bar displays the URL: `orgfarm-ef9b5f0d62-dev-ed.develop.lightning.force.com/lightning/setup/DataManagementDataImporter/home`. Below the address bar, there are links for "Learnings" and "Login Access Policies". The main header includes the Salesforce logo, a "Search Setup" bar, and navigation tabs for "Setup", "Home", and "Object Manager". A large blue banner with a glasses icon says "Before you import your data...". To the right of the banner, there are two warning boxes: "Make sure your field names match Salesforce field names" and "Don't import too many records at once". Below the banner, the text "Import your data in 3 easy steps!" is followed by "Launch the Data Import Wizard to import your data." A horizontal process flow shows four steps: "Pre-step: Prepare your data for import", "Choose data to import", "Edit field mapping", and "Review and start import". A green "Launch Wizard!" button is centered below the flow.

- Steps:
 1. Select Object → e.g., Product2.
 2. Upload CSV.
 3. Map fields (Name → Product Name, Unit Price → Unit_Price__c).
 4. Start Import → Monitor progress.

orgfarm-ef9b5f0d62-dev-ed.develop.lightning.force.com/lightning/setup/DataManagementDataImporter/home

Learnings Login Access Policies

Setup Home Object Manager

Getting closer

Choose data Edit mapping Start import

Standard objects Custom objects

Inventories

Orders

Products

Reorder Requests

Shipments

Warehouses

Add new records

Update existing records

Add new and update existing records

Match by: Name

Which User field in your file designates record owners? --None--

Which Inventory field in your file specifies the Master/Detail relationship? Salesforce.com ID

Trigger workflow rules and processes?

Drag CSV file here to upload

CSV

Cancel Previous Next

orgfarm-ef9b5f0d62-dev-ed.develop.lightning.force.com/lightning/setup/DataManagementDataImporter/home

Learnings Login Access Policies

Setup Home Object Manager

Almost done

Choose data Edit mapping Start import

Edit	Mapped Salesforce Object	CSV Header	Example	Example	Example
Change	Product Code	ProductCode	P001	P002	P003
Change	Product	Name	Rice Bag 25kg	Mobile Charger	Wheat Flour 10kg
Change	Description	Description	Premium Basmati Rice	Fast Charging Adapter	Organic Wheat Flour
Change	Unit Price	UnitPrice	1200 Premium Basmati Rice	500	400
Change	Active	Active	TRUE	TRUE	TRUE

Step 2: Data Loader

- Install **Salesforce Data Loader**
- Use it for **bulk data updates**
- Operations supported: Insert, Update Delete, Export.
- Example:
 - Export all Inventory where Quantity__ c < 10.
 - Update them with new stock levels.

Step 3: Duplicate Management

- Go to **Setup → Duplicate Rules**.

- Create rule for Orders: Prevent creating another order with same Product + Customer on same date.
- Action: Block or Allow with Alert.

The screenshot shows the 'Duplicate Rules' setup page in Salesforce. The page title is 'Duplicate Rules' with a 'SETUP' icon. Below the title, it says 'New Duplicate Rule' and 'Order'. There are buttons for 'Save', 'Save & New', and 'Cancel'. The 'Rule Details' section includes:

- Rule Name: Duplicate orders
- Description: Prevent creating another order with same Product + Customer on same date.
- Object: Order
- Record-Level Security: ☒ Enforce sharing rules, ☐ Bypass sharing rules

 The 'Actions' section specifies what happens when a user tries to save a duplicate record:

- Action On Create: Allow (dropdown), Alert (checked), Report (checked)
- Action On Edit: Allow (dropdown), Alert (unchecked), Report (unchecked)
- Alert Text: Use one of these records? (dropdown)

Step 4: Data Backup

- Use **Data Export Service**:
 - Setup → Data Export → Schedule weekly backup.
 - Choose objects (Inventory, Orders, Shipments).
 - Salesforce emails a ZIP file.

The screenshot shows the 'Schedule Data Export' setup page in Salesforce. The page title is 'Schedule Data Export' with a 'SETUP' icon. There are buttons for 'Save' and 'Cancel'. The 'Schedule Data Export' section includes:

- Export File Encoding: ISO-8859-1 (General US & Western European, ISO-LATIN-1)
- Include images, documents, and attachments: ☐
- Include Salesforce Files and Salesforce CRM Content document versions: ☐
- Replace carriage returns with spaces: ☒
- Schedule Data Export: ☒

 The 'Frequency' section shows:

- On day 7 of every month (radio button)
- On the 1st Sunday of every month (radio button, selected)
- Start: 9/26/2025 (9/28/2025)
- End: 10/26/2025 (9/28/2025)
- Preferred Start Time: --None--

Step 5: Deployment

1. In **Source Org**: Setup → Outbound Change Sets.

2. Add components: Objects, Flows, Apex Classes, Triggers.
3. Upload to Target Org
4. In **Target Org** → Inbound Change Sets → Deploy.

