Salesforce Virtual Internship Program

SmartInternz

FOODCONNECT

TO SUPPLY LEFT OVER FOOD TO POOR

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Project Title: To Supply Leftover Food to Poor

1. Project Overview

The project aims to minimize food wastage by connecting donors (restaurants, hotels, and individuals) with NGOs and organizations that supply food to the poor through the FoodConnect platform. The solution will use Salesforce's cloud-based CRM to manage and optimize the entire process, ensuring transparency, accountability, and timely distribution.

Scope

- **Donors**: Restaurants, cafes, hotels, events, and households.
- **Recipients**: NGOs, shelters, and individuals in need.
- **Features**: Real-time tracking, donor-NGO communication, and data analytics for impact

  measurement.

2.Objectives

2.1 Business Goals

- To create a streamlined and transparent system for managing surplus food donations using Salesforce.
- Facilitate efficient coordination between venues, volunteers, and drop-off points to combat food insecurity.
- Ensure timely delivery of surplus food to beneficiaries while maximizing resource utilization.

2.2 Specific Outcomes

- Implemented public groups for managing user access and permissions.
- Developed custom report types to track venues, drop-off points, volunteers, and tasks effectively.

- Created dashboards for real-time insights into task execution and organization details.
- Established sharing rules to manage data visibility based on distance criteria.
- Designed a comprehensive home page for the FoodConnect app, integrating flows and dashboards.

3. Salesforce Key Features and Concepts Utilized

3.1 Key Features

1. **Donor Registration**
    - Simplified onboarding process for donors through detailed profiles capturing location, capacity, and food type information.
    - Real-time donation forms integrated into the Salesforce portal for seamless data collection.
2. **NGO Registration**
    - Comprehensive database for NGOs, maintaining information such as service areas, food-handling capacities, and requirements.
    - Streamlined registration for NGOs to enhance collaboration.
3. **Donation Management**
    - Automatic matching of food donations with NGOs based on factors like proximity and capacity.
    - Real-time notifications to both donors and NGOs upon confirmation of a match, ensuring prompt action.
4. **Pickup and Delivery Coordination**
    - Logistics coordination through integration with delivery services or NGO transport teams.
    - Food pickup and delivery tracking enabled via Salesforce Maps for transparent operations.
5. **Reporting and Analytics**
    - Dashboards to visualize donation statistics, such as total food donated, NGOs served, and meals provided
    - Impact metrics to measure donor satisfaction and NGO efficiency.

6. **Feedback System**
    - Post-delivery feedback collection from both donors and NGOs, ensuring continuous improvement in the process and quality assurance.

3.2 Concepts Utilized

1. Custom Objects and Fields

- Created tailored objects to manage donor information, volunteer tasks, food pickup requests, and drop-off locations.

2. Lightning App Builder

- Designed an intuitive and visually appealing Lightning app interface for users to easily navigate and manage tasks.

3. Flows and Automation

- Implemented automation for task assignments, notifications, and tracking of food donations and pickups to reduce manual efforts.

4. Triggers

- Developed Apex triggers to ensure data consistency and automate backend processes, such as updating task statuses or alerting users.

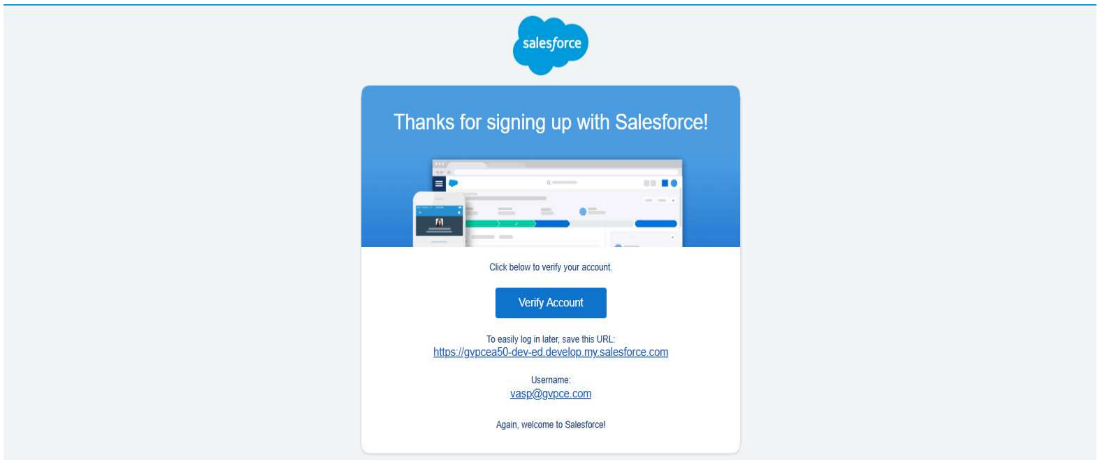
5. Reports and Dashboards

- Built dynamic dashboards and reports to provide real-time insights into donation volumes, volunteer activities, and delivery progress.

4. Detailed Steps to Solution Design

4.1 Salesforce developer account creation

1. Go to https://developer.salesforce.com/signup
2. On the sign up form, enter the following details:



1. First name & Last name
2. Email
3. Role : Developer
4. Company : College or Company Name
5. County : India
6. Postal Code : pin code
7. Username : should be a combination of your name and company

4.2 Object

To Navigate to Setup page:

To create an object:

1. From the setup page > Click on Object Manager > Click on Create > Click on Custom Object.

1. On Custom object defining page:
2. Enter the label name, plural label name, click on Allow reports, Allow search.
3. Click on Save.

4.2.1 Create Venue Object

Navigate to Object Manager: From the Setup page, click on Object Manager.

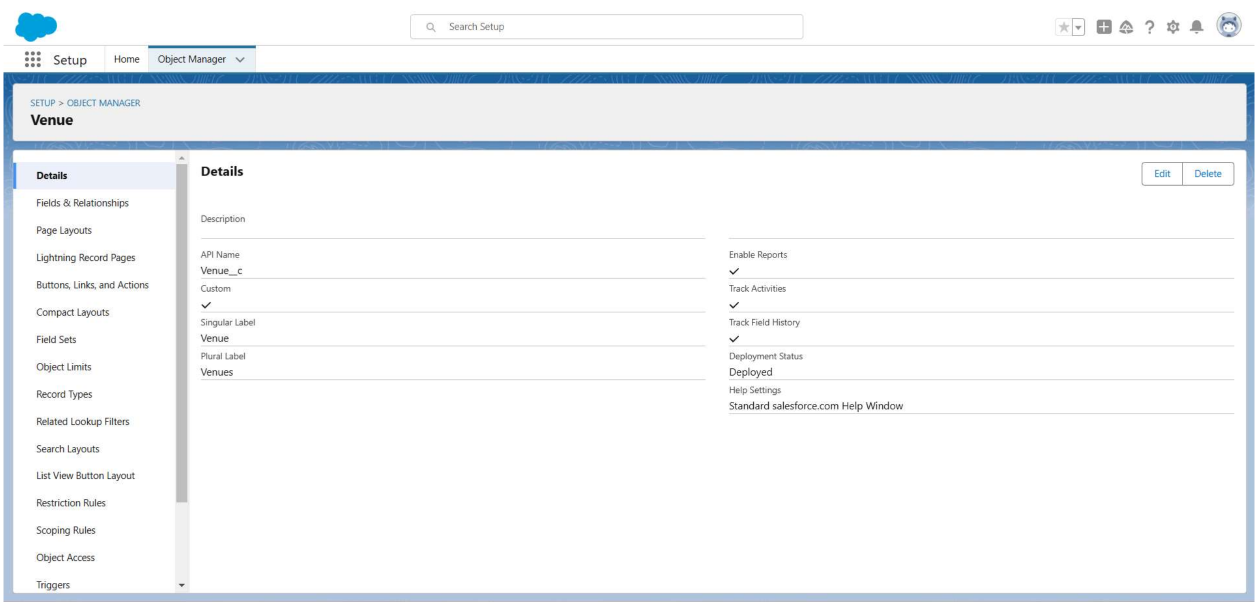
Create Custom Object: Click on Create and select Custom Object.

Enter Object Details:

- Label: Venue Plural
- Label: Venues
- Record Name: Venue Name
- Data Type: Text

Set Additional Options: Check Allow Reports, Track Field History, Allow Activities, and Allow Search.

Save: Click Save to create the Venue object.



4.2.2 Creating a Drop-Off Point Object in Salesforce

Navigate to Object Manager: From the Setup page, click Object Manager.

Create Custom Object: Click Create > Custom Object.

