

# To Supply Leftover food to Poor

## 1. Project Overview

This project aims to address the critical challenge of food wastage by establishing a system that allows for the efficient donation and distribution of leftover food to those in need. The solution will leverage Salesforce's robust platform, including its custom objects, process automation tools, and user-friendly interfaces to create an effective way for organizations, restaurants, and food banks to manage food donations. The primary goal is to enhance the operational efficiency of food donations, improve tracking, and ultimately increase the amount of food distributed to the poor, aligning with the organization's goal to reduce hunger and minimize waste.

## 2. Objectives

### Business Goals:

- **Food Donation Tracking:** Efficiently track and manage food donations to ensure that the food reaches the intended recipients.
- **Volunteer Management:** Organize volunteers for food pickup, distribution, and outreach.
- **Collaboration with Local Food Banks:** Facilitate partnerships with local food banks and organizations to ensure seamless distribution of food.
- **Reporting and Analytics:** Provide real-time data to assess the success of food distribution efforts, identifying trends and areas for improvement.

### Specific Outcomes:

- Develop a user-friendly system for recording food donations, including quantity, type of food, and expiration dates.
- Create a dashboard to visualize donation and distribution data.
- Automate notifications for food pickup and delivery schedules.
- Set up user roles for donors, volunteers, and food bank staff to ensure proper access and security.

## 3. Salesforce Key Features and Concepts Utilized

- **Custom Objects:**
  - Create custom objects to track food donations, including fields for donor information, food categories, expiration dates, pickup locations, and delivery

locations.

- **Process Automation (Flow Builder & Process Builder):**
  - Automate workflows for notifying food banks, volunteers, or food donors when food donations are received or ready for distribution.
- **Reports and Dashboards:**
  - Use Salesforce's reporting capabilities to create custom reports and dashboards for tracking food distribution, volunteer engagement, and donor activity.
- **Salesforce Communities:**
  - Implement a Salesforce Community portal for food donors, volunteers, and food bank staff to collaborate and manage their involvement.
- **Apex Triggers and Classes:**
  - Utilize Apex for advanced functionality such as automating complex business rules around food expiration, or verifying food quality checks before distribution.
- **Data Validation:**
  - Create validation rules to ensure that only usable food donations are logged, with checks on expiration dates, quantities, and types of food.

## 4. Detailed Steps to Solution Design

### Step 1: Data Modeling

- **Custom Objects:**
  - **Food Donation Object:** Stores details such as food type, quantity, expiration date, and donor information.
  - **Volunteer Object:** Captures details about each volunteer, including contact info and availability.
  - **Pickup Schedule Object:** Tracks pickup and delivery dates, volunteer assignments, and food bank details.
- **Relationships:**
  - **Food Donation to Volunteer:** One-to-many relationship to track which volunteers are assigned to specific food donations.
  - **Food Donation to Food Bank:** Many-to-many relationship to link food donations with one or more food banks.

### Step 2: User Interface Design

- **Food Donation Form:** A user-friendly form for food donors to easily log their donations.
- **Volunteer Dashboard:** Allows volunteers to view upcoming pickup schedules and

available donations for distribution.

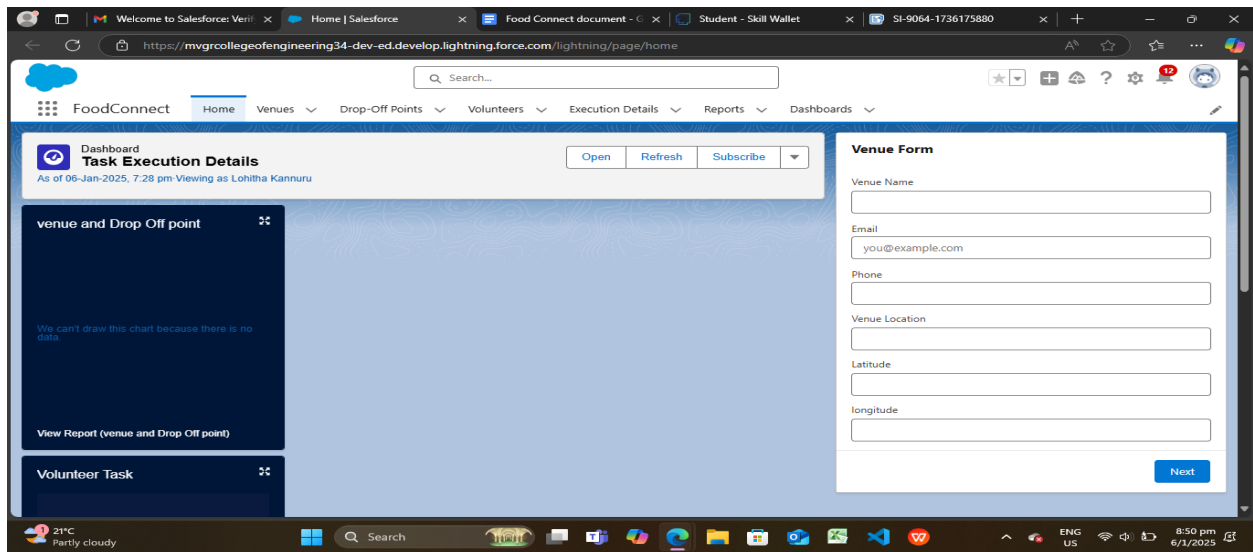
- **Admin Dashboard:** Displays key metrics like the total food donated, food distribution by region, volunteer engagement, etc.

