

FoodConnect: To Supply Leftover Food to Poor



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RAJAM

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1. Introduction

1.1 Project Overview:

FoodConnect is a Salesforce CRM application that has been developed to efficiently connect food donors to poor, then needy, communities. The system manages venues with leftover food plus allocates tasks for volunteers. It tracks drop-off points too, delivery execution details, and perceptive reports to cut food wastage while ensuring operational transparency.

1.2 Objectives:

The primary aims of FoodConnect are:

- To register venues that donate leftover food and their drop-off points.
- To make task creation for food pickup and delivery automated.
- To properly allocate volunteers to every activity according to their availability.
- To monitor the details of food pickups and deliveries correctly.
- To provide reports and dashboards to monitor operations and plan for the future.

2. Phase I: Requirement Analysis & Planning

2.1 Understanding Business Requirements:

FoodConnect meets these user requirements:

- Venues: Wish to register their excess food availability and drop-off locations with ease.
- Volunteers: Require precise task allocation with location and drop-off information.
- Admin: Needs real-time monitoring of every task and execution details for the management.
- Organisation: Requires operational information for open reporting and planning food distribution drives.

2.2 Defining Project Scope & Objectives:

The scope entails:

- Developing custom objects of Venue, Drop-Off Point, Task, Volunteer, Execution Details
- Automatically creating task record flows on venue food registration.
- Adding triggers for status changes in execution details.
- Developing reports and dashboards for task tracking and volunteer performance analysis.
- Configuring security settings with profiles, roles, and sharing rules

2.3 Design Data Model & Security Model:

Data Model: Custom objects are:

- Venue: Stores the donor venue information.
- Drop-Off Point: Stores delivery points for the distribution of food.
- Task: Symbolizes pickup and delivery tasks.
- Volunteer: Stores volunteer information and availability.

- **Execution Details:** Stores Details about the Volunteer and which task he is volunteering for.



- **Security Model:** In FoodConnect, an NGO's Profile was implemented to provide access to volunteers and coordinators belonging to various NGOs. Coordinators can manage volunteers and view all their records, whereas volunteers can view only their allocated data.
- Sharing rules were established for the Drop-off Point object by distance:
 - If the distance is less than 15 km, the records are shared with the Iksha group.
 - If the distance is between 15 km and 30 km, records are exchanged with the NSS group.
 - If the distance is between 30 km and 50 km, records are exchanged with the Street Cause group.
- This arrangement ensures that the volunteers can view only drop-off points close to them, enhancing data security and allowing them to work more efficiently.