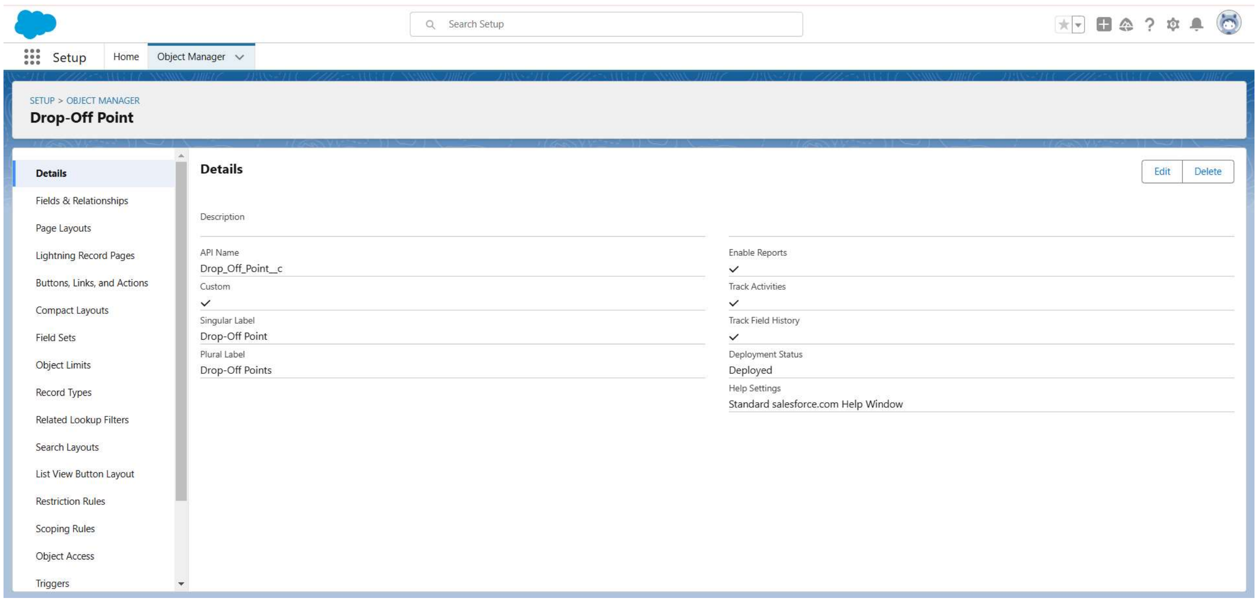
Enter Object Details:

- Label: Drop-Off Point

- Plural Label: Drop-Off Points
- Record Name: Drop-Off Point Name
- Data Type: Text

Set Options: Check Allow Reports, Track Field History, Allow Activities, and Allow Search.

Save: Click Save to create the Drop-Off Point object



4.2.3 Creating a Task Object in Salesforce

Navigate to Object Manager: From the Setup page, click Object Manager.

Create Custom Object: Click Create > Custom Object.

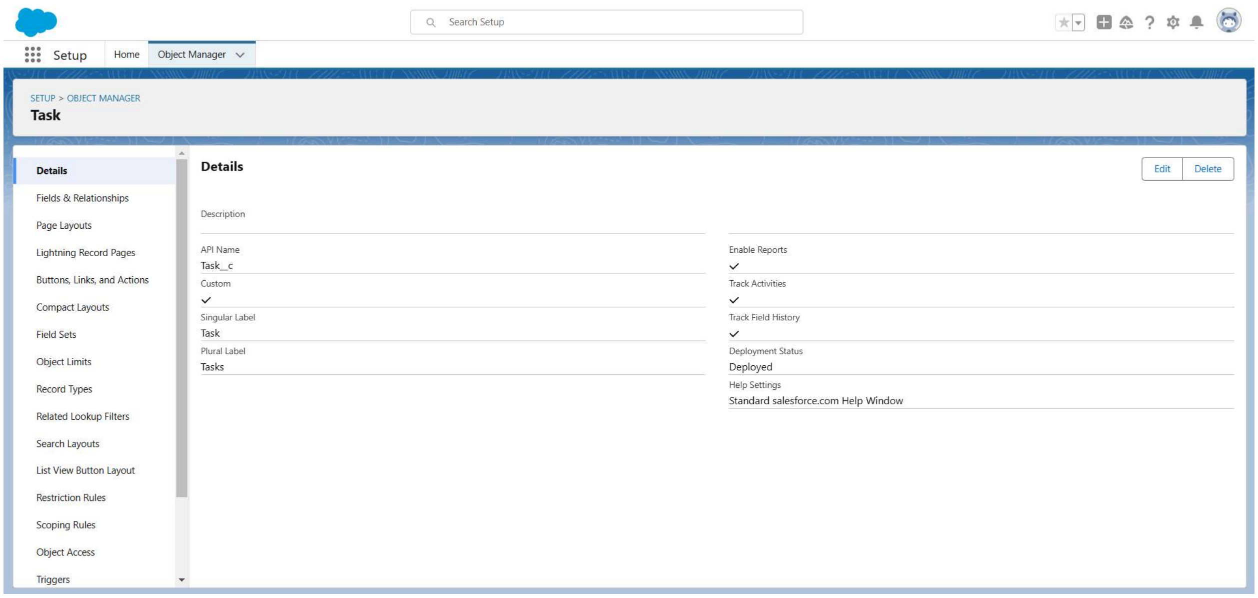
Enter Object Details:

- Label: Task
- Plural Label: Tasks
- Record Name: Task Name

- Data Type: Text

Set Options: Check Allow Reports, Track Field History, Allow Activities, and Allow Search.

Save: Click Save to create the Task object.



4.2.4 Creating a Volunteer Object in Salesforce

Navigate to Object Manager: From the Setup page, click Object Manager.

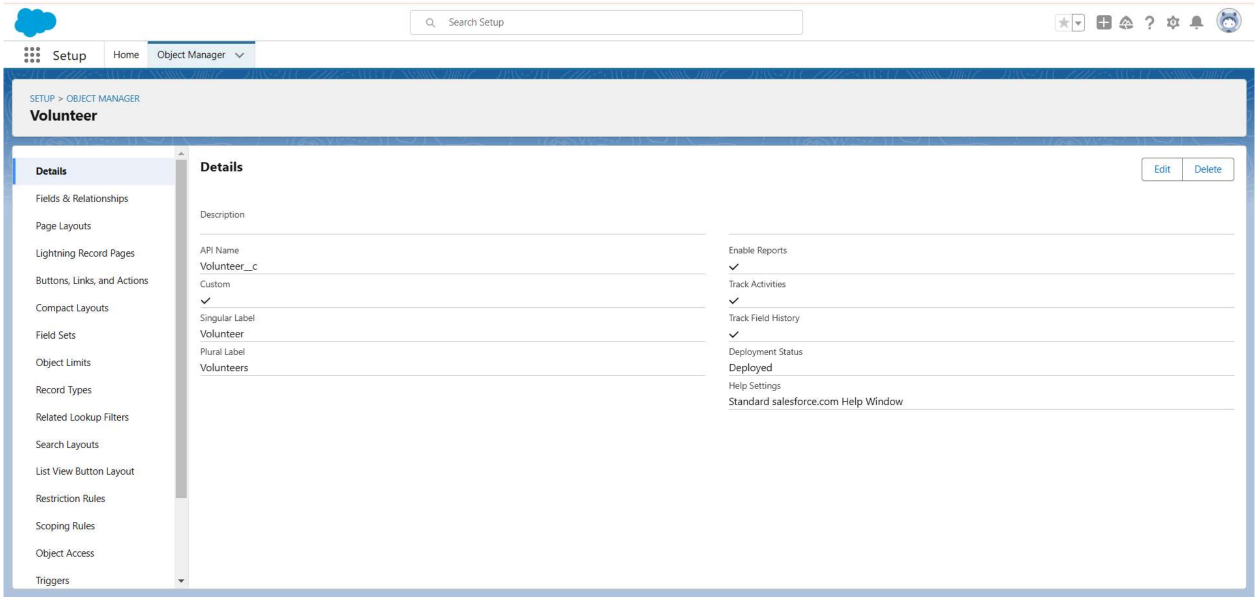
Create Custom Object: Click Create > Custom Object.

Enter Object Details:

- Label: Volunteer
- Plural Label: Volunteers
- Record Name: Volunteer Name
- Data Type: Text

Set Options: Check Allow Reports, Track Field History, Allow Activities, and Allow Search.

Save: Click Save to create the Volunteer object.



4.2.5 Creating an Execution Details Object in Salesforce:

Navigate to Object Manager: From the Setup page, click Object Manager.

