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To Supply Leftover Food to Poor

College: PPG Institute of Technology

College Code: 7125

Team ID: NM2024TMID17257

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GitHub Repo: https://github.com/Kathir-eng/To-Supply-Leftover-Food-to-Poor.git

Demo Video link: https://youtu.be/t3Vhjk4Dly0

1. User Story:

The project "To supply leftover food to the poor" aims to leverage the Salesforce platform to streamline the process of collecting surplus food from various sources and distributing it to those in need. By utilizing Salesforce's robust features and functionalities, the project intends to create an efficient and transparent system for managing food donations, coordinating with volunteers, and ensuring timely delivery to beneficiaries

2. Project Overview :

The primary objective of this project is to create a platform leveraging Salesforce technology to efficiently connect surplus food from various sources with organizations or individuals in need. This initiative aims to minimize food wastage and alleviate hunger by facilitating the redistribution of excess food to those who are food insecure.

Project Flow:

Milestone 1 : Salesforce developer Account Creation

Milestone 2 : Object

Milestone 3 : Tabs

Milestone 4 : The Lightning App

Milestone 5 : Fields

Milestone 6 : Flows

Milestone 7 : Trigger

Milestone 8 : Profiles

Milestone 9 : Creation of Users

Milestone 10 : Public Groups

Milestone 11 : Reports Types

Milestone 12 : Reports

Milestone 13 : Dashboards

Milestone 14 : Sharing Rules

Milestone 15 : Home Page

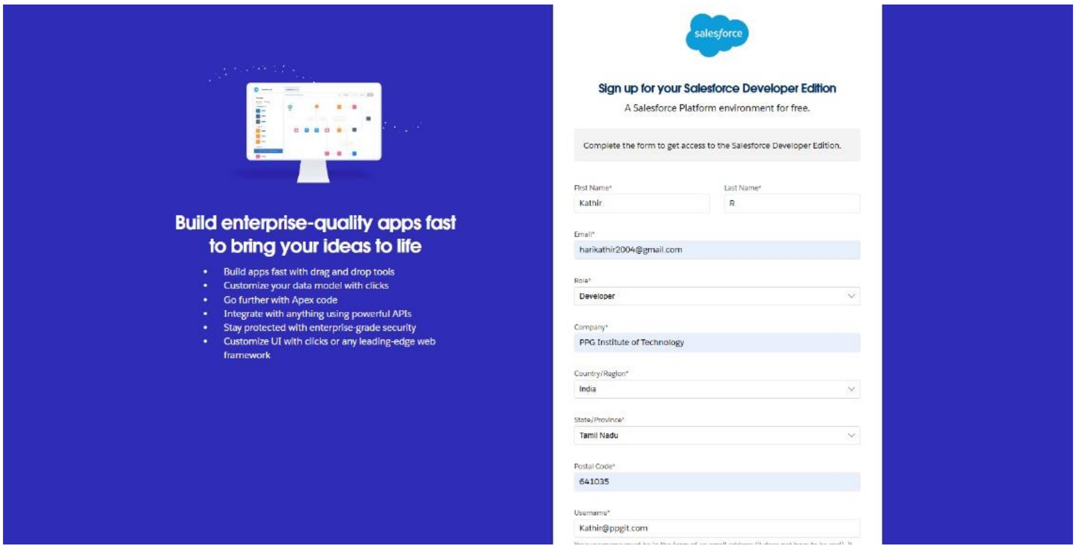
Milestone 16 : Conclusion

Milestone 1-Salesforce developer account creation :

Activity 1:

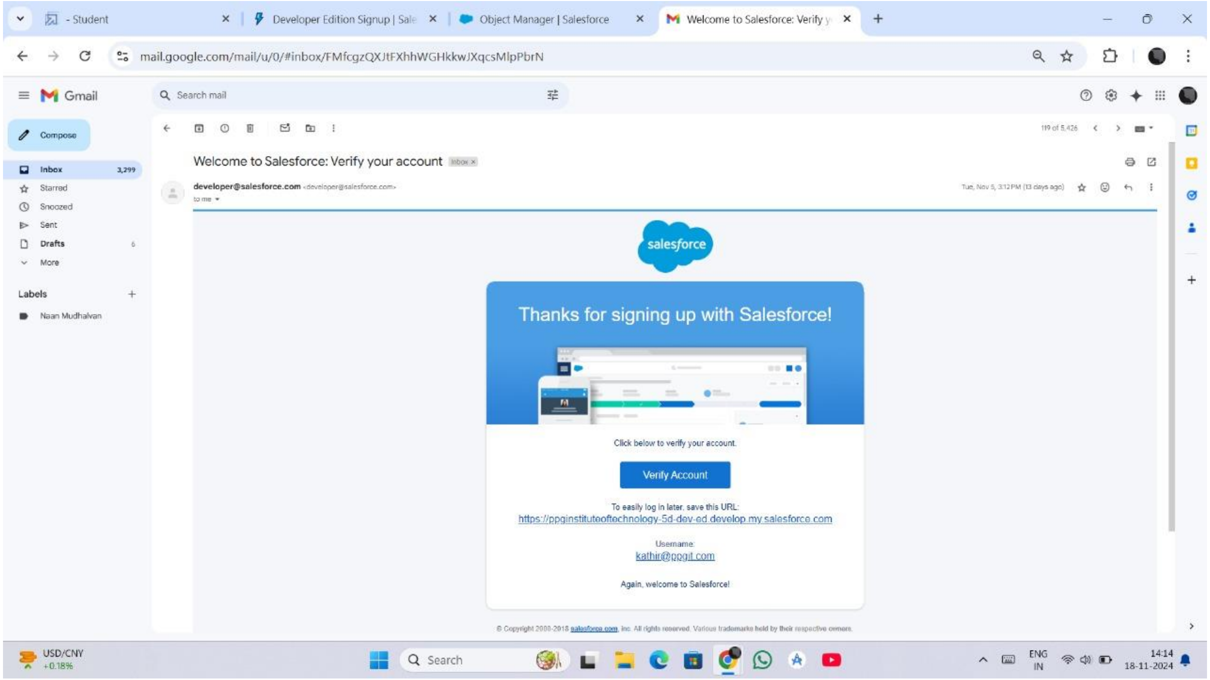
Creating Developer Account: Creating a developer org in salesforce.

1. Go to https: //developer.salesforce.com/signup

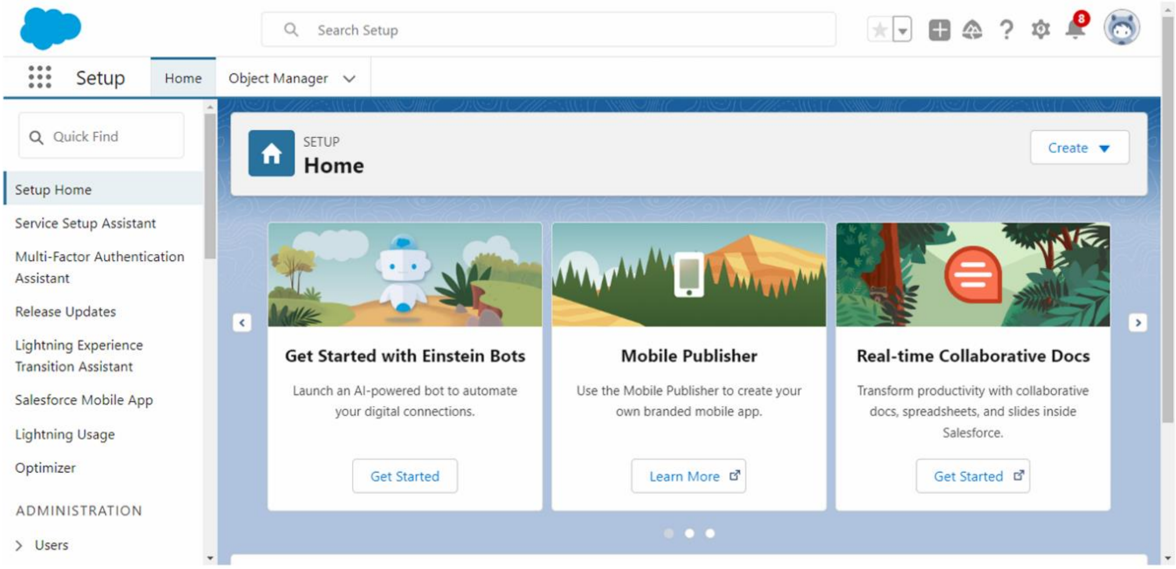


Activity 2: Account Activation:

After signing up, I activated my Salesforce Developer Account by verifying my email. I clicked on the "Verify Account" link, set a secure password, and answered a security question. Upon completing these steps, I was redirected to the Salesforce setup page, successfully enabling access to the platform's features.



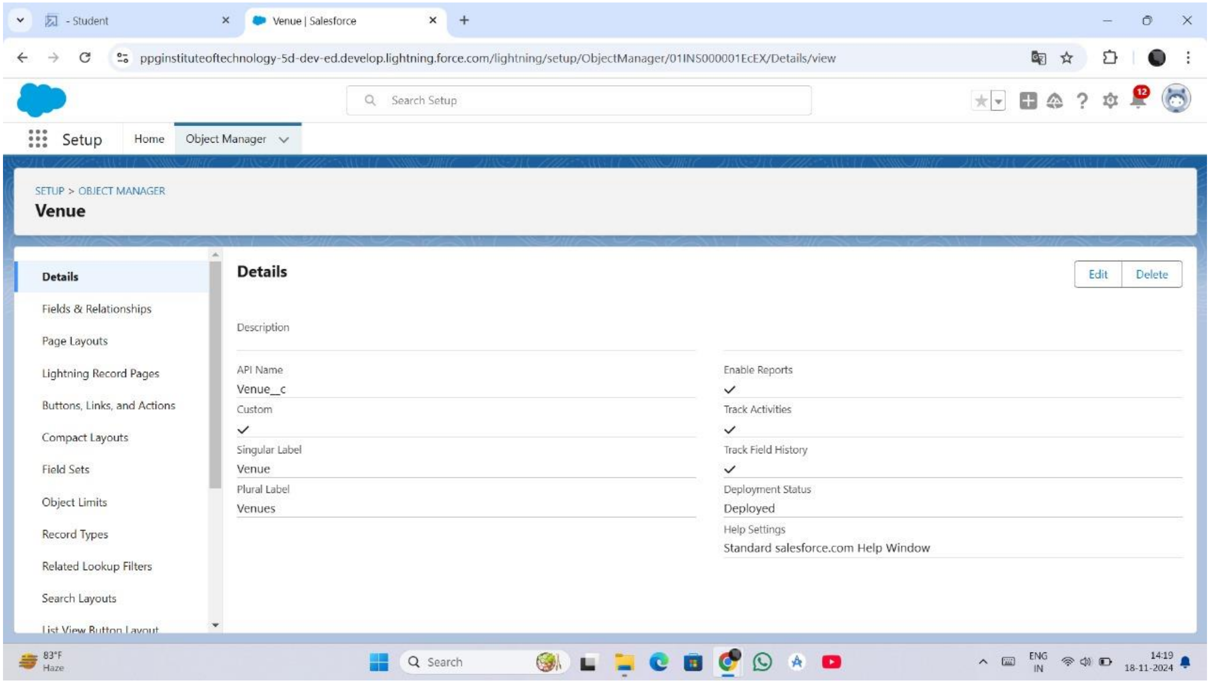
Home Page:



Milestone 2- Object :

For the **"To Supply Leftover Food to the Poor"** project, we use custom objects in Salesforce to manage the data effectively. Below are the steps to create and configure the required objects for the project.