New Profile

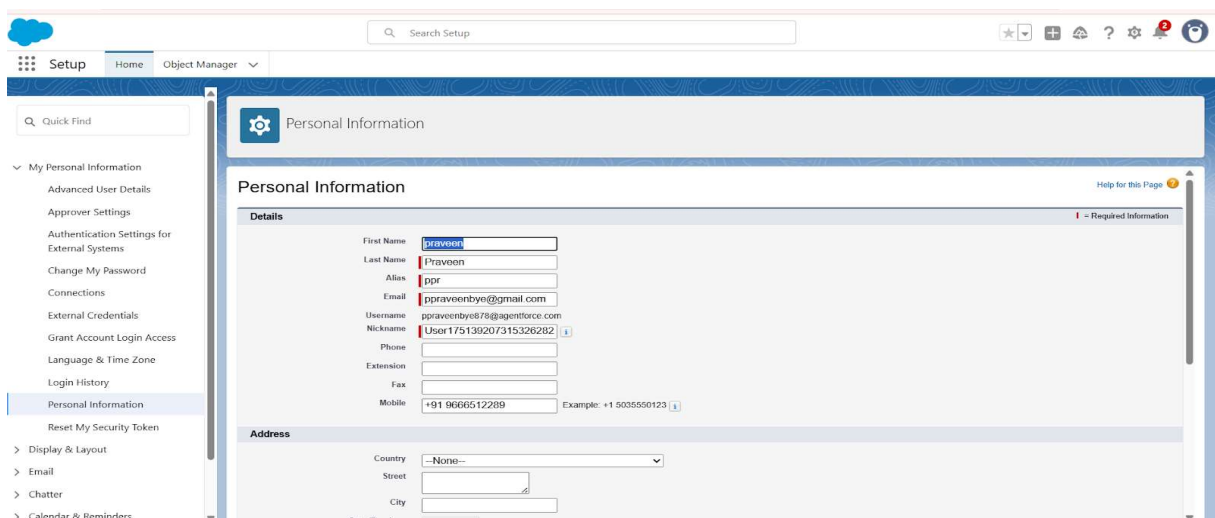


<input type="checkbox"/>	Action	Profile Name ↑	User License
<input type="checkbox"/>	Edit Del ...	NGOs Profile	Salesforce Platform

3. Phase II: Salesforce Development– Backend & Configurations

3.1 Set Environment:

- Created Salesforce Developer Org for FoodConnect implementation.



3.2 Customization of Objects and Fields:

- **Objects Created:**
 - Venue: Contact Email, Contact Phone, Location, Venue Location, Venue Name.
 - Drop-Off Point: Distance, distance calculation, Drop-Off Point Name, Location 2, State, Venue__c.
 - Task: Name of the Person, Food Category, Feedback, Number of People Served, Phone, Rating, Task ID, Task Name.
 - Volunteer: Address, Age, Available On, Contact Number, Date of Birth, Email, Execution ID, Gender, Owner Name, Volunteer ID, Volunteer Name.
 - Execution Details: Execution Detail Name, Task, Volunteer.
- **Fields:** Created fields for each object to support business logic.

SETUP > OBJECT MANAGER

Venue

Details

Fields & Relationships
8 Items, Sorted by Field Label

Q Quick Find New Deleted Fields Field Depend

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	IN
Contact Email	Contact_Email__c	Email		
Contact Phone	Contact_Phone__c	Phone		
Created By	CreatedById	Lookup(User)		
Last Modified By	LastModifiedById	Lookup(User)		
Location	Location__c	Geolocation		
Owner	OwnerId	Lookup(User,Group)		✓
Venue Location	Venue_Location__c	Long Text Area(32768)		
Venue Name	Name	Text(80)		✓

Page Layouts

Lightning Record Pages

Buttons, Links, and Actions

Compact Layouts

Field Sets

Object Limits

Record Types

Related Lookup Filters

Search Layouts

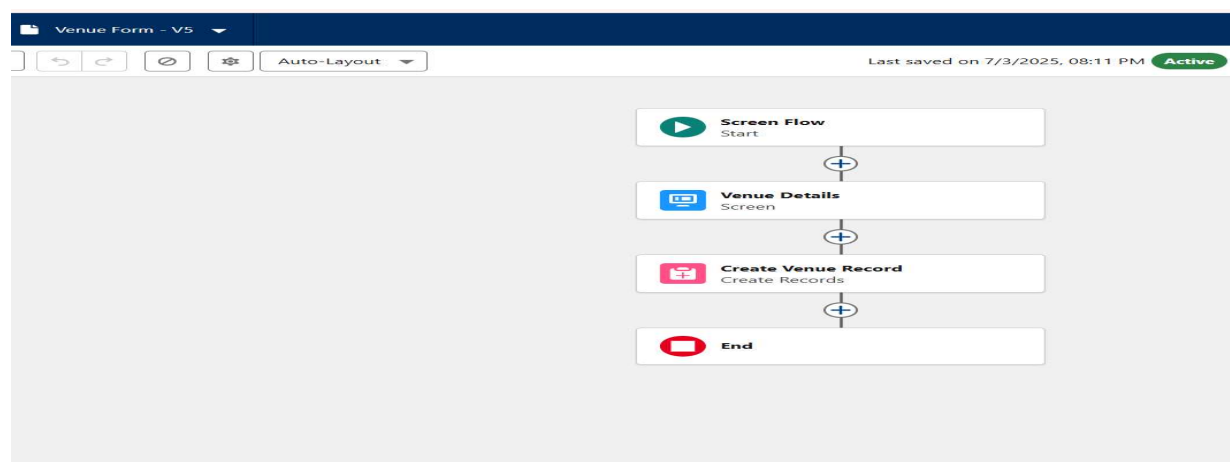
List View Button Layout

3.3 Automation (Flows and Process Builder):

- Flows :

Venue Flow:

A flow was established to automatically create corresponding Task records whenever a new Venue record is created. This ensures that each newly created venue has an assigned pickup task for further processing by default.