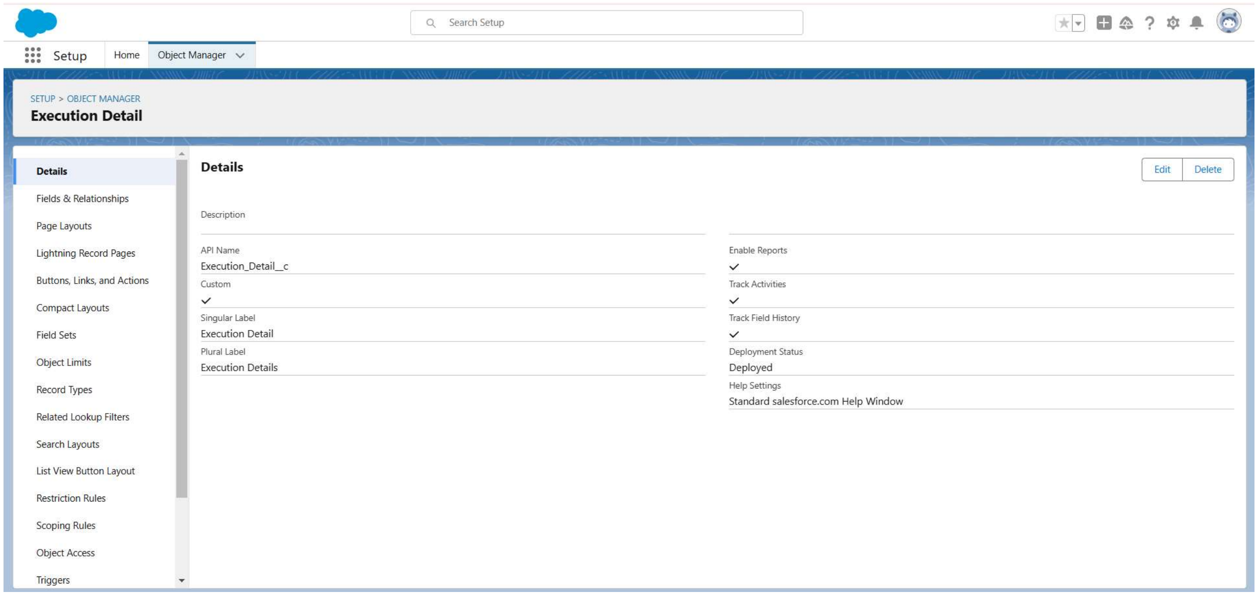
Create Custom Object: Click Create > Custom Object.

Enter Object Details:

- Label: Execution Detail
- Plural Label: Execution Details
- Record Name: Execution Detail Name
- Data Type: Text

Set Options: Check Allow Reports, Track Field History, Allow Activities, and Allow Search.

Save: Click Save to create the Execution Details object



4.3 Tabs

4.3.1 Creating a Custom Tab for Venue in Salesforce

Navigate to Tabs: Go to the Setup page, type Tabs in the Quick Find bar, and click on Tabs.

Create New Tab: Click New under the Custom Object Tabs section.

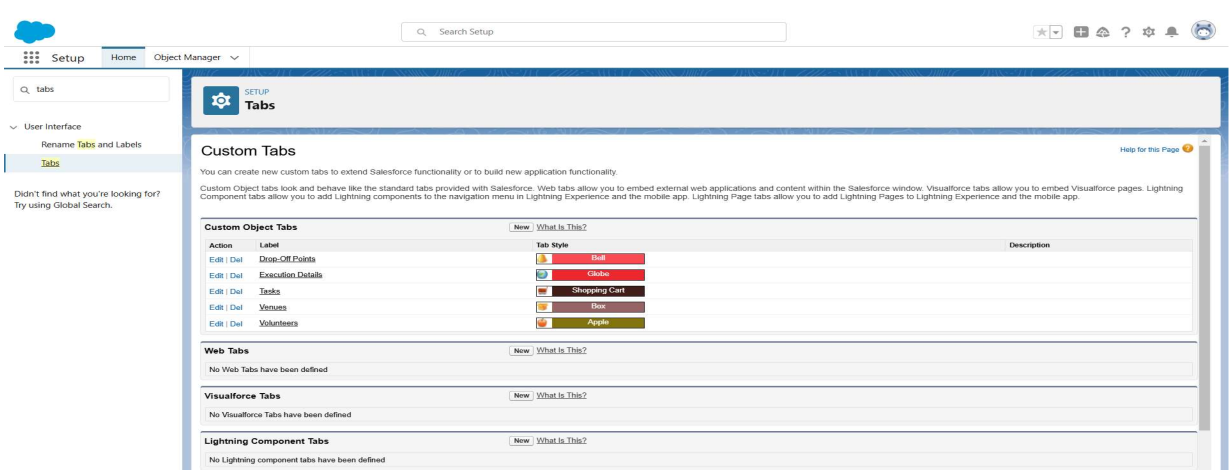
Select Object: Choose Venue from the object list.

Select Tab Style: Pick a tab style and click Next.

Add to Profiles: Keep the default settings and click Next

Add to Custom App: Uncheck Include Tab and ensure Append tab to users' existing personal customizations is checked.

Save: Click Save to create the custom tab.



4.4 The Lightning App

4.4.1 Creating a Lightning App:FoodConnect

Navigate to App Manager: Go to the Setup page, search for App Manager in the Quick Find bar, and select App Manager.

Create New Lightning App: Click New Lightning App.

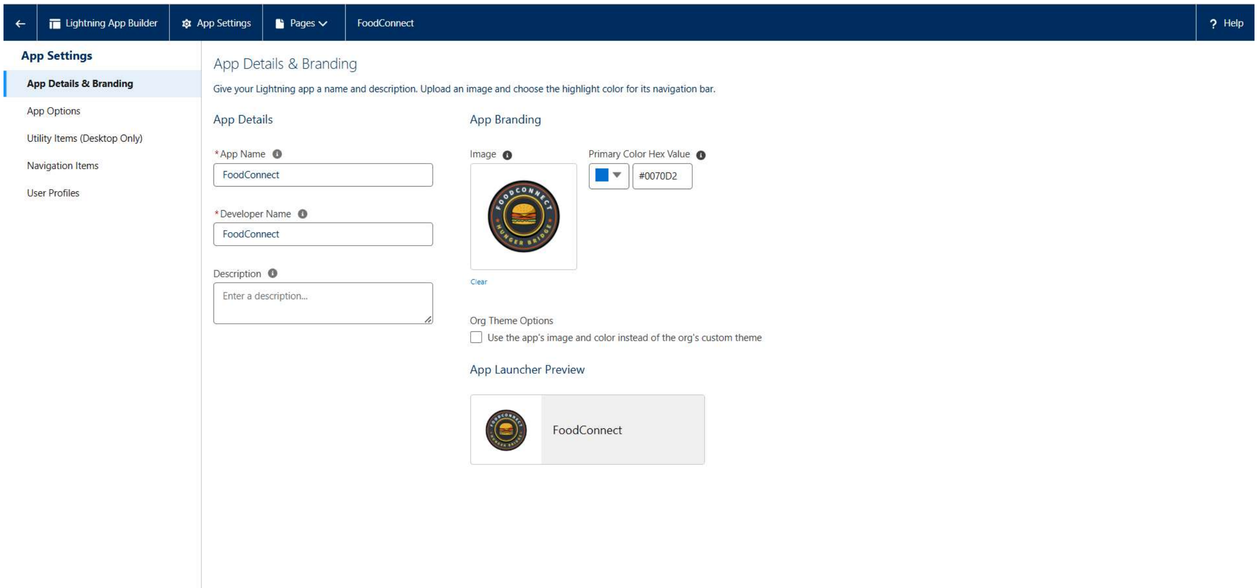
- App Name: FoodConnect
- Developer Name: Auto-populated
- Image: Optional
- Primary Color Hex Value: Default

Set Navigation Style: Click Next, set Navigation Style to Standard Navigation, and click Next.

Utility Items: Keep defaults and click Next.

Add Navigation Items: Search for and add the following items using the arrow button: Home, Venue, Drop-Off Point, Task, Volunteer, Execution Details, Reports. Click Next.

Add User Profiles: Search for System Administrator, click the arrow button then click Save & Finish.



4.5 Fields

4.5.1 Creation of Relationship Fields in Salesforce Objects

1. **Creating a Lookup Relationship Field on the Volunteer Object**

Navigate to Volunteer Object: Go to Setup, click on Object Manager, and search for Volunteer.

Access Fields & Relationships: Click on Fields & Relationships, then click New.

Select Relationship Type: Choose Master-Detail Relationship and click Next.

Select Related Object: Choose Drop-Off Point and click Next.

Field Details:

- Field Name: Drop_Off_Point
- Field Label: Auto-generated

Finish: Click Next, then Next, and finally Save

2. Creating a Master-Detail Relationship Field on the Execution Details Object

Navigate to Execution Details Object: Go to Setup, click on Object Manager, and search for Execution Details.

Access Fields & Relationships: Click on Fields & Relationships, then click New.