1.Venue Object:

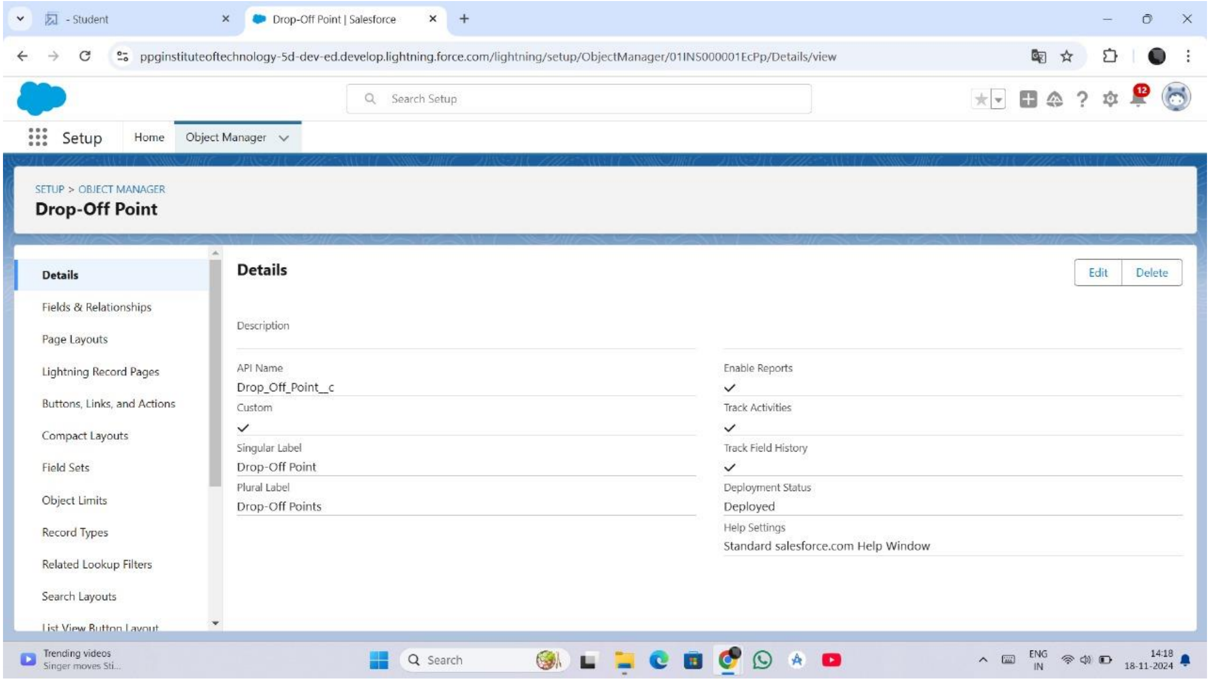


The **Venue Object** stores information about the locations providing leftover food, such as restaurants or event spaces. This object includes fields like:

- **Venue Name**: The name of the food donor.
- **Address**: Location of the venue.
- **Contact Information**: Point of contact for coordination.

By creating this object, we centralize details about food sources, making it easier to track and manage donors.

2. Drop-Off Point Object:



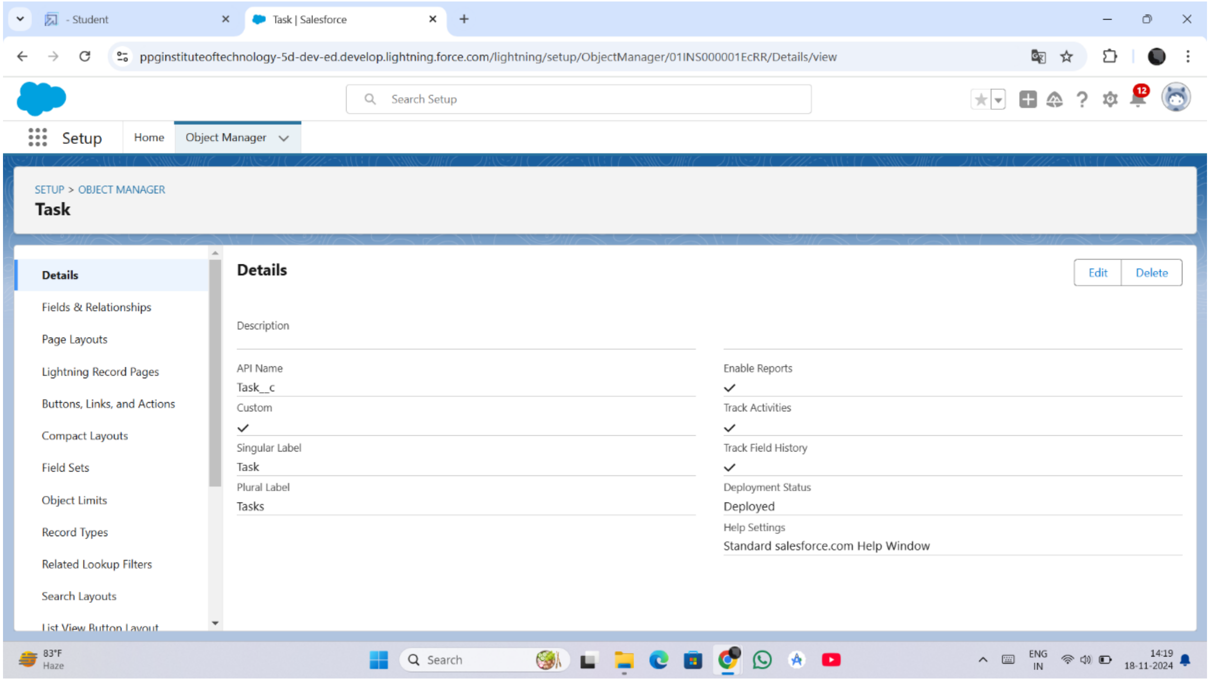
The **Drop-Off Point Object** represents locations where food will be delivered for further distribution to the needy. It includes fields such as:

- **Location**: Address or area of the drop-off point.
- **Capacity**: Amount of food it can accommodate.
- **Contact Details**: To manage logistics at the drop-off point.

3. Task:

The **Task Object** is used to manage actions required in the project, such as food pickup, delivery, and coordination activities. Fields like:

- **Task Name**: Title of the task (e.g., "Food Pickup from Venue A").
- **Assigned To**: Volunteer or team handling the task.
- **Deadline**: To track task completion timelines.

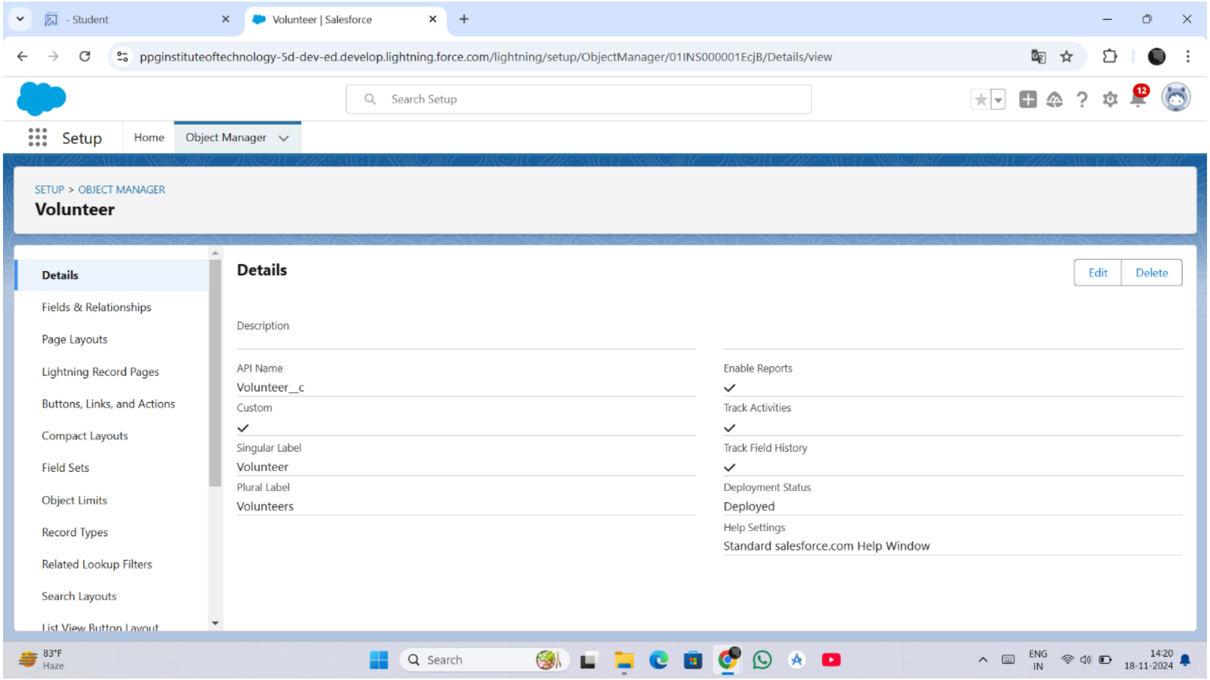


4. Volunteer Object

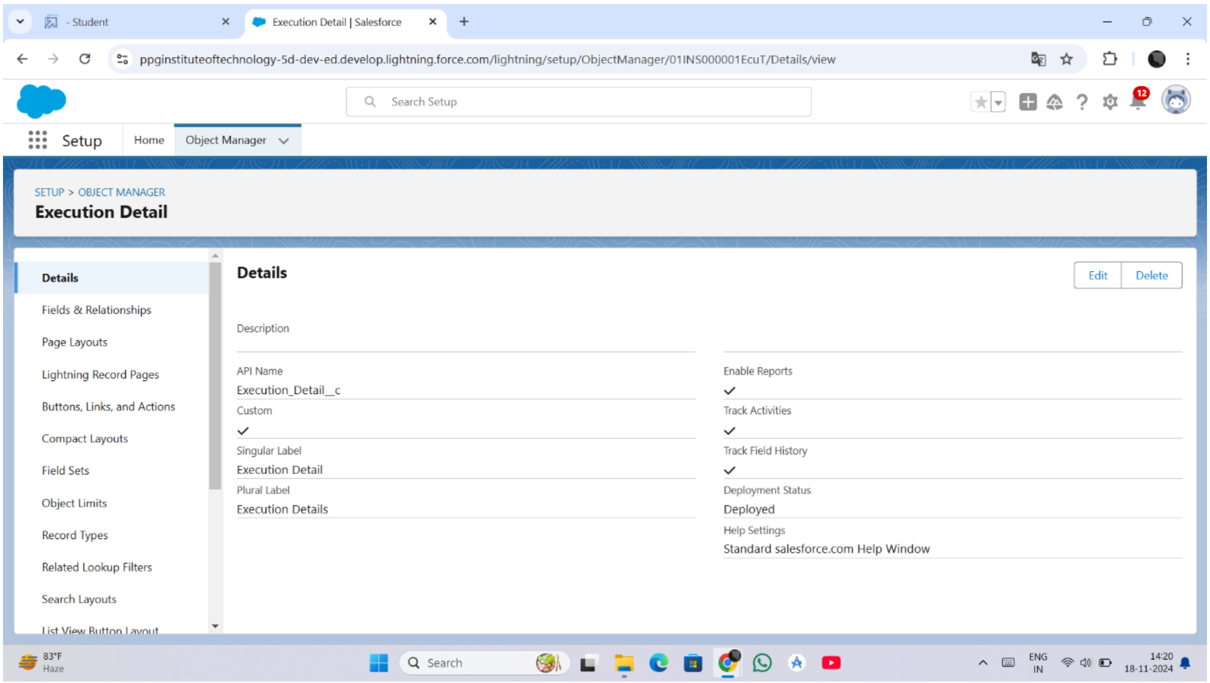
The **Volunteer Object** keeps details about the individuals participating in the project. Key fields include:

- **Name**: Name of the volunteer.
- **Contact Number and Email**: For communication purposes.
- **Availability**: To assign tasks based on their schedule.
- **Assigned Tasks**: Tasks linked to the volunteer.