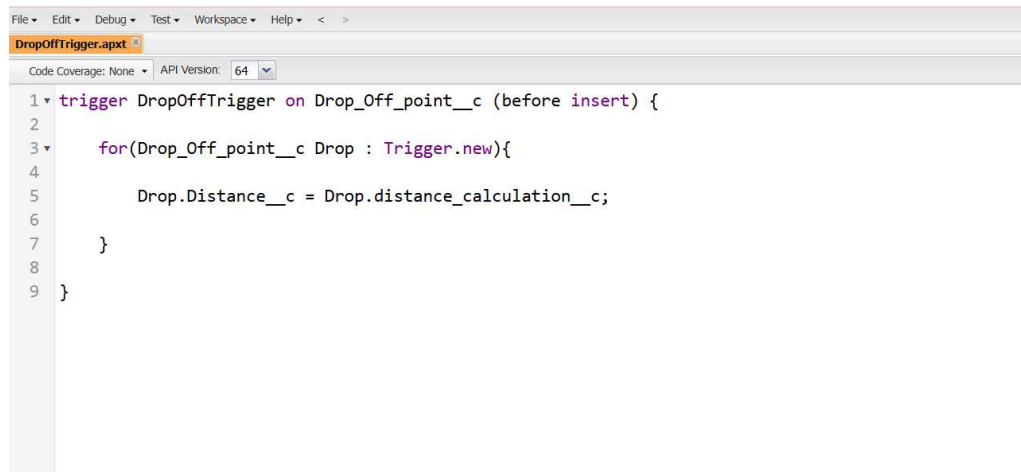


- Triggers

- o Drop-off Trigger:

An automation was created on the Drop-off Point object to change the associated Task status to 'Ready for Delivery' every time a new Drop-off Point record is

inserted. This simplifies the workflow by making tasks ready as soon as drop-off information is entered.



```
File Edit Debug Test Workspace Help < >
DropOffTrigger.apxt
Code Coverage: None API Version: 64
1 trigger DropOffTrigger on Drop_Off_point__c (before insert) {
2
3   for(Drop_Off_point__c Drop : Trigger.new){
4
5       Drop.Distance__c = Drop.distance_calculation__c;
6
7   }
8
9 }
```

4. Phase III: UI/UX Development & Customisation:

4.1 Lightning App Setup:

- Custom Lightning App “FoodConnect” created with tabs for Venue, Drop-Off Point, Task, Volunteer, and Execution Details.

The screenshot shows the 'App Details & Branding' configuration page in the Lightning App Builder. The left sidebar lists 'App Settings' with sub-items: 'App Details & Branding' (selected), 'App Options', 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area is titled 'App Details & Branding' and includes instructions: 'Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.' It is divided into two sections: 'App Details' and 'App Branding'. The 'App Details' section contains fields for 'App Name' (FoodConnect), 'Developer Name' (FoodConnect), and 'Description' (Enter a description...). The 'App Branding' section includes an 'Image' upload button, a 'Primary Color Hex Value' dropdown set to '#0070D2', 'Org Theme Options' (with a checkbox 'Use the app's image and color instead of the org's custom theme' which is unchecked), and an 'App Launcher Preview' showing a blue square with 'Fo' and the text 'FoodConnect'.