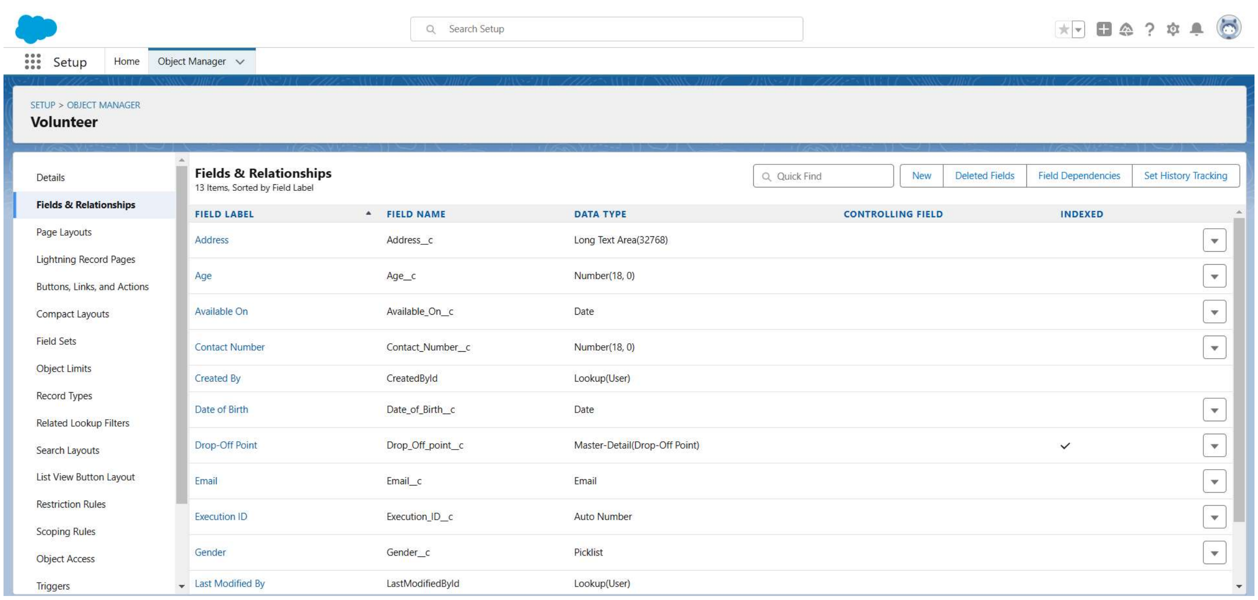
Select Relationship Type: Choose Master-Detail Relationship and click Next.

Select Related Object: Choose Volunteer and click Next.

Field Details:

- Field Name: Volunteer
- Field Label: Auto-generated

Finish: Click Next, then Next, and finally Save.



4.6 Flows

4.6.1 Create Flow to Create a Record in Venue Object: Navigate to Flow: Go to Setup, type Flow in the Quick Find box, and click on Flows.

Create New Flow: Click New Flow and select Screen Flow. Click Create.

Add Screen Element:

- Click the + icon between Start and End, then select Screen.
- Label: Venue Details
- API Name: Venue_Details

Add Components:

Text Component:

- Label: Venue Name
- API Name: Venue_Name

Email Component:

- Label: Email
- API Name: Contact_Email

Phone Component:

- Label: Phone
- API Name: Contact_Phone

Text Component:

- Label: Venue Location

- API Name: Venue_Location

  Number Component:

- Label: Latitude
- API Name: Latitude

  Number Component:

- Label: Longitude
- API Name: Longitude

Click Done.

Add Create Record Element:

- Click the + icon between Venue Details and End, then select Create Record.
- Label: Create Venue Record
- API Name: Create_Venue_Record How Many Records to Create: One
- How to Set the Record Fields: Use separate resources, and literal values
- Object: Venue

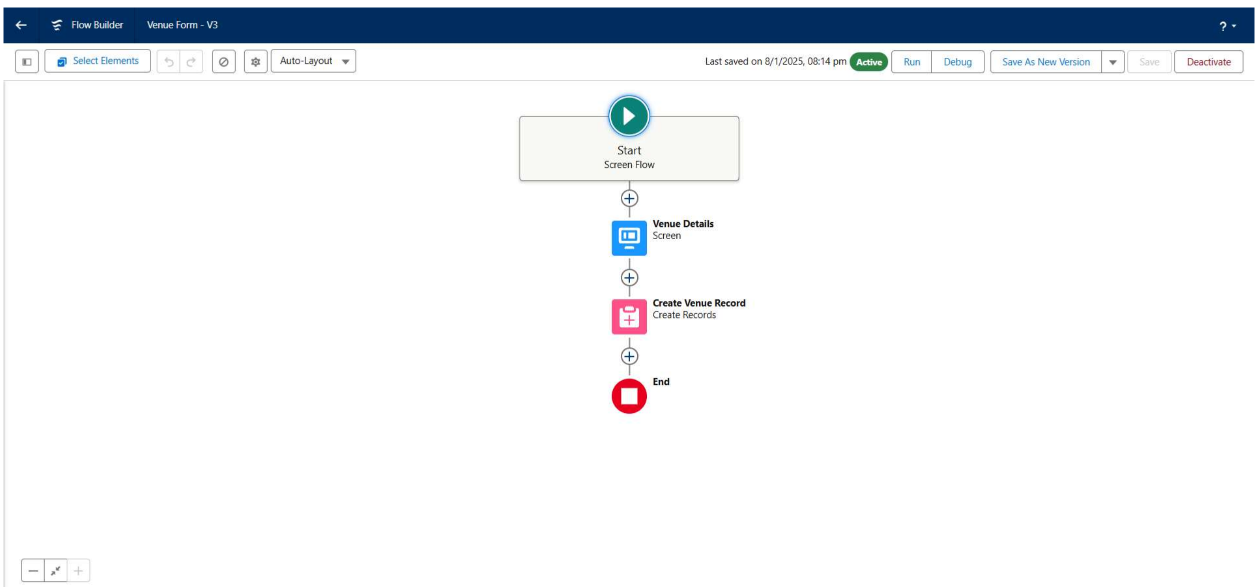
Set Field Values:

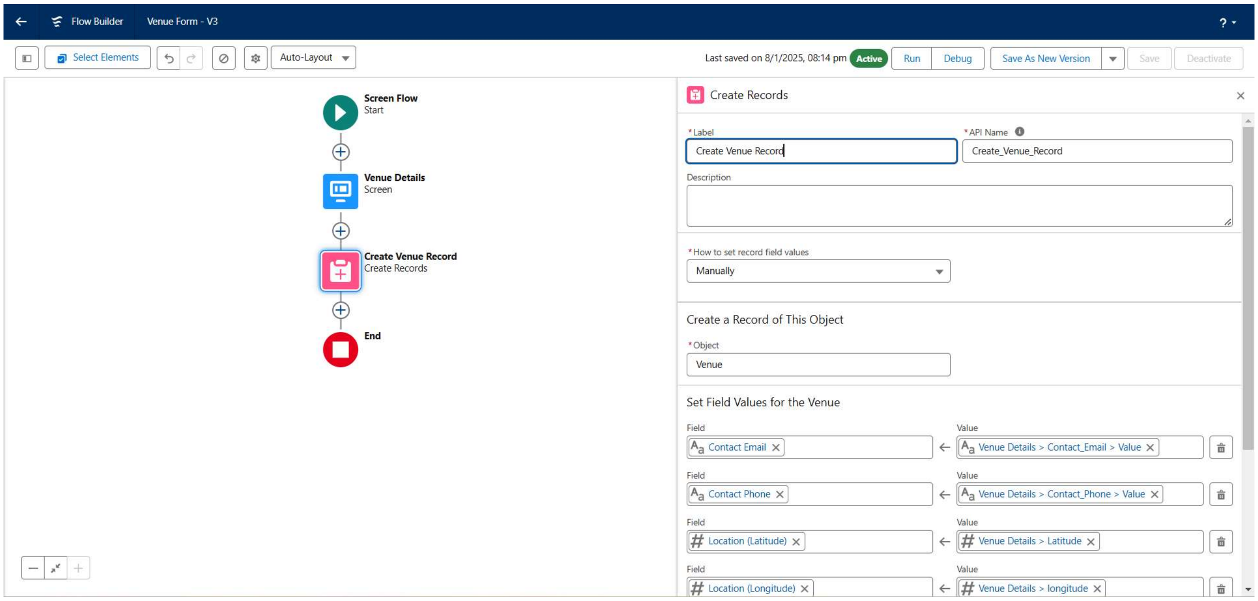
- Field: Contact_Email__c = {!Contact_Email.value}
- Field: Contact_Phone__c = {!Contact_Phone.value}
- Field: Name = {!Venue_Name}

- Field: Venue_Location__c = {!Venue_Location}
- Field: Location__Latitude__s = {!Latitude}
- Field: Location__Longitude__s = {!Longitude}

Save Flow:

- Flow Label: Venue Form Flow
- API Name: Venue_Form





4.7 Trigger

4.7.1 Create a Trigger in Salesforce

Log In: Log into your Trailhead account.