### Step 3: Business Logic

- **Automated Notifications:** Set up automation using Process Builder to notify volunteers when they have an assigned pickup or when food is ready for distribution.
- **Expiration Date Alerts:** Use Flows to alert admins when food donations near their expiration date, ensuring only fresh food is distributed.

### Step 4: Security Model

- Implement user profiles with specific permissions (e.g., food donor, volunteer, food bank staff) to control access to sensitive data.



Browser tabs: Inbox (27) - Iohithakannuru, Home | Salesforce, Profiles | Salesforce, Student - Skill Wallet, SI-9064-1736175880

URL: <https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/setup/EnhancedProfiles/home>

Setup | Home | Object Manager

Search Setup

profiles

Users

Profiles

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

SETUP Profiles

Profiles

All Profiles | Edit | Delete | Create New View

New Profile

Action	Profile Name	User License	Custom
<a href="#">Edit</a>   <a href="#">Delete</a>	NGOs Profile	Salesforce Platform	✓

1-1 of 1 | 0 Selected | < Previous Next >

Page 1 of 1

Browser tabs: Inbox (27) - Iohithakannuru, Recently Viewed | Venues | S, Profiles | Salesforce, Student - Skill Wallet, SI-9064-1736175880

URL: [https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/o/Venue\\_\\_c/list?filterName=\\_\\_Recent](https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/o/Venue__c/list?filterName=__Recent)

FoodConnect | Home | Venues | Drop-Off Points | Volunteers | Execution Details | Reports | Dashboards

Search...