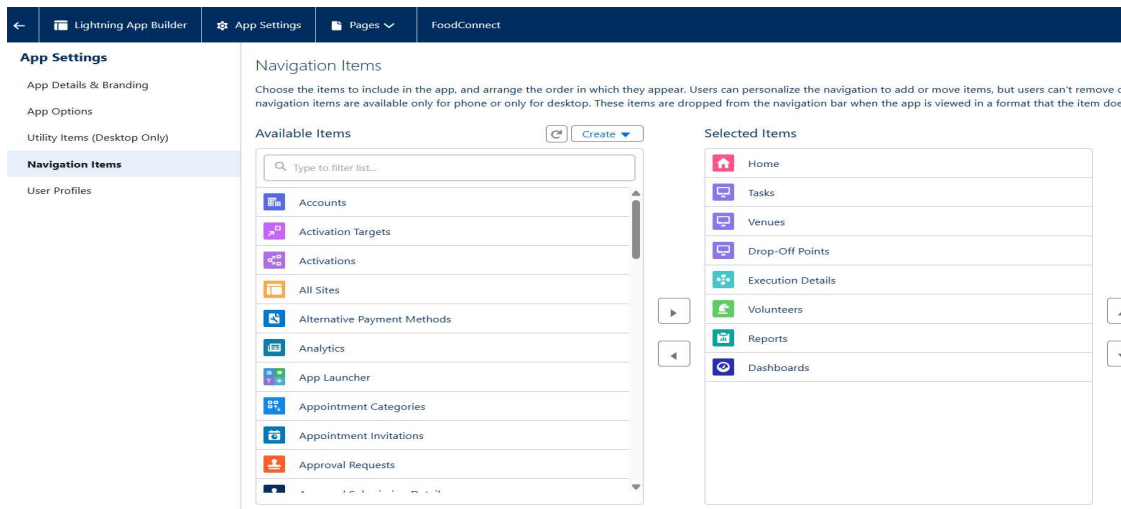
4.2 Page Layouts and Dynamic Forms:

- Set up page layouts for every object to show the important information to view and edit easily.

The screenshot shows the 'App Options' configuration page in the Lightning App Builder. The left sidebar lists 'App Settings' with sub-items: 'App Details & Branding', 'App Options' (selected), 'Utility Items (Desktop Only)', 'Navigation Items', and 'User Profiles'. The main content area is titled 'App Options' and includes instructions: 'If you don't see all the form factors in this list, it's because this app contains items that prevent selection of one or more options. For example, if an app contains pages assigned to the phone form factor, you can't switch the app to be for desktop only.' It is divided into two sections: 'Navigation and Form Factor' and 'Setup and Personalization'. The 'Navigation and Form Factor' section includes 'Navigation Style' (radio buttons for 'Standard navigation' and 'Console navigation', with 'Standard navigation' selected) and 'Supported Form Factors' (radio buttons for 'Desktop and phone' and 'Desktop', with 'Desktop and phone' selected). The 'Setup and Personalization' section includes 'Setup Experience' (radio buttons for 'Setup (full set of Setup options)', 'Service Setup', and 'Data Cloud Setup', with 'Setup (full set of Setup options)' selected) and 'App Personalization Settings' (checkboxes for 'Disable end user personalization of nav items in this app', 'Disable temporary tabs for items outside of this app', and 'Use Omni-Channel sidebar', all of which are unchecked).