Open Developer Console: Click on the gear icon in the top right corner and select Developer Console.

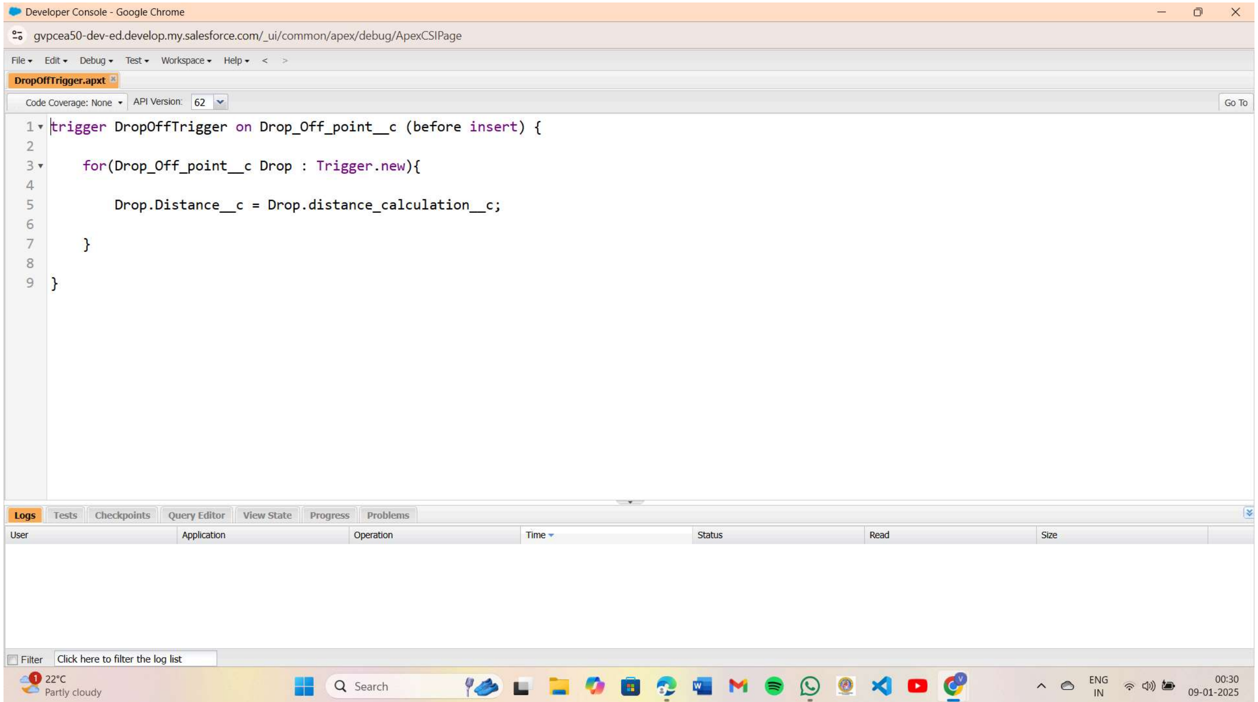
Create New Trigger:

- Click on the File menu in the toolbar.
- Select New > Trigger.

Enter Trigger Details:

- Name: DropOffTrigger
- sObject: Drop-Off Point

Click on Submit



4.8 Profile

4.8.1 Creation of Users

Navigate to Users: Go to Setup, type Users in the Quick Find bar, and click on Users.

Create New User: Click New User.

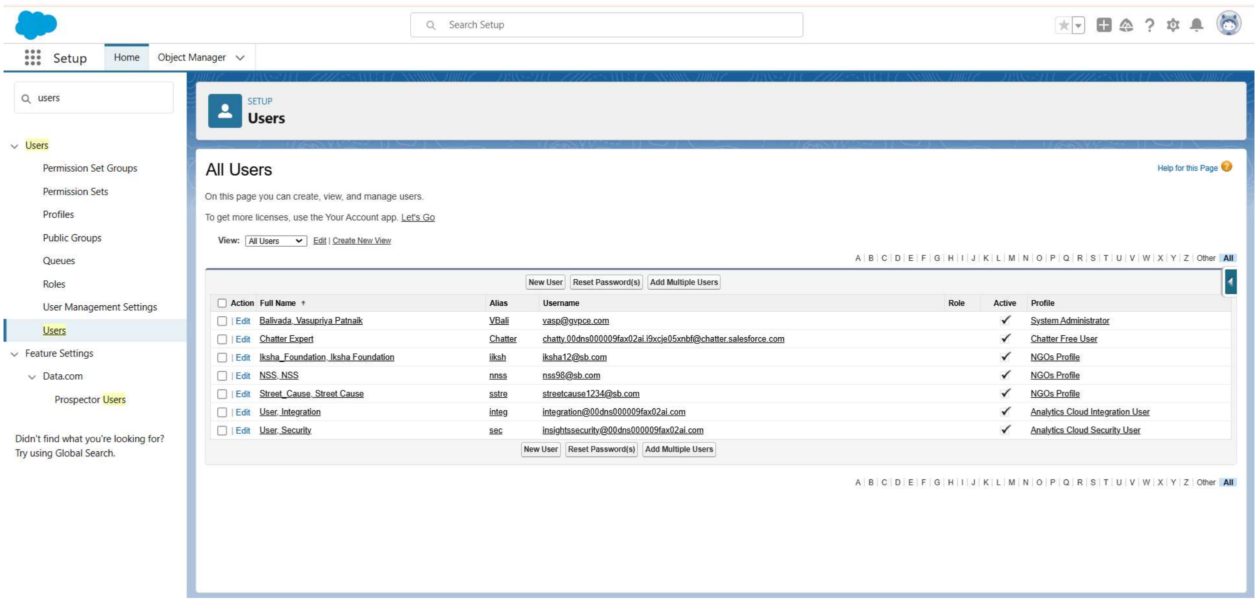
General Information:

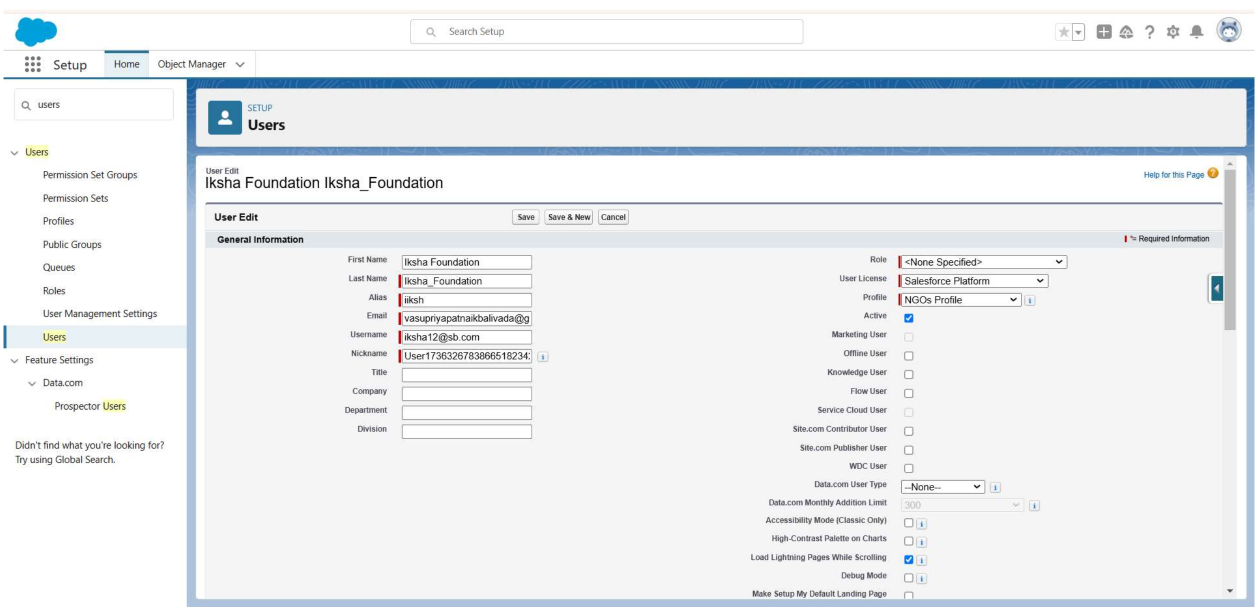
- First Name: Iksha Foundation
- Last Name: Iksha_Foundation
- Alias: iiksh
- Email: (Your Email)
- Username: ikshafoundation@sb.com
- Nickname: (Auto Populated)

- User License: Salesforce Platform
- Profile: NGOs Pro
- Active: Check

Click Save.