Step 6: Deployment with SFDX (VS Code)

For GitHub-driven workflow:

- To **deploy from VS Code** →
 - `sfdx force:source:deploy -p force-app/main/default`
- To **retrieve from Salesforce** →
 - `sfdx force:source:retrieve -p force-app/main/default`
- To **push to scratch org** →
 - `sfdx force:source:push`

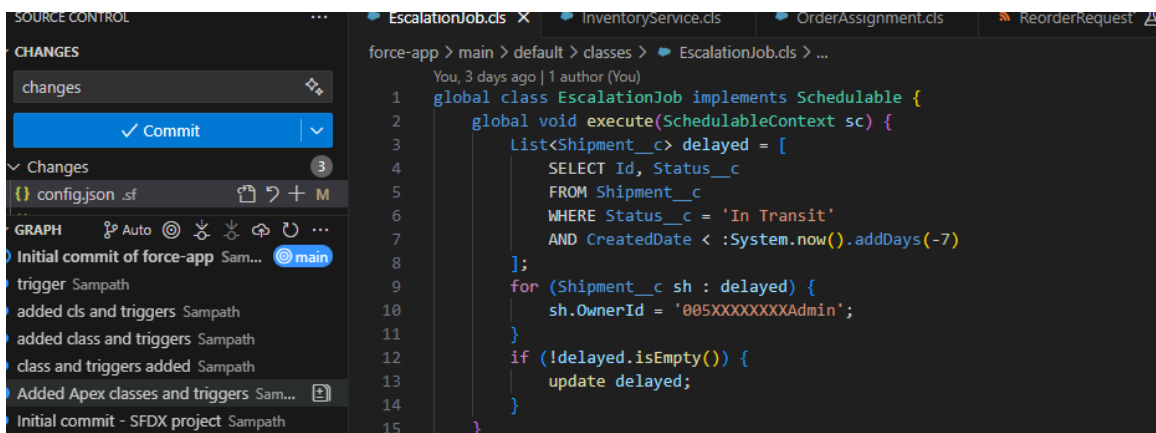
✓ Step 7: GitHub Version Control

Keep your project versioned:

`git add .`

`git commit -m "changes"`

`git push`



main1 Branch0 Tags

Go to file

Add file

Code

Sampath0211npm package3dcb3f · 3 days ago3 Commits

.github/workflows	npm package	3 days ago
.husky	Initial commit - SFDX project	2 weeks ago
.vscode	Initial commit - SFDX project	2 weeks ago
config	Initial commit - SFDX project	2 weeks ago
scripts	Initial commit - SFDX project	2 weeks ago
.forceignore	Initial commit - SFDX project	2 weeks ago
.gitignore	Initial commit - SFDX project	2 weeks ago
.prettierignore	Initial commit - SFDX project	2 weeks ago
.prettierrc	Initial commit - SFDX project	2 weeks ago
README.md	abstract	last week

About

No description, website, or topics provided.

Readme

Activity

0 stars

0 watching

0 forks

Releases

No releases published

Create a new release

Packages

No packages published

Publish your first package

Languages

.github/workflows

.husky

.vscode

config

scripts

.forceignore

.gitignore

.prettierignore

.prettierrc

README.md

eslint.config.js

Phase 9: Reporting, Dashboards & Security Review

Step 1: Reports

Reports Created:

1. Inventory by Warehouse Report

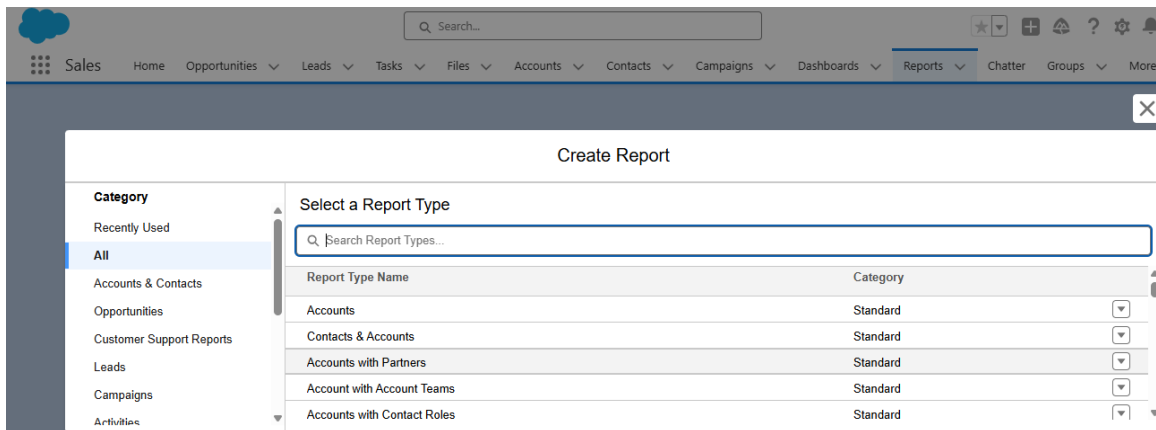
- Report Type: Inventory__ c with Warehouse__ c
- Fields: Product, Quantity, Reorder_ Level, Warehouse.
- Filters: Quantity < Reorder_ Level → “Low Stock” products.