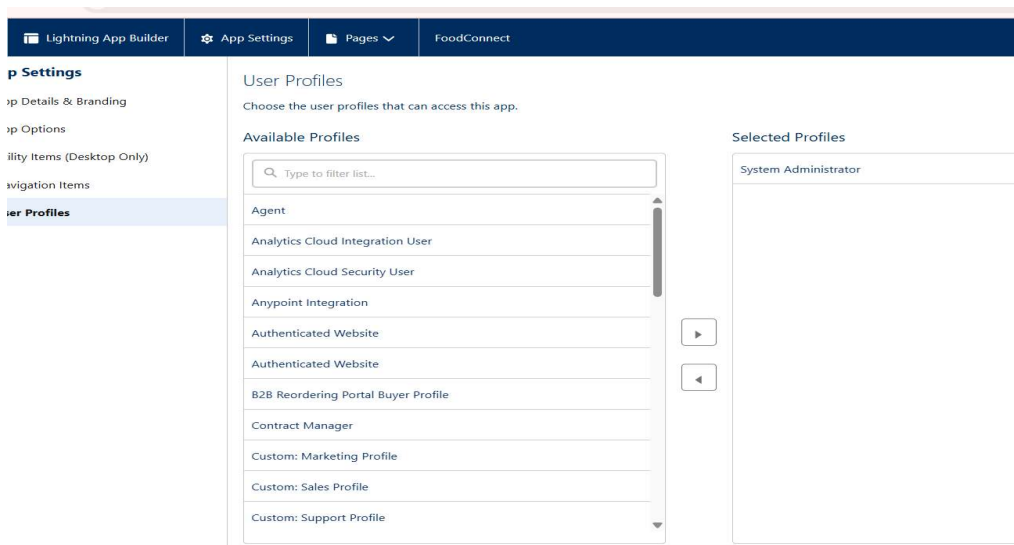
4.3 Tabs:

- Tabs are designed for all five custom objects of the FoodConnect app for easy access.



4.4 User Management:

- Users created with profiles: System Administration, NGO's Profile.

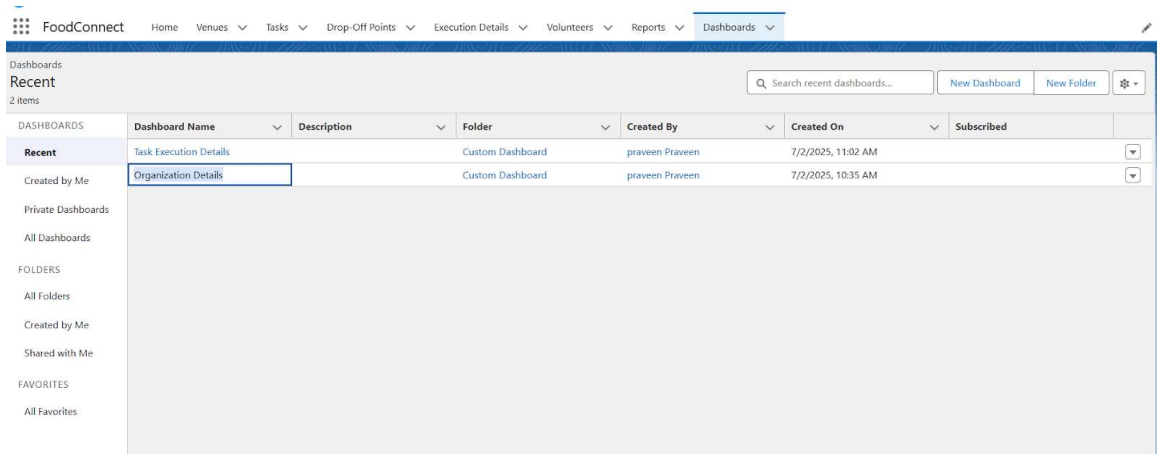


4.5 Reports and Dashboards:

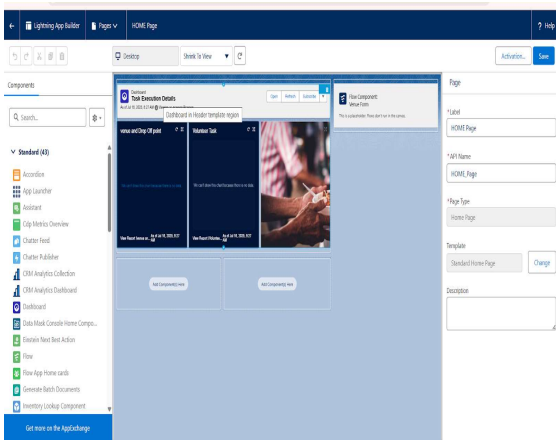
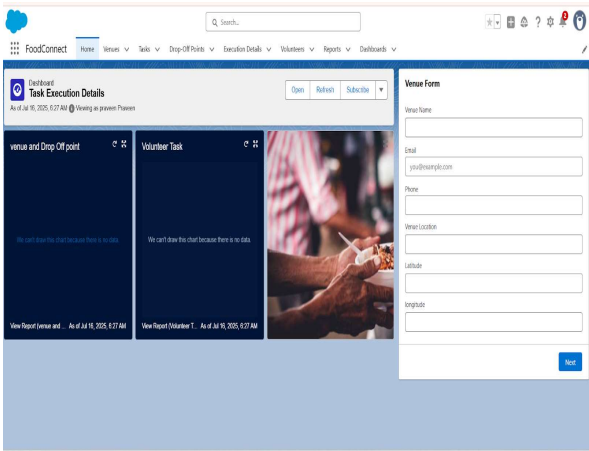
- Reports:
 - venue and drop-off point
 - Volunteer Task