Venues

Recently Viewed

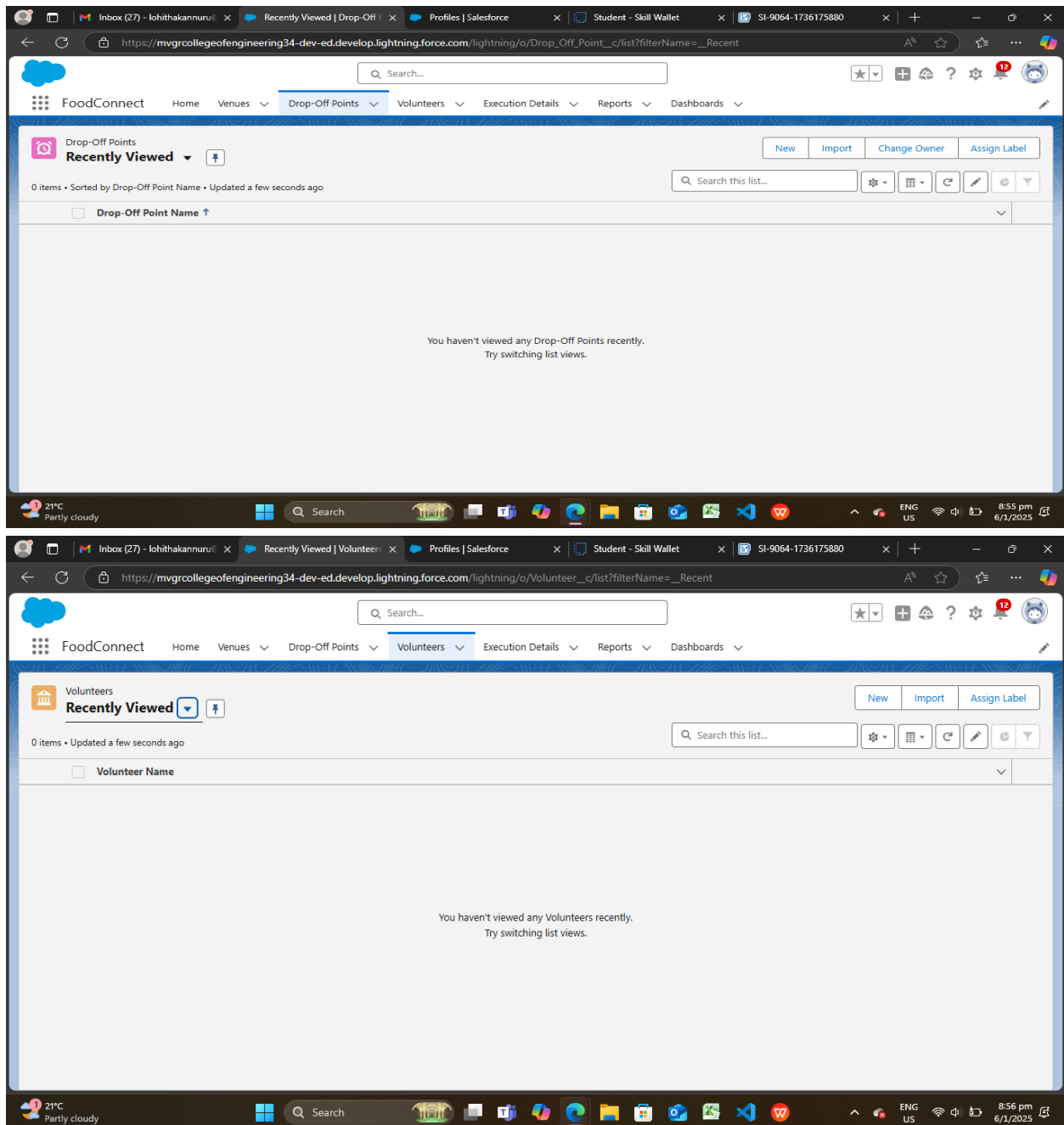
New | Import | Change Owner | Assign Label

0 items • Updated a few seconds ago

Search this list...

Venue Name

You haven't viewed any Venues recently. Try switching list views.



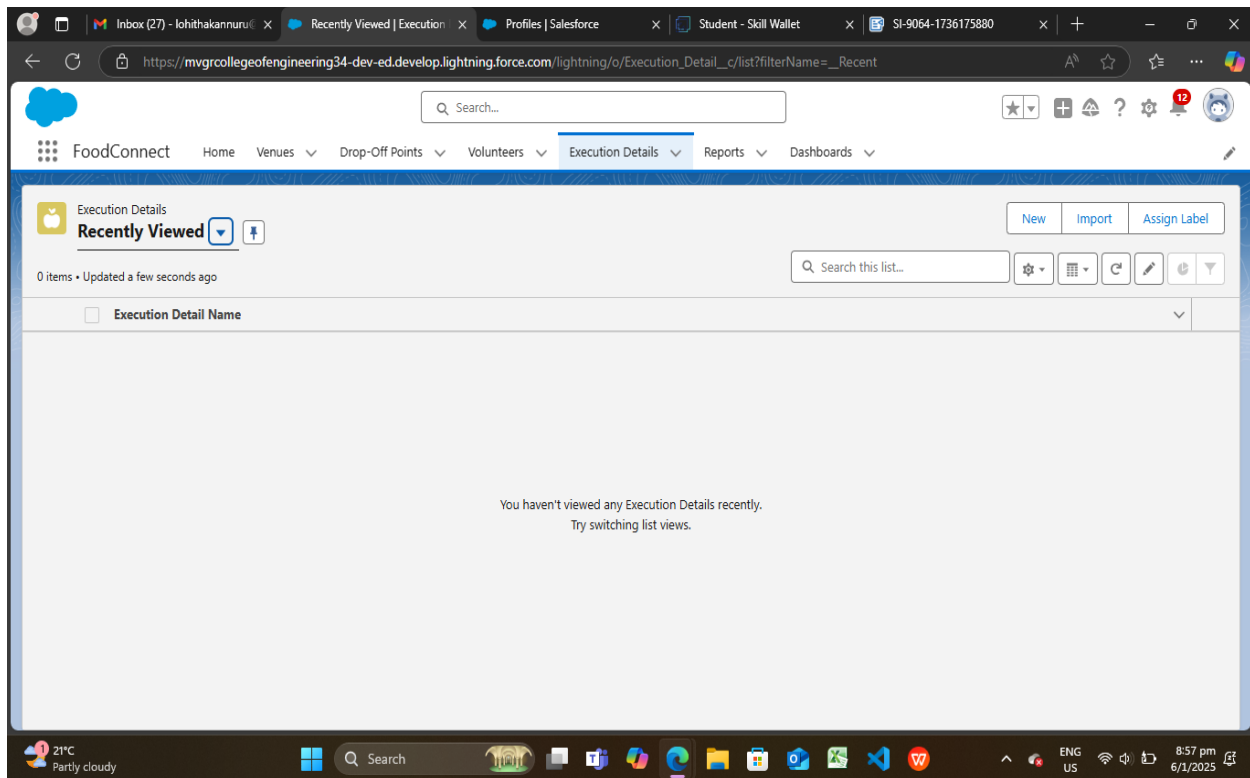
The image displays two screenshots of the FoodConnect application interface, showing the 'Drop-Off Points' and 'Volunteers' sections respectively. Both sections are currently empty, displaying '0 items' and a message: 'You haven't viewed any Drop-Off Points recently. Try switching list views.' (or 'Volunteers' in the second screenshot).