This object streamlines volunteer management and enables efficient task assignment.



5. Execution Detail Object



The **Execution Detail Object** tracks the progress and completion of activities, ensuring transparency and accountability. It includes fields such as:

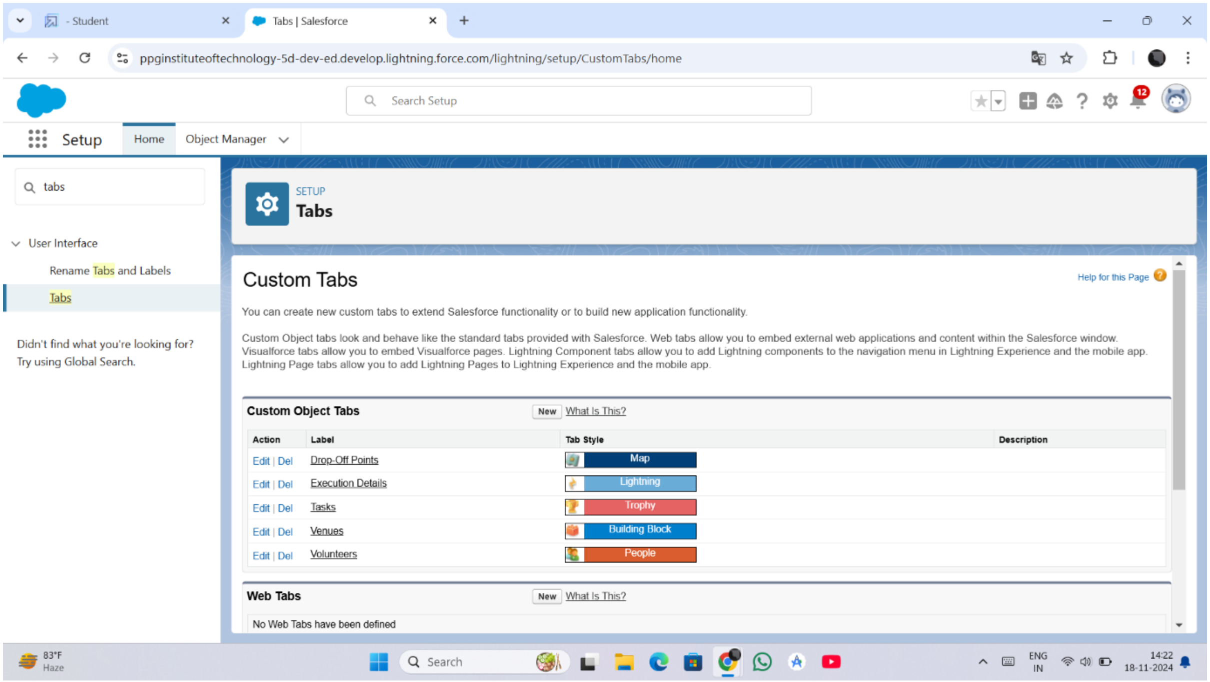
- **Execution ID**: Unique identifier for each execution instance.
- **Venue and Volunteer**: Details about the source and person responsible.

- **Drop-Off Point**: Delivery location.
- **Completion Status**: Indicates whether the activity is complete.
- **Date & Time**: Timestamp for better tracking.

This object provides a comprehensive overview of the project's execution and helps monitor its success.

Milestone 3 :Tab Creation in Salesforce:

Tabs in Salesforce provide a user-friendly way to access and interact with data stored in custom objects. For the **"To Supply Leftover Food to the Poor"** project, we create custom tabs for each object to simplify navigation and data management.



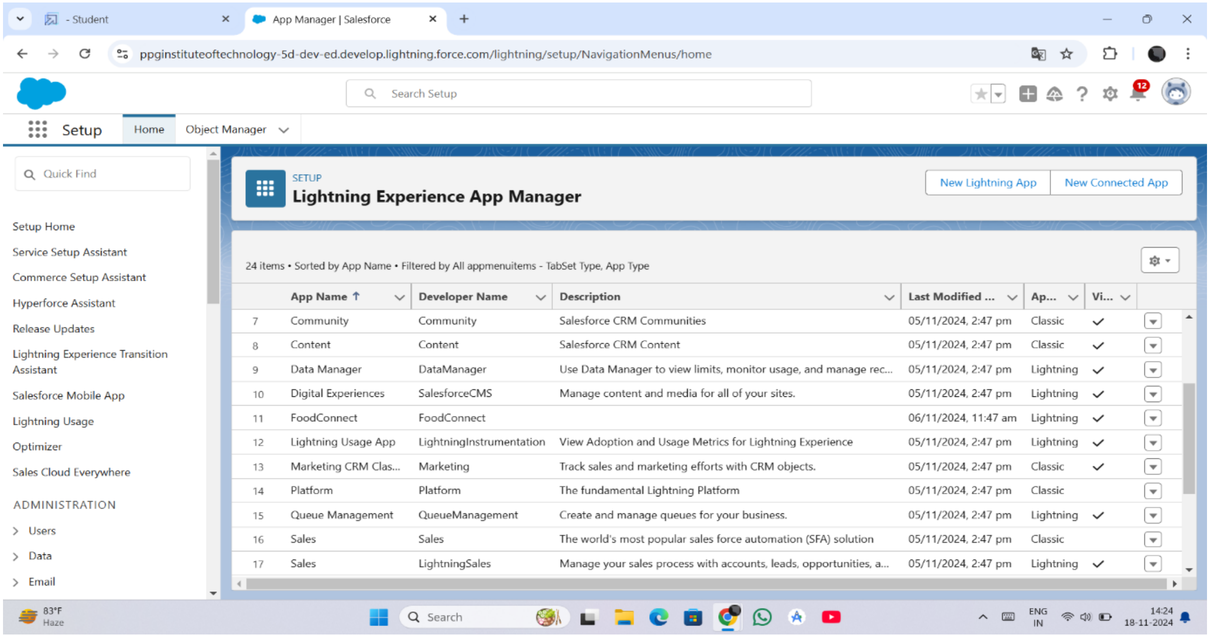
Creating Tabs for All Objects

- **Venue Tab**: Provides access to details of all venues donating food.
- **Drop-Off Point Tab**: Displays information about food distribution points.
- **Task Tab**: Allows users to view and manage all assigned tasks.
- **Volunteer Tab**: Centralized location for managing volunteer data.

- **Execution Detail Tab**: Shows the execution history and progress of the project activities.

Milestone 4: Creating a Lightning App and Lightning App Page:

In Salesforce, Lightning Apps enhance the user experience by providing an intuitive interface to manage data and processes. For the **"To Supply Leftover Food to the Poor"** project, we will create a custom Lightning App and a Lightning App Page to centralize operations.



Create a Lightning App

Step 1: Navigate to App Manager

1. Log in to Salesforce and go to **Setup**.
2. In the **Quick Find** box, search for **App Manager** and select it.

Step 2: Create a New Lightning App

1. Click the **New Lightning App** button in the App Manager.
2. Enter the following details:

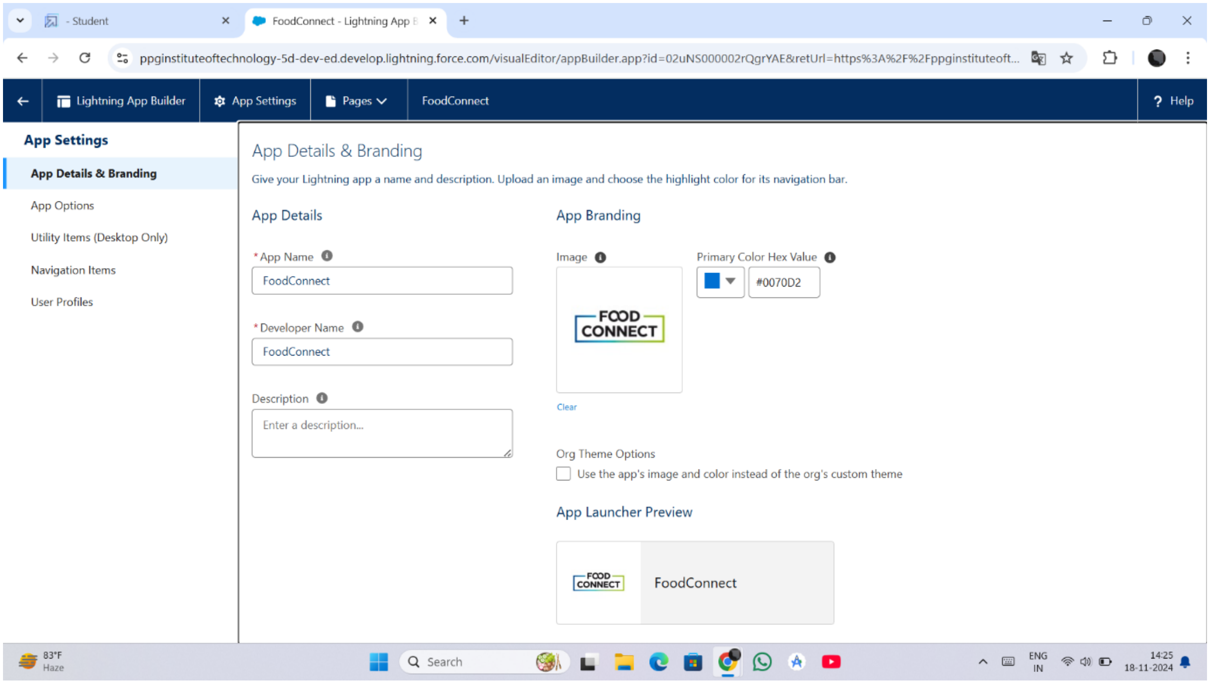
- **App Name**: To Supply Leftover Food to Poor

- **Developer Name**: Automatically populated, or enter a unique identifier.

Description: A platform to manage leftover food collection and distribution

Milestone 4: Create a Lightning App Page:

A Lightning App Page organizes essential data and components for streamlined workflows.



Step 1: Navigate to App Builder

1. From **Setup**, search for **Lightning App Builder** in the **Quick Find** box.
2. Click **New** and select **App Page** as the type of Lightning page.

Step 2: Design the Layout

1. Choose a layout template for the app page, such as:
   - **Single Region**: For a simple page.
   - **Two or Three Columns**: To display multiple components side by side.
2. Click **Next** to proceed.

Step 3: Add Components to the Page

1. Drag and drop components into the layout. Include:

- **Tabs or Lists**: For objects like Venues, Drop-Off Points, etc.
- **Charts and Dashboards**: To display reports on food collected and distributed.
- **Record Details**: To view detailed information for selected records.