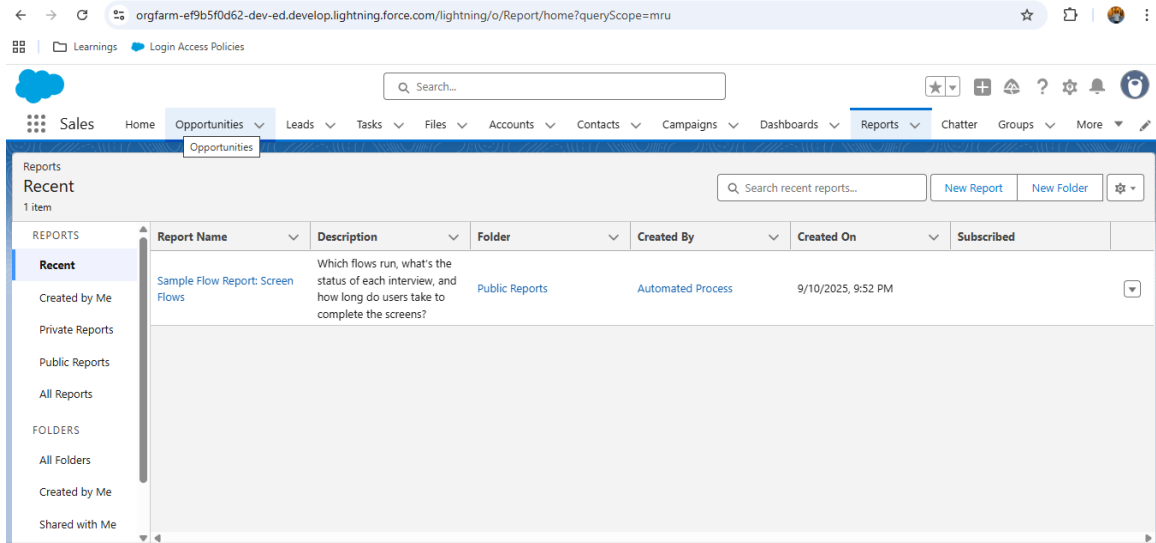
2. Orders by Status Report

- Report Type: Orders
- Fields: Order ID, Product, Quantity, Customer, Status.
- Group by: Status (Draft, Activated, Delivered, Cancelled).

3. Shipment Performance Report

- Report Type: Shipments
- Fields: Shipment ID, Order, Delivery Agent, Status, Delivery_ Date.
- Filter: Status = “In Transit” AND Age > 7 days → Escalations.





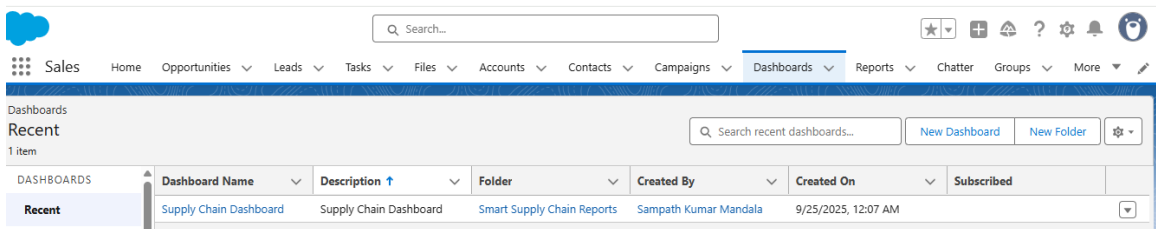
Step 2: Dashboards

Dashboards **visualize your reports** into charts & KPIs.