The interface includes a navigation bar with the following tabs: Home, Venues, Drop-Off Points, Volunteers, Execution Details, Reports, and Dashboards. The 'Drop-Off Points' section is active in the top screenshot, and the 'Volunteers' section is active in the bottom screenshot.

The browser address bar shows the URL: `https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/o/Drop_Off_Point_c/list?filterName=__Recent` (or `Volunteer_c` in the second screenshot).

The system tray at the bottom indicates the date as 6/1/2025 and the time as 8:56 pm.

## 5. Testing and Validation



## Unit Testing (Apex Classes, Triggers):

- **Test Data Creation:** Develop test classes to simulate donations, volunteer assignments, and food distribution processes.
- **Trigger Testing:** Validate that triggers are firing as expected, such as alerts for expired food or automated pickup scheduling.

## User Interface Testing:

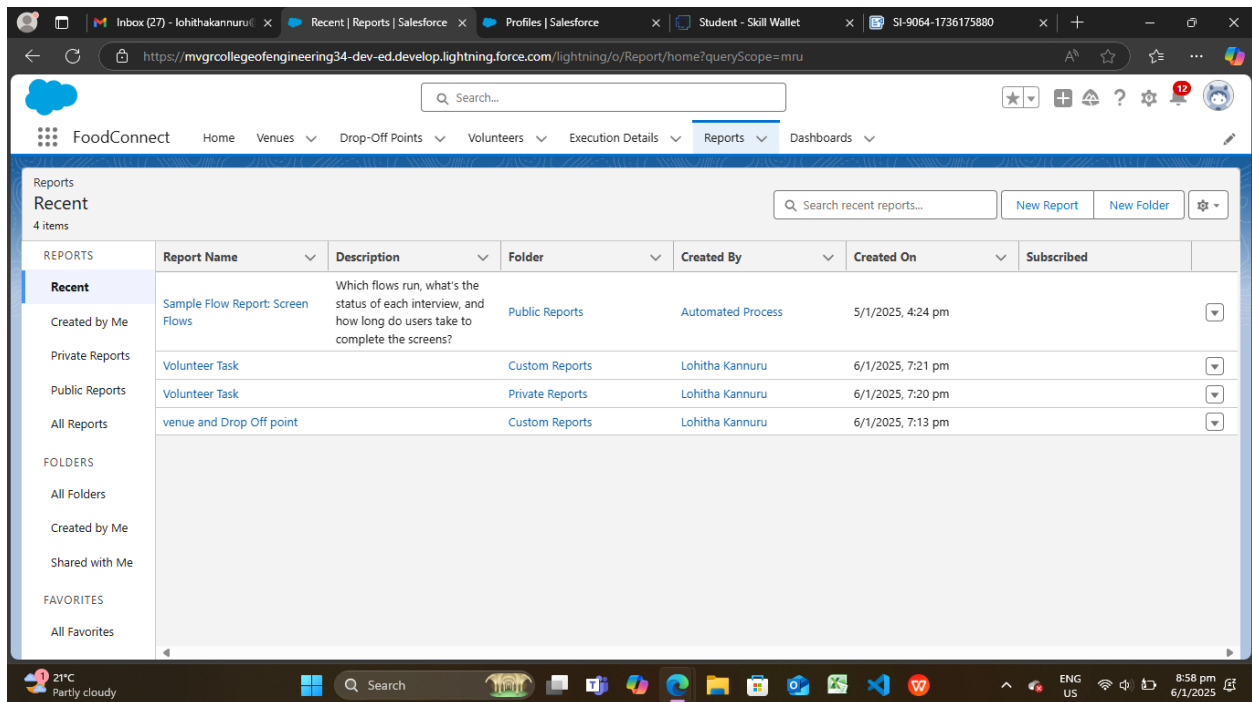
- **Donor Interface:** Test the donation form to ensure data is accurately recorded and that validation rules are working.
- **Volunteer Interface:** Test the volunteer dashboard to ensure volunteers can view upcoming pickup assignments and log their actions.