2. Customize each component's settings to display relevant data.

Step 4: Save and Activate the Page

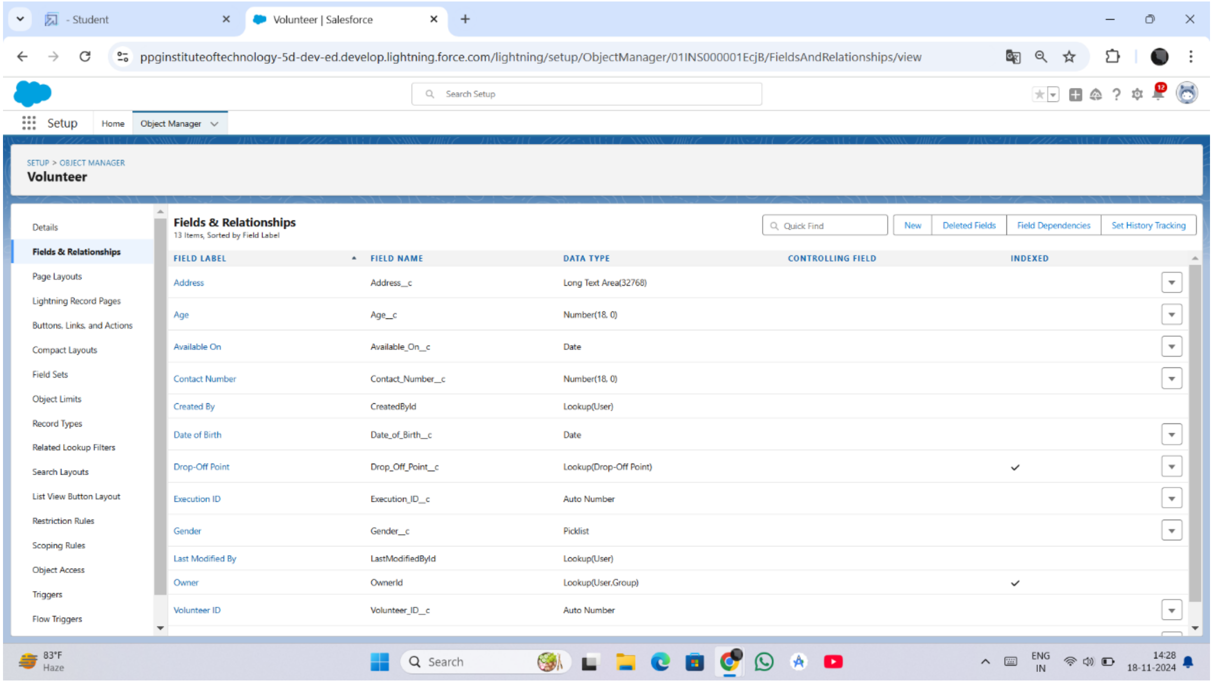
1. Save the app page and click **Activate**.
2. Assign the page to a specific app or make it the default home page for selected profiles.

Milestone 5: **Creation of Relationship Fields in Objects.**

Relationship fields in Salesforce are used to establish connections between objects, enabling seamless data integration and better data management. For the **"To Supply Leftover Food to the Poor"** project, various relationship fields are created to link objects effectively. Below are the steps for each relationship creation:

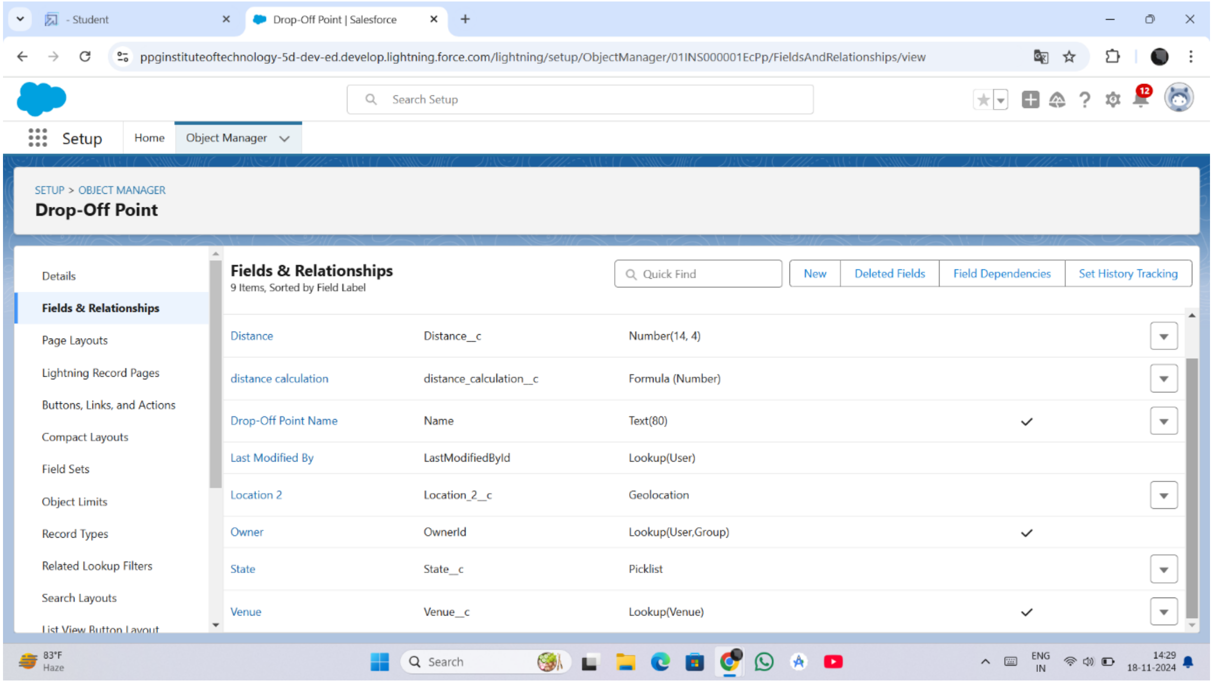
1. Creation of Master-Detail Relationship Field on Volunteer Object

1. Go to **Setup** and click **Object Manager**.
2. Search for **Volunteer** in the search bar and select the object.
3. Click on **Fields & Relationships**, then click **New**.
4. Select **Master-Detail Relationship** and click **Next**.
5. Choose the related object **Drop-Off Point** and click **Next**.
6. Enter the following details:
   - **Field Name**: Drop_Off_Point
   - **Field Label**: Auto-generated.
7. Click **Next >> Next >> Save**.



2. Creation of Master-Detail Relationship Field on Execution Details Object (Volunteer)

1. Go to **Setup** and click **Object Manager**.
2. Search for **Execution Details** in the search bar and select the object.
3. Click on **Fields & Relationships**, then click **New**.
4. Select **Master-Detail Relationship** and click **Next**.
5. Choose the related object **Volunteer** and click **Next**.
6. Enter the following details:
   - **Field Name**: Volunteer
   - **Field Label**: Auto-generated.
7. Click **Next >> Next >> Save**.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Drop-Off Point | Salesforce
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Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout
Fields & Relationships
9 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
Distance Distance__c Number(14, 4)
distance calculation distance_calculation__c Formula (Number)
Drop-Off Point Name Name Text(80)
Last Modified By LastModifiedById Lookup(User)
Location 2 Location_2__c Geolocation
Owner OwnerId Lookup(User,Group)
State State__c Picklist
Venue Venue__c Lookup(Venue)
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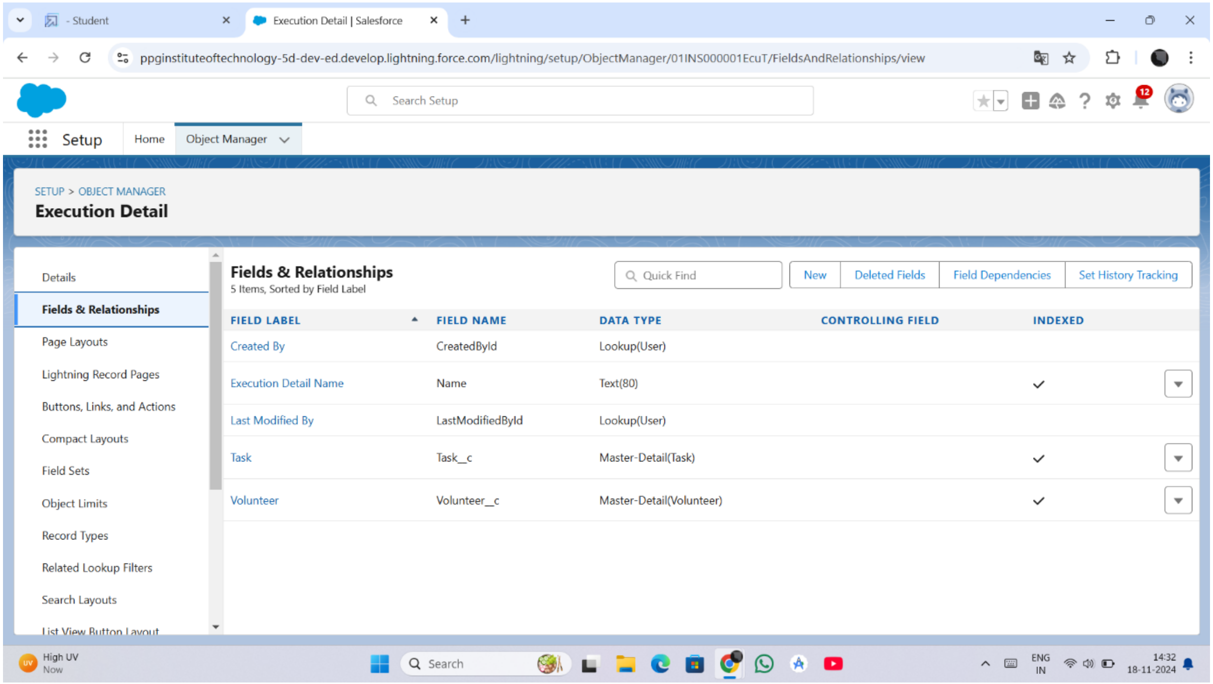
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Compact Layouts
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Record Types
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Search Layouts
List View Button Layout
Fields & Relationships
5 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL FIELD NAME DATA TYPE CONTROLLING FIELD INDEXED
Created By CreatedById Lookup(User)
Execution Detail Name Name Text(80)
Last Modified By LastModifiedById Lookup(User)
Task Task__c Master-Detail(Task)
Volunteer Volunteer__c Master-Detail(Volunteer)
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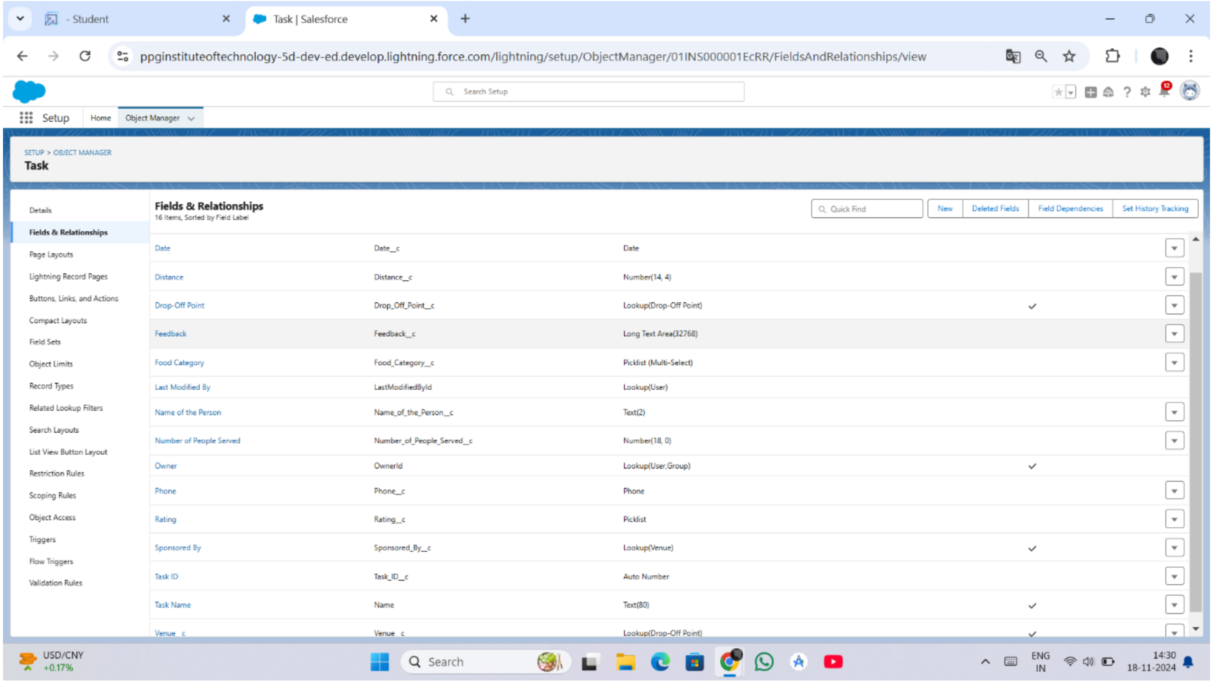
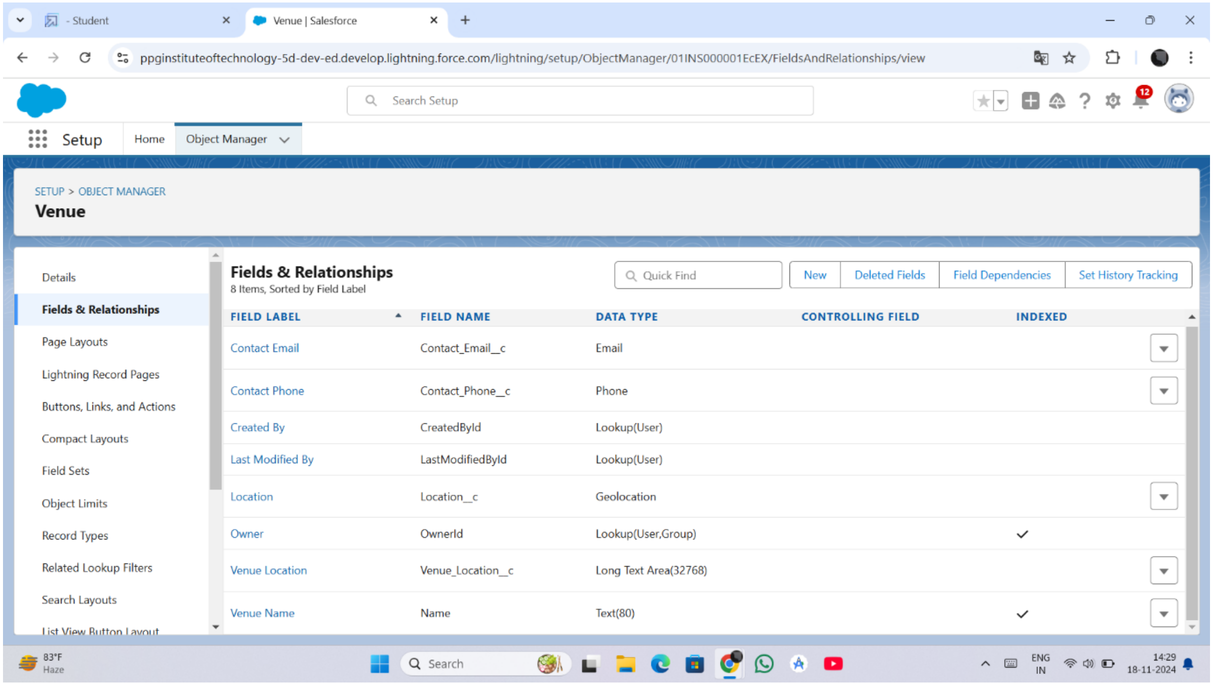