Follow the same steps to create two additional users with different first last names based on different NGOs, ensuring each has a unique username and alias.





4.9 Public Groups:

4.9.1 Creation of Public Groups:

Navigate to Public Groups: Go to Setup, type Public Groups in the Quick Find bar, and click on Public Groups.

Create New Group: Click New.

Group Information:

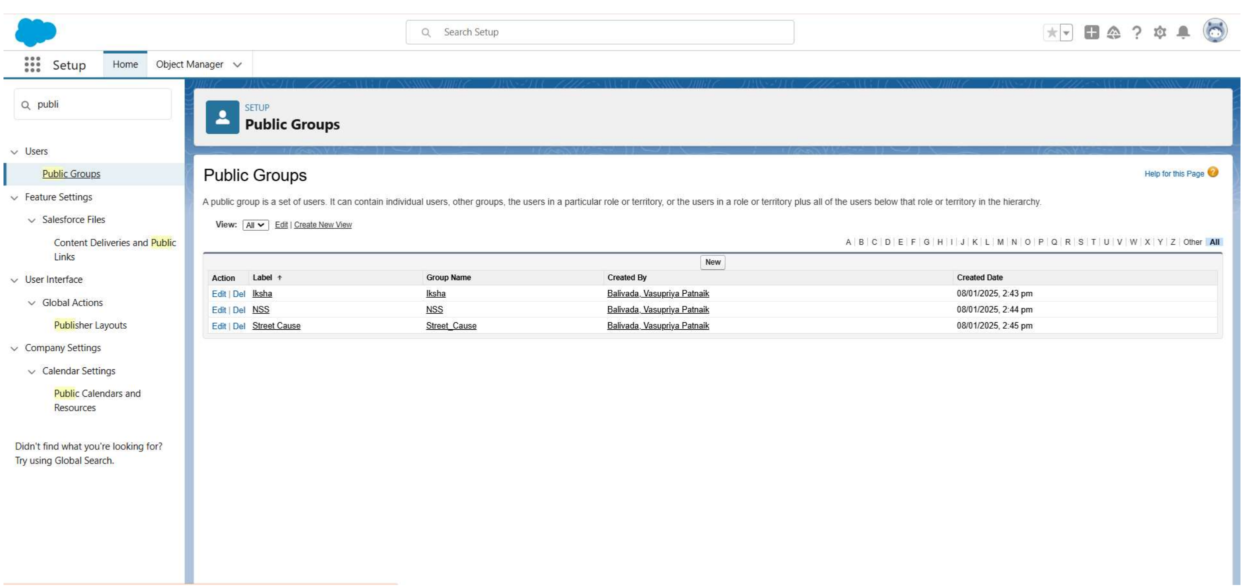
- Label: Iksha
- Group Name: Iksha
- Grant Access Using Hierarchies: Check

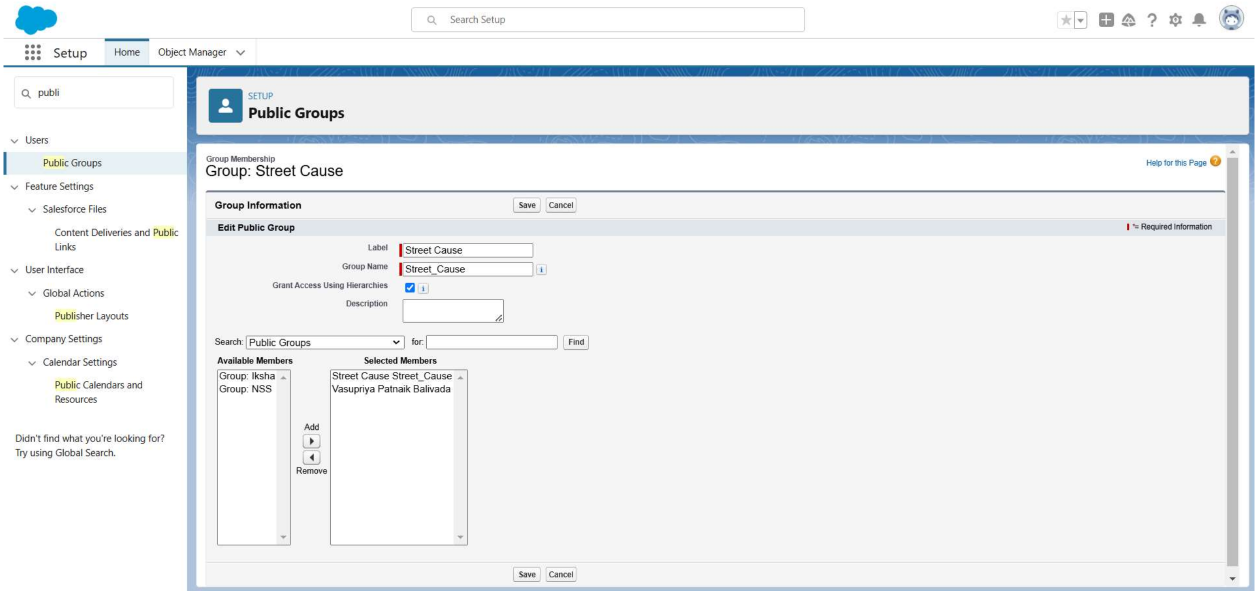
Select Members:

- In the Search box, select Users.
- In Selected Members, add Iksha Foundation and System Administrator.

Click Save.

Follow the same steps to create two additional public groups with different labels and group names based on different NGOs, ensuring each group includes the appropriate users and has the "Grant Access Using Hierarchies" option checked.





4.10 Report Types

4.10.1 Creation of Report Types

Navigate to Report Types: Go to Setup, type Report Types in the Quick Find bar, and click on Report Types.

Continue: Click on Continue.

Create New Custom Report Type: Click on New Custom Report Type.

Define the Custom Report Type

- Primary Object: Select Venues
- Report Type Label: Venue with DropOff with Volunteer
- Report Type Name: Venue_with_DropOff_with_Volunteer
- Description: Venue with DropOff with Volunteer
- Store in Category: Select Other Reports

- Deployment Status: Deployed

Click Next.

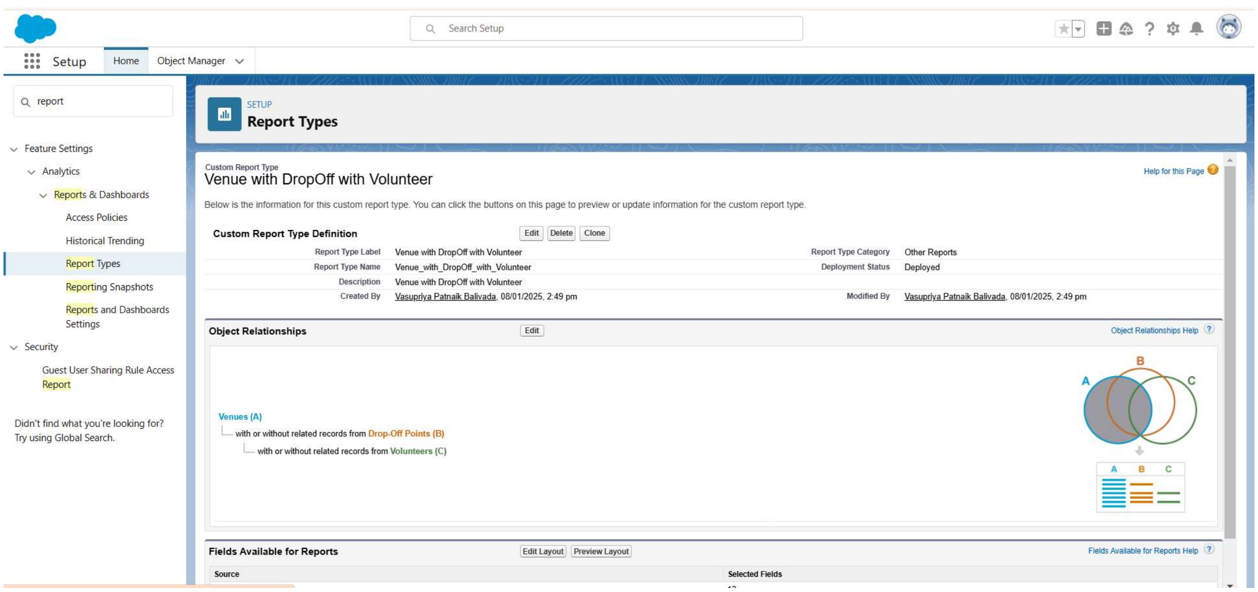
Relate Another Object:

- Near Click to relate another Object, select Drop-Off Points.
- Choose "A" records may or may not have related "B" records.