Create Dashboard → Smart Supply Chain Dashboard

Components:

- **Bar Chart → Inventory by Warehouse**
 - Shows stock levels across warehouses.
- **Pie Chart → Orders by Status**
 - Visual split of how many orders are Draft, Shipped, Delivered.
- **Line Chart → Shipments over Time**
 - Shows delivery performance trends.
- **Metric → Low Stock Products**
 - Quick KPI: number of products below reorder level.



Step 3: Dynamic Dashboards

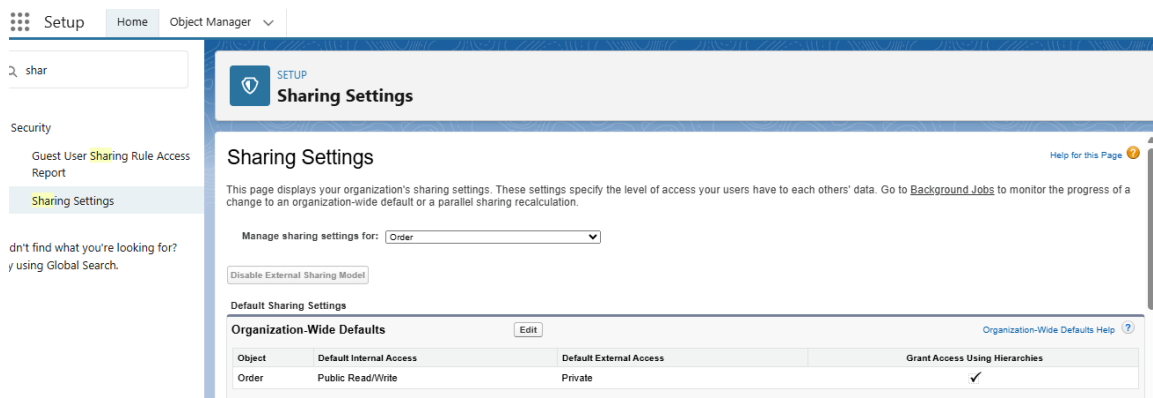
- Go to **Dashboard Settings** → **Run Dashboard As** → **Logged-in User**.
- This makes dashboards **role-based**:
 - Admin → Sees all warehouses, orders, shipments.
 - Warehouse Manager → Sees only their warehouse stock & orders.
 - Delivery Agent → Sees only shipments assigned to them.

Step 4: Security Review

security review:

1. OWD

- Inventory → Private
- Orders → Private
- Shipments → Private
- Warehouse → Public Read/Write



2. Sharing Rules

- Orders → Shared with Warehouse Manager.
- Shipments → Shared with Delivery Agent.

3. Field-Level Security (FLS)

- Hide sensitive fields (e.g., Supplier Cost) from Delivery Agents.

4. Session Settings

- Timeout: 2 hrs.
- Enforce IP restrictions for Warehouse Managers (only office network).

Session Settings

Set the session security and session expiration timeout for your organization.

Session Timeout

Timeout Value: 2 hours

☐ Disable session timeout warning popup

☒ Force logout on session timeout

5. Audit Trail

- Setup → Security → View Setup Audit Trail → track configuration changes.

View Setup Audit Trail

The last 20 entries for your organization are listed below. You can [download](#) your organization's setup audit trail for the last six months (Excel .csv file).

Date	User	Source Namespace Prefix	Action	Section	Delegate User
9/26/2025, 12:11:53 AM PDT	mandalasampath560665@agentforce.com		Created new 01IgK000002PEt3 duplicate rule "Duplicate orders". Set "Record-Level Security" to "Enforce sharing rules"	Duplicate Rule	
9/25/2025, 11:58:40 PM PDT	mandalasampath560665@agentforce.com		Created a new Salesforce Connect: OData 2.0 external data source: supply chain	External Objects	
9/24/2025, 11:04:31 PM PDT	mandalasampath560665@agentforce.com		Created custom object: Shipment_Update	Custom Objects	
9/24/2025, 11:00:57 PM PDT	mandalasampath560665@agentforce.com		Remote Proxy insert Supplier_API: https://supplier-system.com	Security Controls	
9/24/2025, 10:46:51 PM PDT	mandalasampath560665@agentforce.com		Created Lightning Page: Order Details	Lightning Pages	
9/24/2025, 10:42:42 PM PDT	mandalasampath560665@agentforce.com		Reset standard button override on Inventories: View	Custom Objects	
9/24/2025, 10:42:22 PM PDT	mandalasampath560665@agentforce.com		Changed Lightning Page: Inventory__c	Lightning Pages	
9/24/2025, 10:42:06 PM PDT	mandalasampath560665@agentforce.com		Created custom object: Inventory__c	Custom Objects	

Phase 10: Final Presentation

Presentation