Milestone 6: Creation of a Flow to Create a Record in the Venue Object.

Flows in Salesforce provide a user-friendly way to automate processes without extensive coding. For the **"To Supply Leftover Food to the Poor"** project, we will create a flow that allows users to create a new record in the **Venue** object. This ensures data entry is streamlined and consistent.

Steps to Create the Flow

Step 1: Navigate to Flow Builder

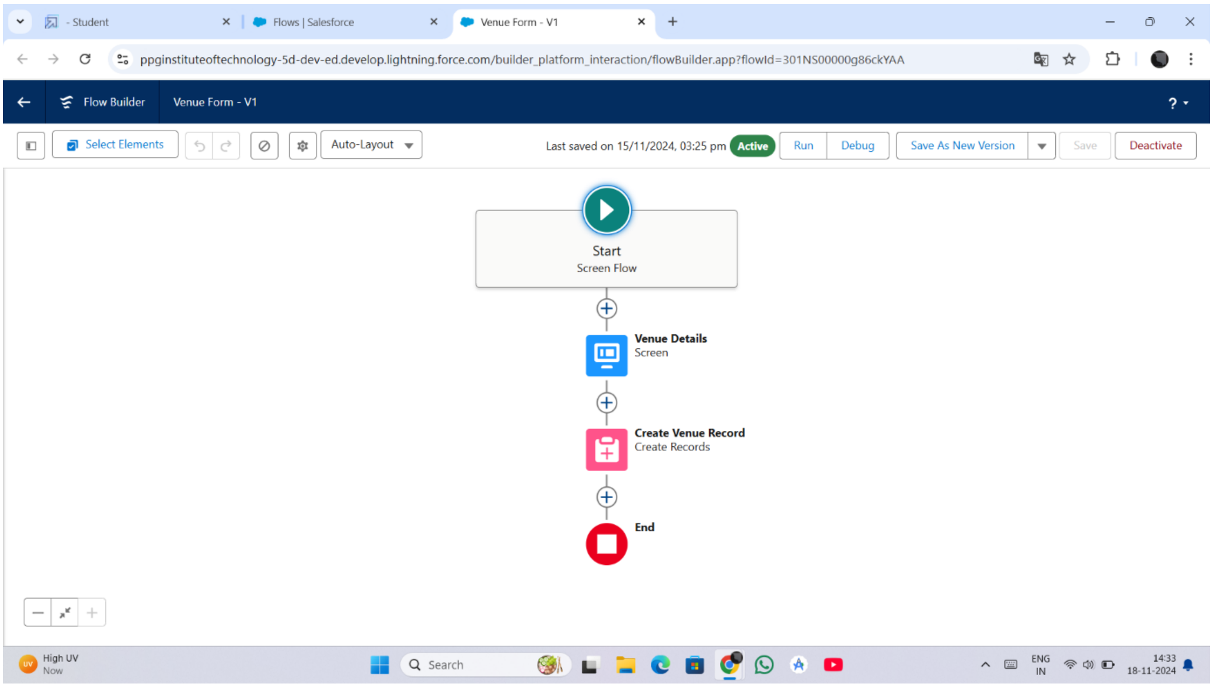
1. Log in to your Salesforce Developer account.
2. Go to **Setup**, and in the **Quick Find** box, search for **Flows**.
3. Click **Flows** under **Process Automation** and then click **New Flow**.

Step 2: Select Flow Type

1. Choose **Screen Flow** to create an interactive flow for users.
2. Click **Create** to open the Flow Builder.

Step 3: Add a Screen Element

1. Drag the **Screen** element from the toolbox onto the canvas.
2. Configure the screen to collect data for the **Venue** object:
   - Add fields for **Venue Name**, **Address**, **Contact Number**, and any other required fields.
   - Use components like **Text**, **Phone**, or **Email** based on the field types.
3. Provide a name for the screen, e.g., **Enter Venue Details**, and click **Done**.



Step 4: Add a Create Records Element

- Drag the **Create Records** element onto the canvas, following the screen element.
- Configure the **Create Records** element:
    - **Label**: Create Venue Record.
    - **Create a Record For**: Select **Venue**.
    - **How to Set Record Fields**: Choose **Use separate resources and literal values**.
- Map the inputs from the screen to the Venue object fields. For example:
    - **Venue Name** → Screen Input: Venue Name
    - **Address** → Screen Input: Address
    - **Contact Number** → Screen Input: Contact Number
- Click **Done**.

Step 5: Connect Elements

1. Connect the **Start** element to the **Screen** element.
2. Connect the **Screen** element to the **Create Records** element.

Step 6: Save and Activate the Flow

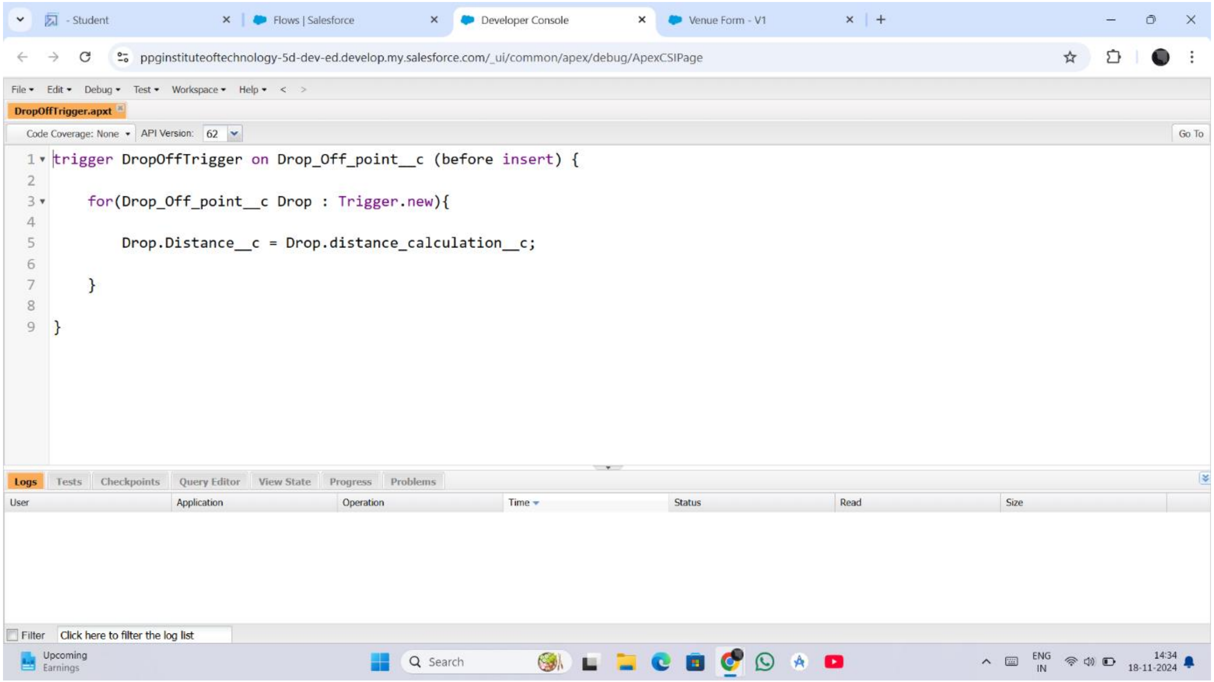
1. Click **Save** and provide a name for the flow, e.g., **Create Venue Record Flow**.
2. Click **Activate** to make the flow available for use.

Milestone 7: Creation of a Trigger in Salesforce

A **trigger** in Salesforce is an Apex script that executes before or after specific events occur on a record. For the **"To Supply Leftover Food to the Poor"** project, we will create a trigger to automate actions based on operations performed on an object.

(This Trigger is to assign Distance field to the Distance Calculation field. So that we can assign the distance in the sharing rules.)

```
trigger DropOffTrigger on Drop_Off_point__c (before insert) {
   for(Drop_Off_point__c Drop : Trigger.new){
      Drop.Distance__c = Drop.distance_calculation__c;
   }
}
```



Explanation:

- The above example ensures that the **Contact Number** field is not left blank when creating or updating a Venue record.
- Use **Trigger.new** to access the new values of the record.