Relate Another Object:

- Near Click to relate another Object, select Volunteers.

Click Save.



4.11 Dashboard

Adding Venue and Drop-Off Point Report to the Dashboard

Navigate to App: Go to the FoodConnect app.

Access Dashboards Tab: Click on the Dashboards tab.

Create New Folder:

- Click on New Folder.
- Folder Label: Custom Dashboards
- Folder Unique Name: (Auto Populated)

Open Custom Dashboards: Click on the Custom Dashboards folder and then click on New Dashboard.

Name the Dashboard:

- Name: Organization Details.

Add Widget:

- Click on Widget and select Chart or Table.
- Select Report: Choose Venue and Drop Off Point Report.
- Click on Select.

Add Component:

- Display As: Select Lightning Table.
- Component Theme: Select Dark (Optional).

Save Dashboard: Click on Save.

Adding Volunteer Task Report to the Dashboard:

Access Dashboard: Open the dashboard where you want to add the report.

Add Widget:

- Click on Widget and select Chart or Table.

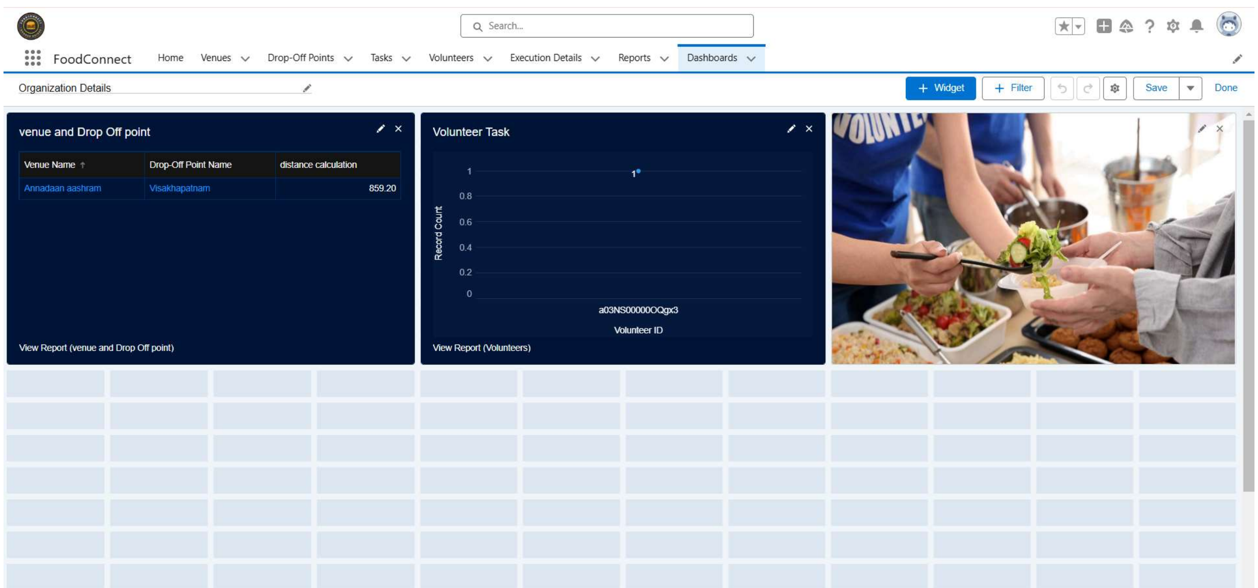
Select Report:

- In Select Report, choose Volunteer Task Report.
- Click on Select.

Add Component:

- Display As: Select Line Chart.
- Component Theme: Select Dark (Optional).

Save Dashboard: Click on Save.



4.12 Sharing Rules

Rule 1: Distance Less Than 15

Navigate to Sharing Settings: Go to Setup, type Sharing Settings in the Quick Find box, and click on Sharing Settings.

Find Drop-Off Point Sharing Rules: Scroll down to find Drop-Off Point Shari Rules.

Create New Rule:

- Click on New near Drop-Off Point Sharing Rules.
- Label: Rule 1
- Rule Name: Rule_1
- Select Rule Type: Based on criteria.

Select Records to Share:

- Field: Distance
- Operator: less than Value: 15

Select Users to Share With:

- Public Groups: Iksha

Click Save.

Rule 2: Distance Greater Than 15 and Less Than or Equal to 30:

Create New Rule:

- Click on New near Drop-Off Point Sharing Rules.
- Label: Rule 2
- Rule Name: Rule_2
- Select Rule Type: Based on criteria.

Select Records to Share:

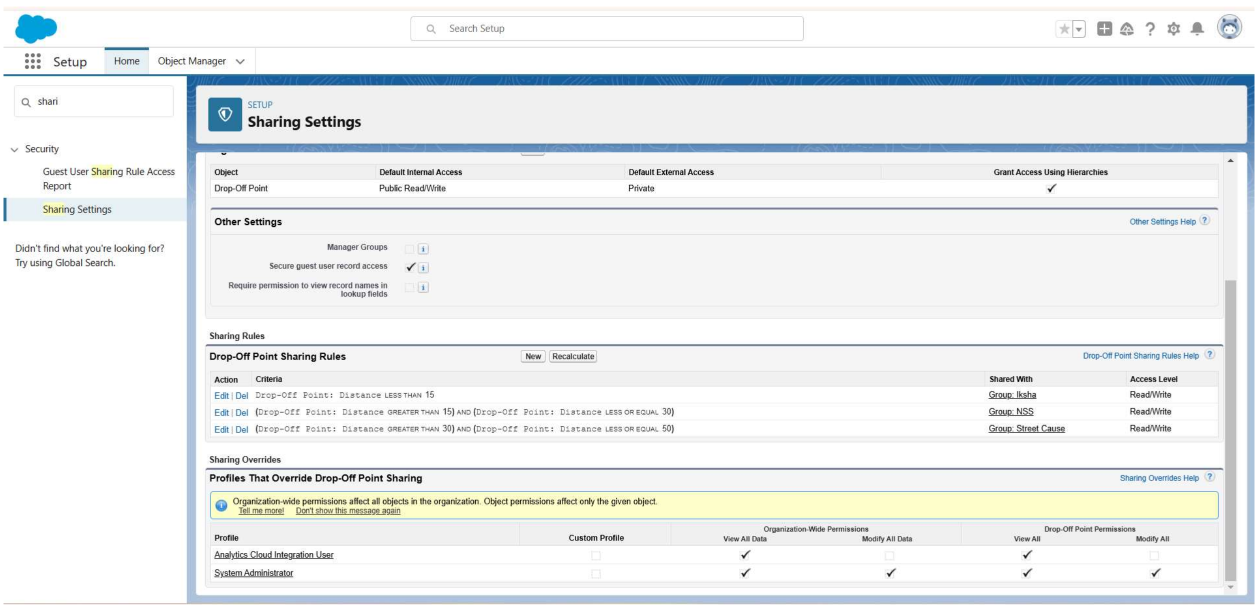
- Field: Distance
- Operator: greater than Value: 15

- Field: Distance
- Operator: less or equal Value: 30

Select Users to Share With:

- Public Groups: NSS

Click Save.



4.13 Home Page

4.13.1 Creation of Home Page

Navigate to Setup: Go to Setup, type Lightning App Builder in the Quick Find box, and click on Lightning App Builder.

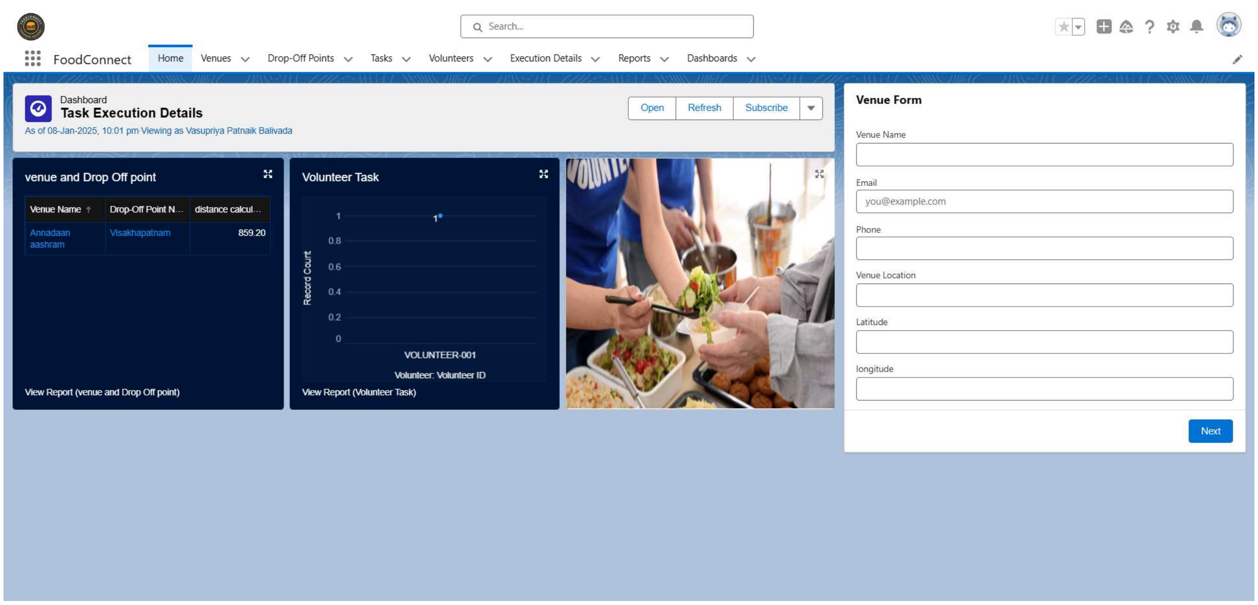
- Create New Home Page:
- Click on New. Select Home Page and give it a Label: HOME Page.
- Select Standard Home Page