## Integration Testing:

- Ensure that data flows seamlessly between different objects (e.g., donations being linked to food banks and volunteers).

## 6. Key Scenarios Addressed by Salesforce in the Implementation Project

- **Scenario 1: Donation Logging**
  - A donor logs a new donation. The system records the donation details, checks the expiration date, and stores the data.
- **Scenario 2: Volunteer Assignment**
  - A volunteer is automatically assigned to a food donation based on availability and proximity to the food bank. They receive an email notification.
- **Scenario 3: Pickup Scheduling**
  - A food bank admin sets a pickup schedule, which automatically generates a task for a volunteer. The system tracks the pickup date and notifies both the volunteer and food bank.
- **Scenario 4: Reporting & Analytics**
  - The admin generates a report showing total donations by category or the number of volunteers engaged in a certain time period. Insights are used to improve distribution strategies.



Browser tabs: Inbox (27) - Iohithakannuru | Recent | Reports | Salesforce | Drop-Off Point | Salesforce | Student - Skill Wallet | SI-9064-1736175880

URL: https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01dL000003m95h/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Drop-Off Point

Details

**Fields & Relationships**  
9 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)		
distance calculation	distance_calculation__c	Formula (Number)		
Distance__c	Distance__c	Number(4, 4)		
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		

Taskbar: 21°C Partly cloudy, Search, Windows icons, ENG US, 8:59 pm 6/1/2025

Browser tabs: Inbox (27) - Iohithakannuru | Recent | Reports | Salesforce | Volunteer | Salesforce | Student - Skill Wallet | SI-9064-1736175880

URL: https://mvgrcollegeofengineering34-dev-ed.develop.lightning.force.com/lightning/setup/ObjectManager/01dL000003m9AX/FieldsAndRelationships/view

Search Setup

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Volunteer

Details

**Fields & Relationships**  
13 Items, Sorted by Field Label

Quick Find New Deleted Fields Field Dependencies Set History Tracking

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
Address	Address__c	Long Text Area(32768)		
Age	Age__c	Number(18, 0)		
Available On	Available_On__c	Date		
Contact Number	Contact_Number__c	Number(18, 0)		
Created By	CreatedById	Lookup(User)		
Date of Birth	Date_of_Birth__c	Date		
Drop-Off Point	Drop_Off_Point__c	Master-Detail(Drop-Off Point)		✓

Taskbar: 21°C Partly cloudy, Search, Windows icons, ENG US, 9:03 pm 6/1/2025



## 7. Conclusion

### Summary of Achievements:

- The project successfully implemented a comprehensive food donation management system using Salesforce, automating key processes like donation tracking, volunteer scheduling, and pickup notifications.
- Custom dashboards provide real-time insights, enabling better decision-making and resource allocation.
- Through this solution, the organization has significantly increased food distribution efficiency and helped reduce food waste, supporting the long-term goal of alleviating hunger in the community.

This Salesforce-powered solution provides a sustainable framework for organizations to streamline food donation efforts, maximize impact, and make a meaningful difference in the fight against hunger.