Step 5: Save and Test the Trigger

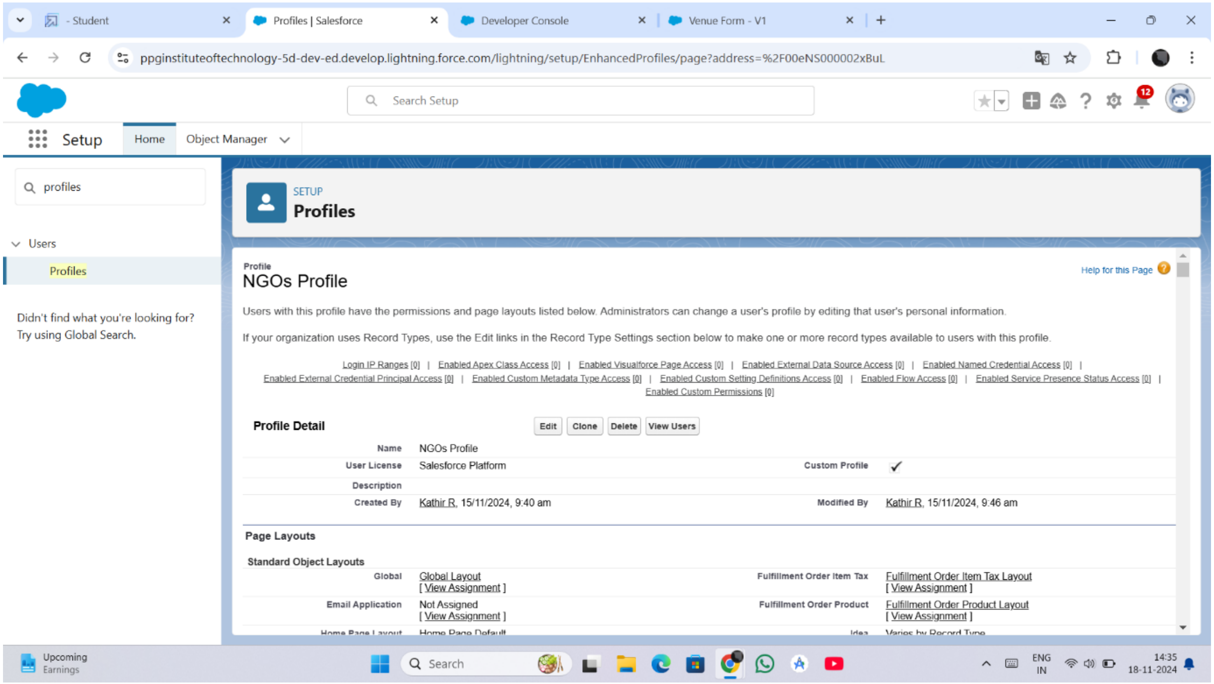
1. Save the trigger in the Developer Console.
2. Navigate to the **Venue** object (or the selected object) and try creating or updating a record to test the trigger's functionality.

Milestone 8: Creation of Profiles in Salesforce

Profiles in Salesforce are used to define the level of access and permissions a user has for data and features. For the **"To Supply Leftover Food to the Poor"** project, we will create a custom profile for NGOs to manage their activities efficiently while ensuring data security and access control.

1. Creation of User 1 (NGO Manager)

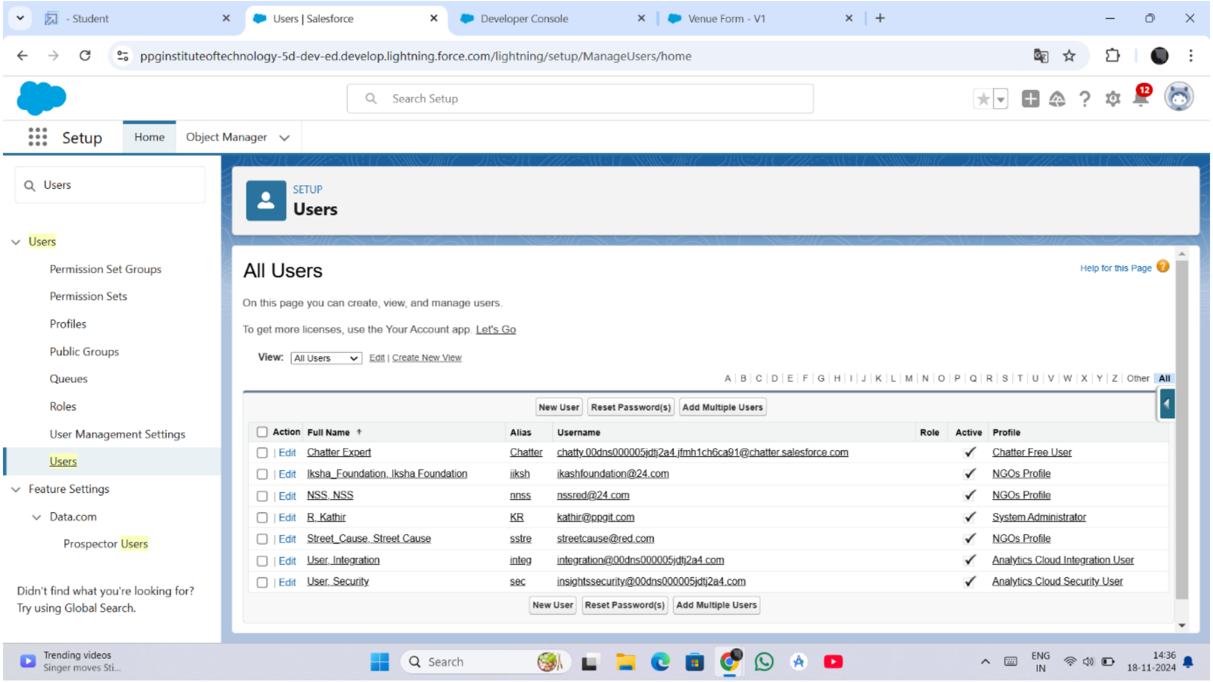
1. On the **Users** page, click **New User**.
2. Creating a NGOs Profile by cloing the standard user.
3. Click Save.



Milestone 9: Creation of Users

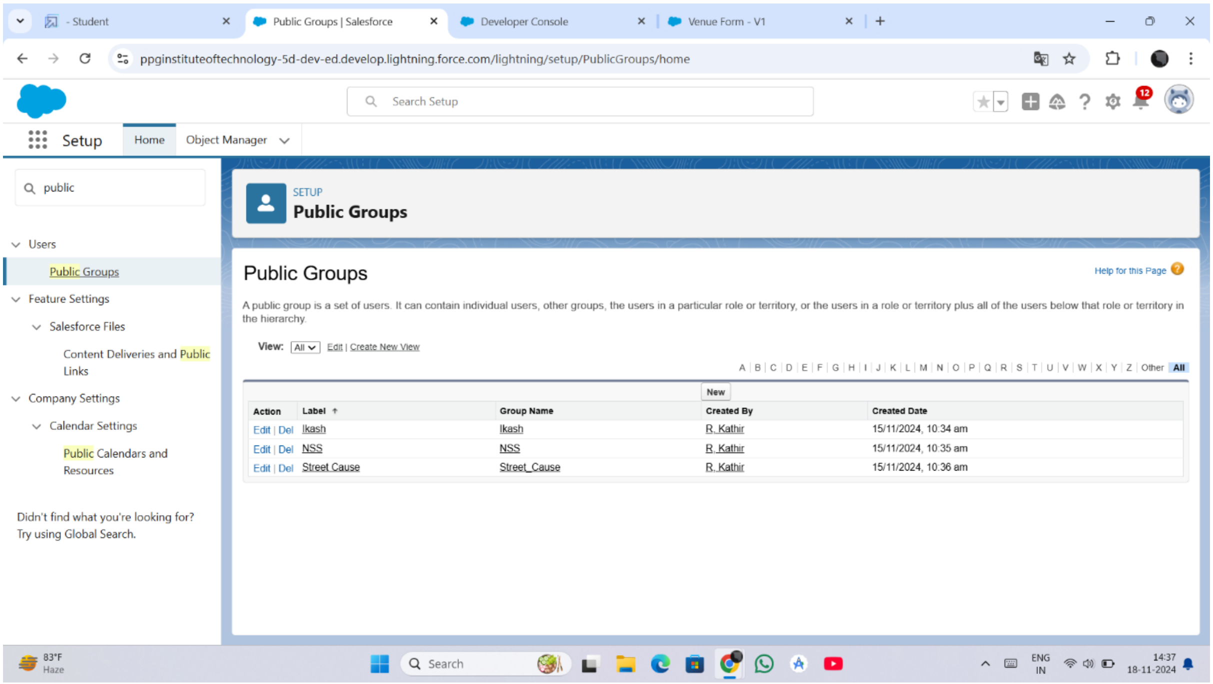
Creation of users in Salesforce involves setting up individual user accounts with specific roles, permissions, and profiles that align with the goals and structure of the project. It ensures that members of your team or stakeholders have access to the Salesforce platform with the appropriate level of access to perform their tasks. For a project like an NGO management system, this process is critical for defining access and responsibilities.

1. Created custom profiles such as Donor Manager and Volunteer Manager.
2. Assigned permissions for accessing, editing, or viewing specific objects.



Milestone 10: Public Groups

Purpose: This group is intended for NGO Managers who oversee the overall operation of food distribution.



Milestone 11: Report Types

In Salesforce, **Report Types** define the structure and data relationships available for generating reports. For the **"To Supply Leftover Food to the Poor"** project, creating custom report types helps in analyzing critical data such as Venue details, Task assignments, and Volunteer performance.

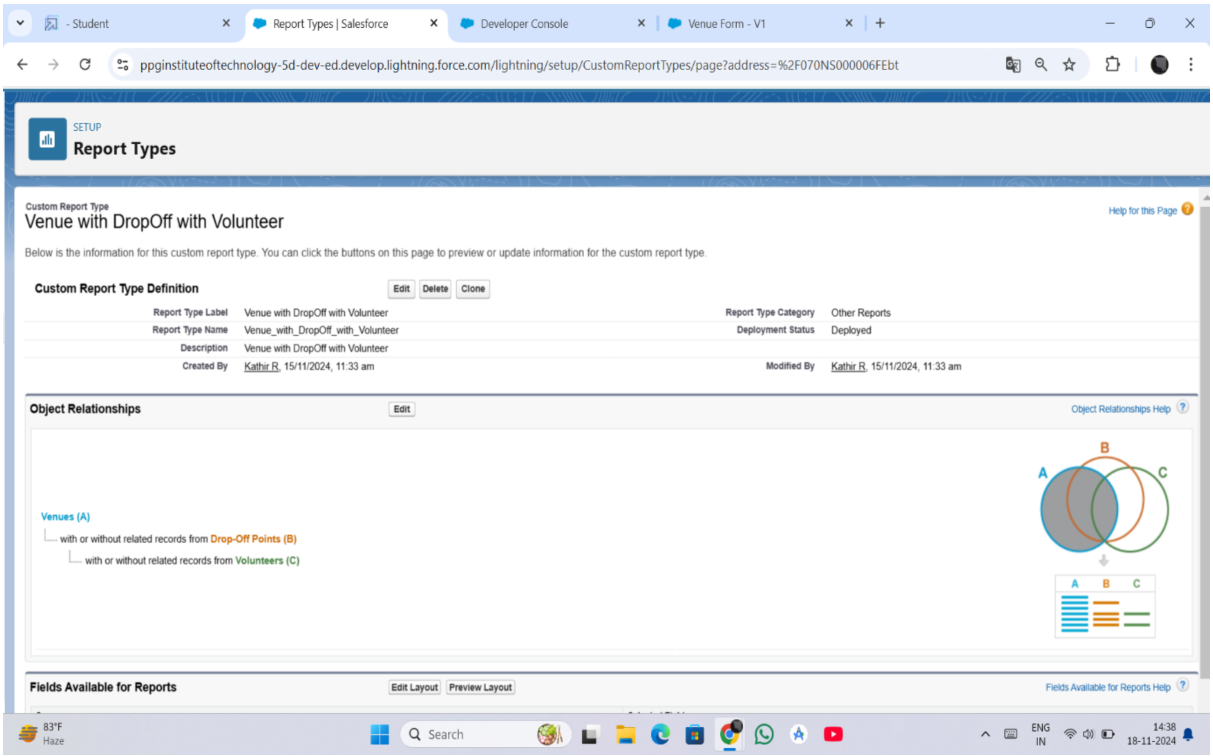
Steps to Create Report Types

Step 1: Navigate to Report Types

1. Log in to Salesforce and go to the **Setup** page.
2. In the **Quick Find** bar, type **Report Types** and select **Report Types** from the results.