Add Components:

- In the Components section, search for Flow and drag it to the right side section.
- On the right side, set the Flow to: Venue Flow.
- Search for Dashboard in the Components section, then drag and drop it into the first section

Save and Activate:

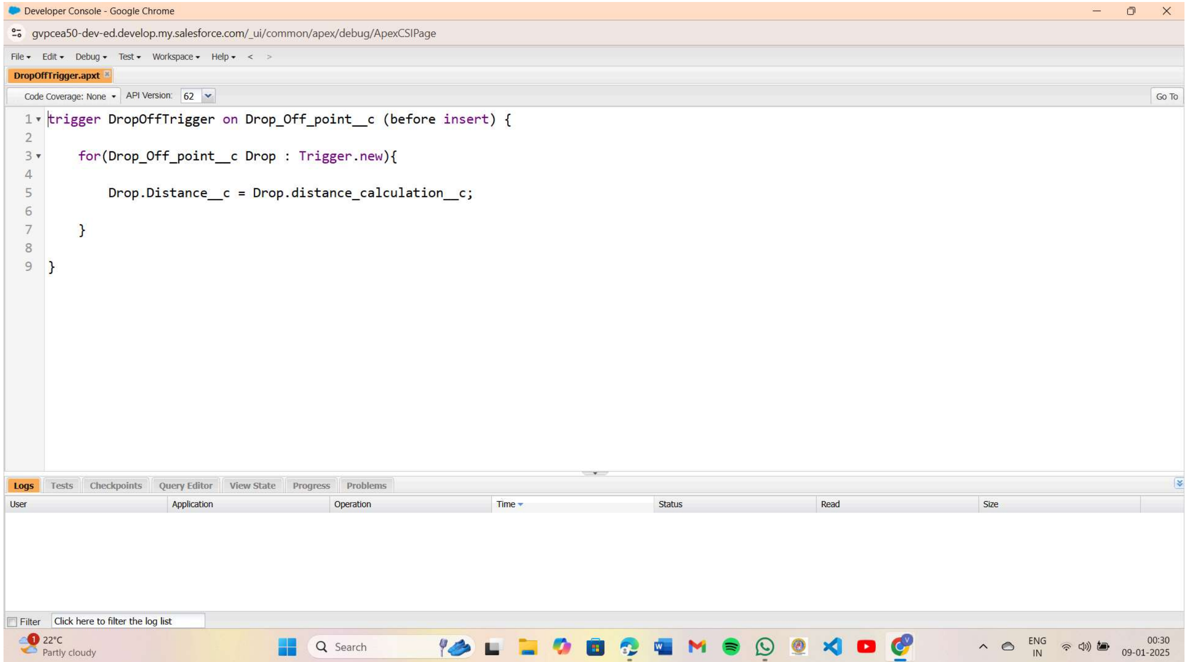
- Click on Save and then Activation.
- Click on App Default and then Add Assignments.
- Add FoodConnect App and then click on Save.



5. Testing and Validation

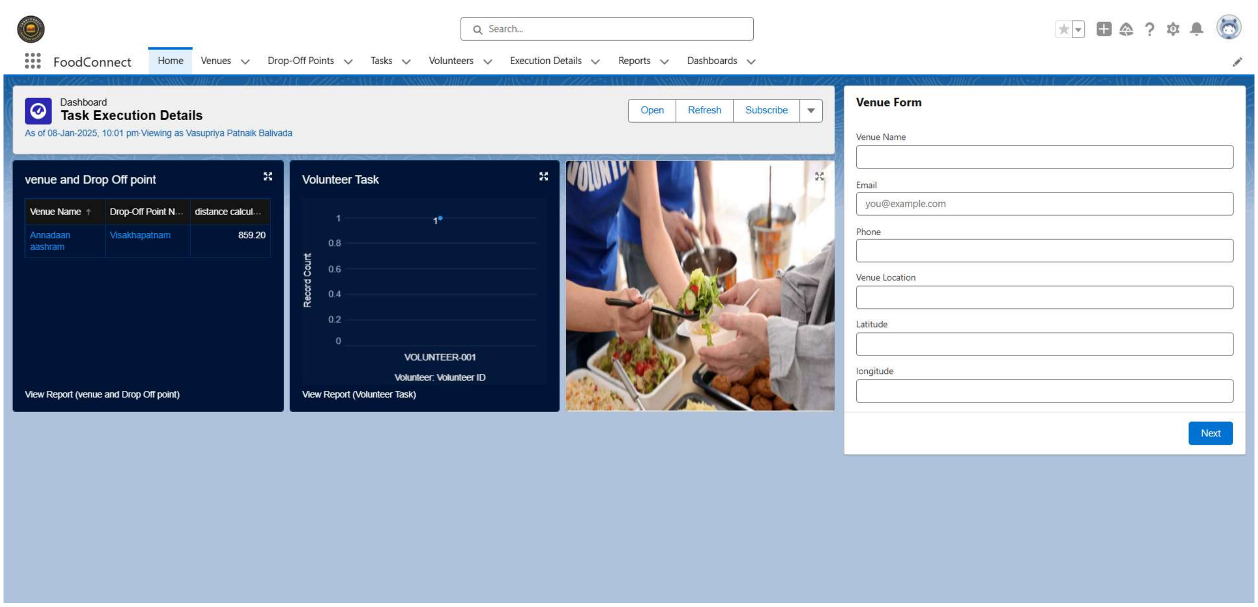
5.1 Unit Testing

Testing the Drop-Off Trigger



5.2 User Interface Testing

Here we can see the Dashboard with Venue And Drop Point is tested and Volunteer task Dashboard where we can observe a graph plotted between Record Count and Volunteer:Volunteer ID, Which shows That UI is perfectly developed.



5.3 Validation

We can Observe That cant Create Duplicate Fields,Objects and Every User,Public Groups details are Valid.

● **Venue Form**: Ensures all mandatory fields (Venue Name, Email, Phone, Venue Location) are filled, with real-time error messages for missing or incorrect inputs. Email and numeric fields are validated for proper formats.

● **Venue and Drop-Off Point Table**: Data is dynamically fetched and validated to ensure accuracy, with functional sorting and scrolling for large datasets.

● **Volunteer Task Section**: Graph data is validated to accurately reflect real-time information, and links are tested for correct redirection.

● **Dashboard Controls**: Buttons like "Open," "Refresh," and "Subscribe" are tested to confirm proper functionality and data updates.

6. Key Scenarios Addressed by Salesforce in Implementation Of The Project

● **Customer Relationship Management (CRM)**: Salesforce handles managing and analyzing customer interactions and data, improving customer service and engagement.

● **Sales Process Automation**: It automates various sales processes, like tracking leads, opportunities, and performance, helping sales teams close deals faster.

● **Marketing Campaigns and Engagement**: Salesforce enables personalized marketing campaigns and provides tools for tracking and analyzing their effectiveness.

● **Service Management**: It supports case management, service cloud, and provides tools for customer support teams to resolve issues efficiently.

● **Analytics and Reporting**: Salesforce helps generate real-time reports and dashboards, providing insights into business operations and customer behavior.

● **Collaboration and Integration:** The platform integrates with other systems and fosters team collaboration, ensuring streamlined workflows and improved productivity.

7. Conclusion

By leveraging the Salesforce platform, the project successfully established a streamlined and transparent system for managing surplus food donations. Through efficient coordination with volunteers and timely delivery beneficiaries, the project effectively addressed food insecurity while maximize the utilization of available resources. This approach not only enhanced operational efficiency but also fostered community engagement, ultimate contributing to a more sustainable and impactful solution to food waste and hunger.