Step 2: Click on New Custom Report Type

1. Click the **New Custom Report Type** button.



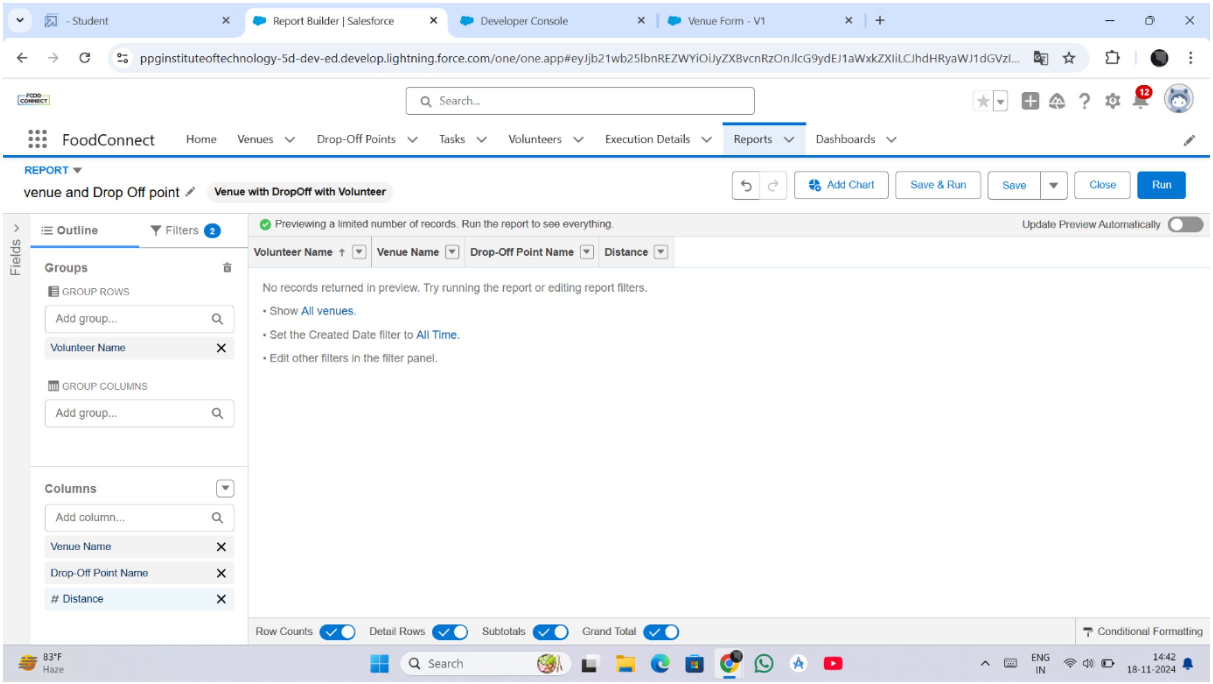
Step 3: Define the Report Type Details

1. **Primary Object**: Select the primary object for the report (e.g., **Venue**, **Task**, **Volunteer**).
2. **Report Type Label**: Enter a descriptive name for the report type (e.g., **Venue and Drop-Off Points Report**).
3. **Report Type Name**: Automatically generated based on the label.

Milestone 12: Reports

Activity 1: Creation of Reports: Venue with Drop-Off Point and Volunteer.

Reports in Salesforce help visualize and analyze data effectively. For the **"To Supply Leftover Food to the Poor"** project, a report combining Venue, Drop-Off Point, and Volunteer data provides insights into the food distribution network and volunteer participation.



Steps to Create the Report:

Step 1: Navigate to Report Types

3. Log in to Salesforce and go to the **Setup** page.
4. In the **Quick Find** bar, type **Report Types** and select **Report Types** from the results.

Step 2: Click on New Custom Report Type

2. Click the **New Custom Report Type** button.

Step 3: Define the Report Type Details

4. **Primary Object**: Select the primary object for the report (e.g., **Venue**, **Task**, **Volunteer**).
5. **Report Type Label**: Enter a descriptive name for the report type (e.g., **Venue and Drop-Off Points Report**).
6. **Report Type Name**: Automatically generated based on the label.
7. **Description**: Enter a brief description of the report type's purpose (e.g., "Tracks venue details and associated drop-off points").
8. **Store in Category**: Choose the category where the report type will be saved (e.g., Other Reports).
9. **Deployment Status**: Set the status to **Deployed** to make the report type available for use.
10. Click **Next**.

Step 4: Define Object Relationships

1. **Add Related Objects**:

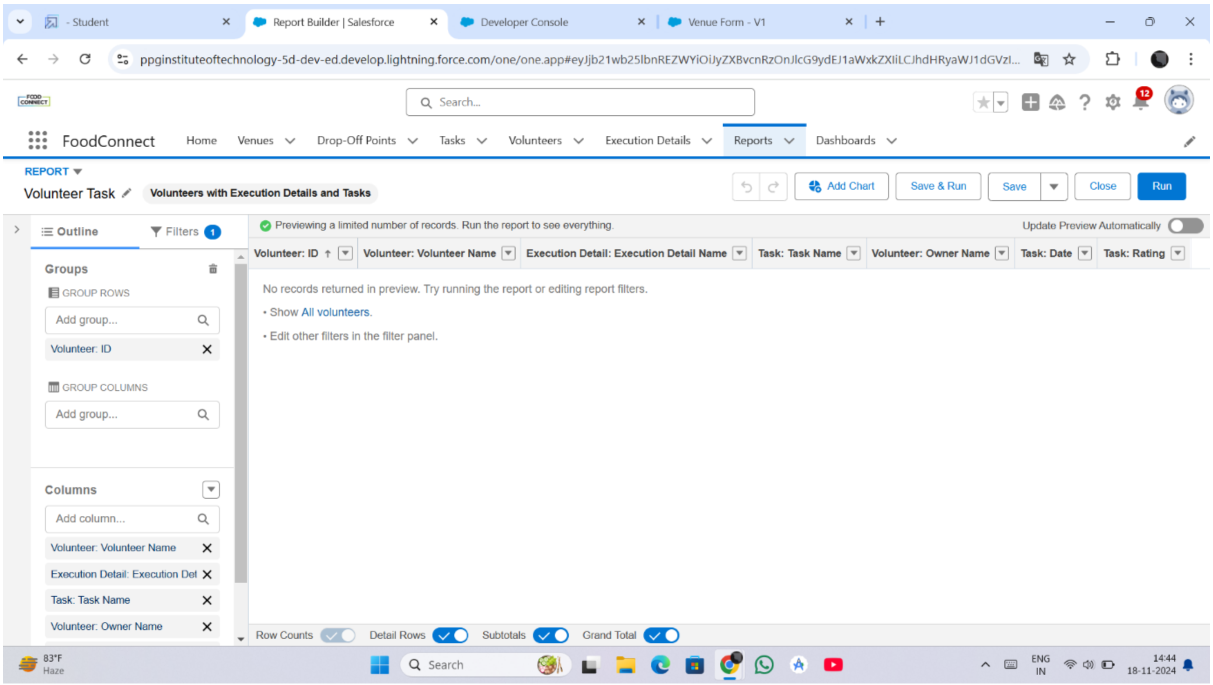
- Select related objects to include additional data in the report. For example:
  - **Venue** (Primary Object) with **Drop-Off Point** (Related Object).
- Define the relationship type (e.g., "Each A may or may not have related B").

2. Click **Save**.

Activity 2:

Creation of Report: Volunteers with Execution Details and Tasks

In the **"To Supply Leftover Food to the Poor"** project, creating a report that combines Volunteer data with Execution Details and Tasks helps in tracking volunteer activities, task progress, and execution outcomes.



Steps to Create the Report:

Step 1: Navigate to the Reports Tab

1. Log in to Salesforce.
2. Click on the **App Launcher** and select **Reports**.
3. In the Reports page, click **New Report**.

Step 2: Select a Report Type

1. In the **Choose Report Type** window:
   - Search for and select the **Venue with Drop-Off Point and Volunteer** report type.
   - Click **Continue**.

Step 3: Configure the Report

1. **Add Filters**:
   - Set the filters to include relevant data:
     - **Status**: Active
     - **Date**: Select a date range to filter data (e.g., Current Month).
2. **Add Columns**:
   - Include the following columns to display key data:
     - **Venue Name**
     - **Drop-Off Point Location**
     - **Volunteer Name**
     - **Task Description**
     - **Task Status**
3. **Group Data**:
   - Group the report by **Venue Name** to categorize data by venue.

4. **Sort Data**:
    - Sort the report by **Task Status** or **Drop-Off Point Location** as needed.

Step 4: Save and Run the Report

1. Click **Save & Run** to generate the report.
2. Enter report details:
    - **Report Name**: Venue with Drop-Off Point and Volunteer
    - **Description**: Tracks venues, drop-off locations, and volunteer participation for food distribution.
    - **Folder**: Save the report in a shared folder for access by team members.

Milestone 13: Dashboards

Activity 1: Steps to Add Venue and Drop-Off Point Report to the Dashboard

A Dashboard refers to a visual interface or a consolidated page within the **FoodConnect** application that presents data and reports in an organized and interactive manner. It is designed to help users analyze key metrics, track performance, and make data-driven decisions effectively.

In the **"Food Connect"** project, adding a **Venue and Drop-Off Point Report** to a Salesforce Dashboard enables project stakeholders to have a visual and real-time overview of the distribution venues and drop-off points. This helps in tracking the status and improving the operational efficiency of the food distribution process.

1. Navigate to Dashboards:

- Open the **FoodConnect app**.

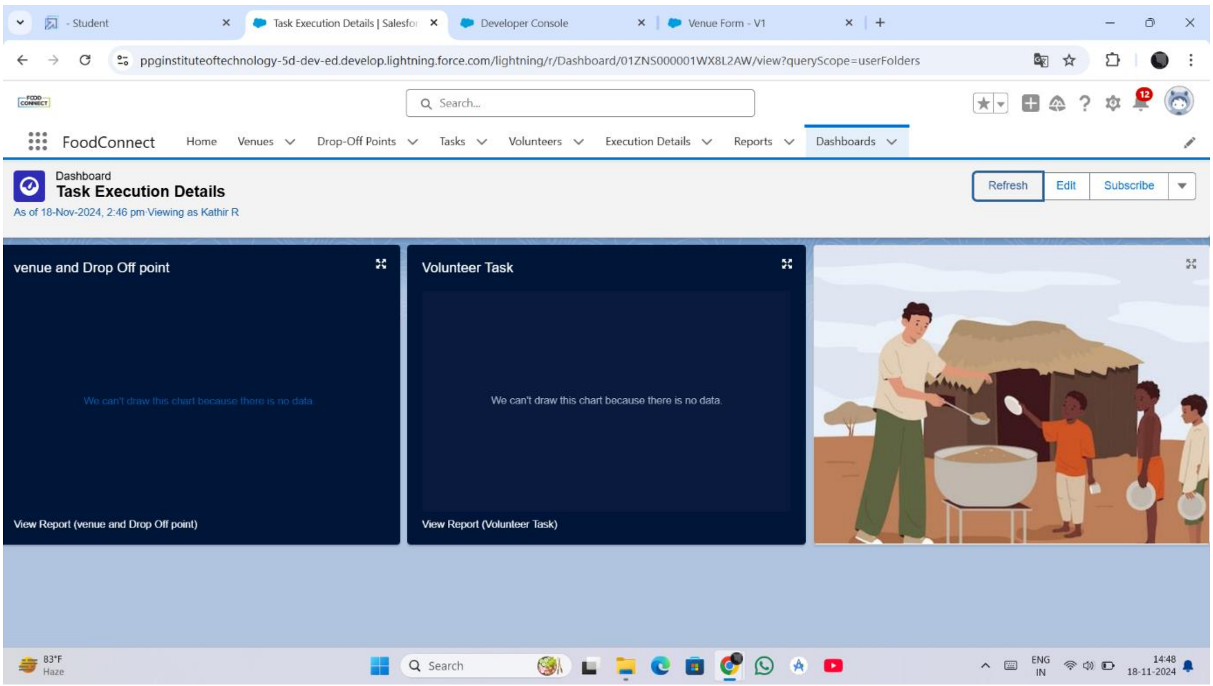
- Click on the **Dashboards** tab.

2. Create a New Folder:

- Click **New Folder**.
- Enter the following details:
- **Folder Label**: Custom Dashboards
- **Folder Unique Name**: *(Auto-populated)*
- Save the folder.

3. Create a New Dashboard:

  - Open the newly created **Custom Dashboards** folder.
  - Click **New Dashboard**.
  - Enter the following details:
    - **Name**: Organization Details
  - Save the dashboard.

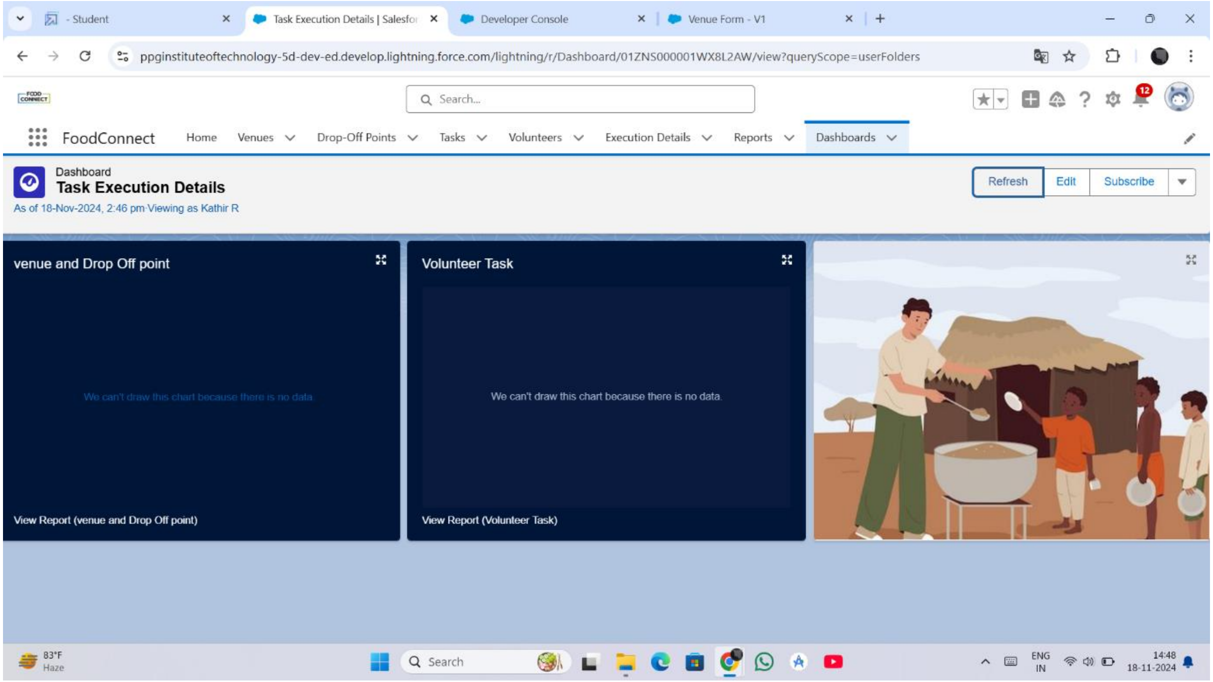


Adding Volunteer Task Report to the Dashboard

To provide an overview of volunteer tasks and their progress, you can add the **Volunteer Task Report** to the Salesforce dashboard.

Adding a Picture to the Dashboard (Optional)

Visual elements such as logos or project-related images can be added to dashboards for a more engaging user experience.



Milestone 14: Sharing Rules

Sharing Rules Configuration for Drop-Off Points.

Sharing rules define the level of data access across users and groups. In the **"FoodConnect"** project, sharing rules ensure that relevant stakeholders have access to important records.

To configure sharing rules for Drop-Off Points based on distance criteria, ensuring that specific data is shared with appropriate public groups in alignment with access requirements.

Rule 1:

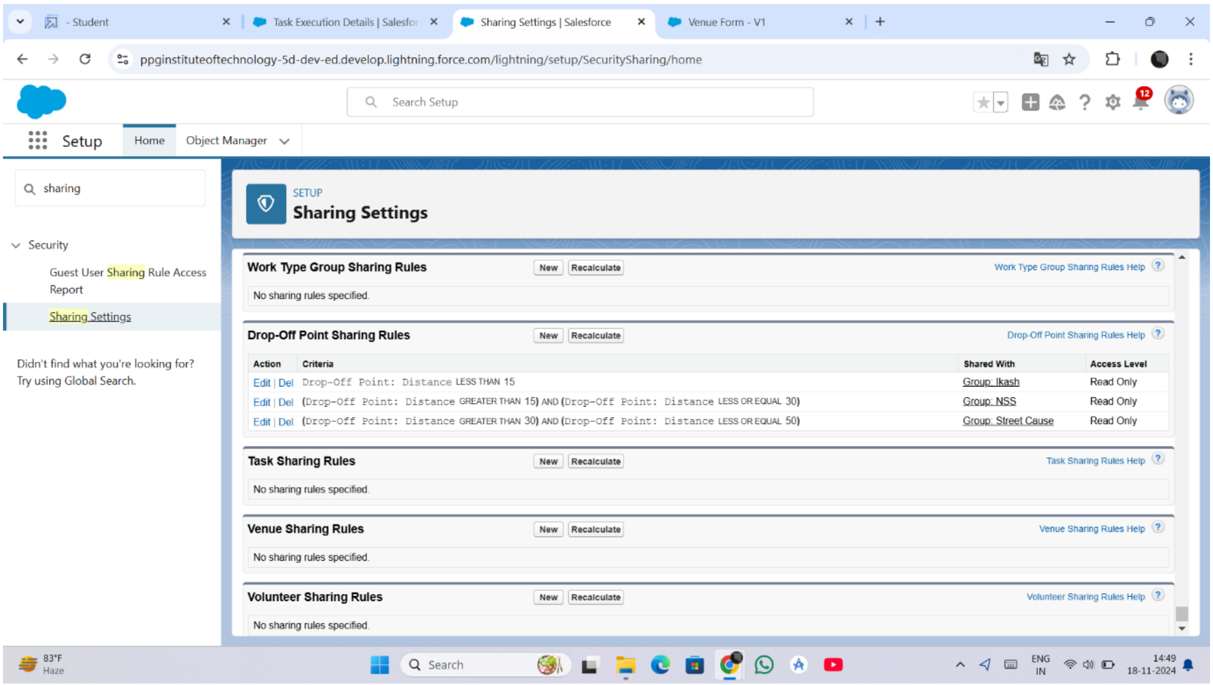
- **Label**: Rule 1
- **Rule Name**: Rule_1
- **Type**: Based on Criteria
- **Records to be Shared**:
  - **Field**: Distance
  - **Operator**: Less Than
  - **Value**: 15
- **Users to Share With**:
  - **Public Group**: Iksha
- **Action**: Saved successfully.

Rule 2:

- **Label**: Rule 2
- **Rule Name**: Rule_2
- **Type**: Based on Criteria
- **Records to be Shared**:
  - **Field**: Distance
  - **Operator**: Greater Than
  - **Value**: 15
  - **Field**: Distance
  - **Operator**: Less or Equal
  - **Value**: 30
- **Users to Share With**:
  - **Public Group**: NSS
- **Action**: Saved successfully.

Rule 3:

- **Label**: Rule 3
- **Rule Name**: Rule_3
- **Type**: Based on Criteria
- **Records to be Shared**:
    - **Field**: Distance
    - **Operator**: Greater Than
    - **Value**: 30
    - **Field**: Distance
    - **Operator**: Less or Equal
    - **Value**: 50
- **Users to Share With**:
    - **Public Group**: Street Cause
- **Action**: Saved successfully.

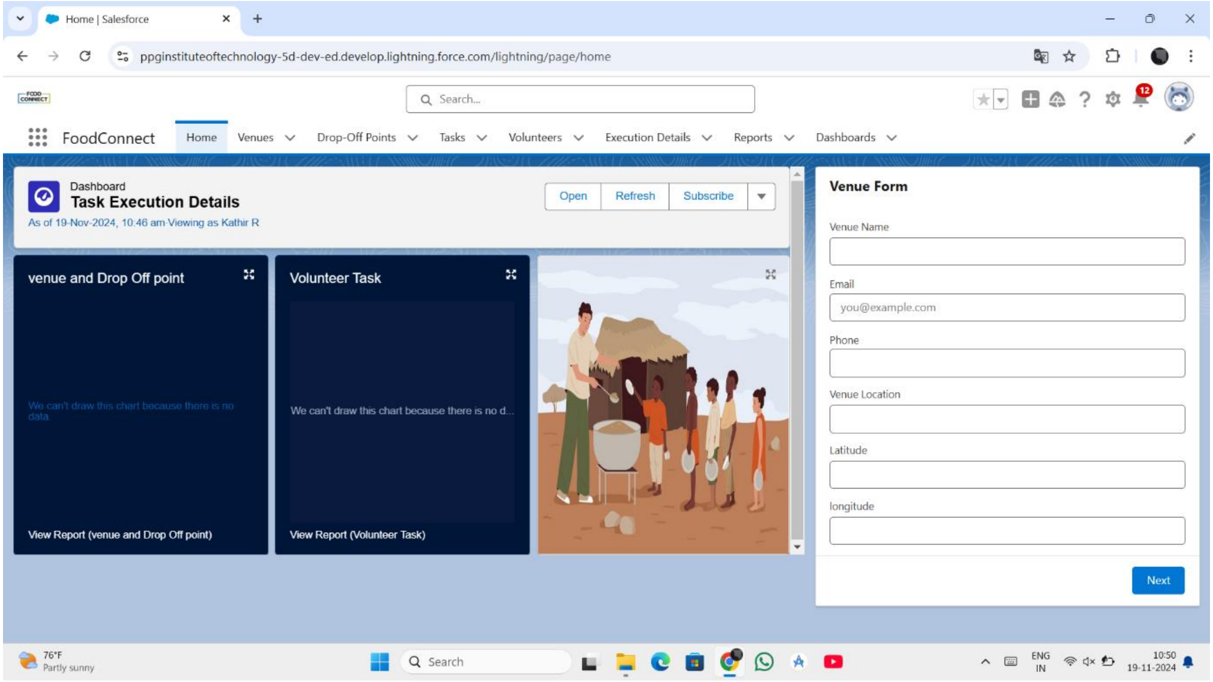


Milestone 15: Home Page

Creation of Home Page:

Customizing the home page in Salesforce helps to display relevant information for users, ensuring that they can quickly access the data they need.

To create and configure a custom Home Page in the FoodConnect application using Salesforce's Lightning App Builder. The page will include key components such as a Flow and a Dashboard to enhance the user interface and functionality.



Steps:

1. Go to **Setup** and search for **App Builder**.
2. Select **New** to create a new **Home Page**.
3. Choose a **Page Layout**.
4. **Add Components**: Drag and drop components such as:
    - Reports (e.g., Volunteer Task Report)
    - Charts

- News (for project updates)
- Recent Records (e.g., Task Status or Volunteer Assignments)

5. Customize the layout as per the user's role or function (NGO Managers, Volunteers, etc.).

Milestone 16: 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 to beneficiaries, the project effectively addressed food insecurity while maximizing the utilization of available resources.