REPORTS	Report Name	Description	Folder	Created By	Created On	Subscribed
Recent	Sample Flow Report: Screen Flows	Which flows run, what's the status of each interview, and how long do users take to complete the screens?	Public Reports	Automated Process	6/23/2025, 2:01 AM	<input type="checkbox"/>
Created by Me	Volunteer Task		Custom Report	praveen Praveen	7/2/2025, 10:13 AM	<input type="checkbox"/>
Private Reports	venue and Drop Off point		Custom Report	praveen Praveen	7/2/2025, 10:42 AM	<input type="checkbox"/>
Public Reports						
All Reports						
FOLDERS						
All Folders						
Created by Me						
Shared with Me						
FAVORITES						
All Favorites						

- Dashboards:
 - Operations dashboard with overall tasks, done tasks, outstanding tasks, and volunteer utilization statistics.
 - Task Execution Details.
 - Organization Details



- Lightning Page:
 - Configured record pages for objects with related lists and dynamic forms for a better user experience.



5. Phase IV: Data Migration & Security

5.1 Data Loading:

- In the FoodConnect project, data migration was performed via the Salesforce Data Import Wizard.
- An Excel spreadsheet was set up with fields like Venue Name, Contact Email, Contact Phone, Location, Latitude, Longitude, and Venue Location for the Venue object.
- The data was imported into Salesforce to easily create multiple Venue records.
- Utilizing the Data Import Wizard facilitated fast uploading of bulk data, having the system prepared with sample records for testing flows, triggers, and reports.

The top screenshot shows a Google Sheet titled 'Untitled spreadsheet' with the following data:

	A	B	C	D	E	F	G	H
1	Venue Name	Contact Email	Contact Phone					
2	Sri Ram Mess	sriram@gmail.com	9876543210					
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								

The bottom screenshot shows a Google Sheet with the following data:

	A	B	C	D	E	F	G	H
1	Id	Success	Created	Error				
2	a00gL00000BRSOTQA5	TRUE	TRUE					
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

Venue

Sri Ram Mess

Related

Details

Venue Name

Sri Ram Mess

Contact Email

sriram@gmail.com

Contact Phone

(987) 654-3210

Location

Venue Location

Created By

praveen Praveen

7/18/2025, 9:56 AM

Owner

praveen Praveen

Last Modified By

praveen Praveen

7/18/2025, 9:56 AM

SETUP

Bulk Data Load Jobs

Job ID	750gL000008uJu	Job Type	Bulk V1	Status	Closed
Submitted By	praveen Praveen	Operation	Insert	Total Processing Time (ms)	83
Start Time	7/18/2025, 9:56 AM PST	Queued Batches	0	API Active Processing Time (ms)	39
End Time	7/18/2025, 9:56 AM PST	In Progress Batches	0	Apex Processing Time (ms)	0
Time to Complete ([hh:]mm:ss)	00:01	Completed Batches	1		
Object	Venue	Failed Batches	0		
External ID Field		Progress	100%		
Content Type	CSV	Records Processed	1		
Concurrency Mode	Parallel	Records Failed	0		
API Version	64.0	Retries	0		

Reload

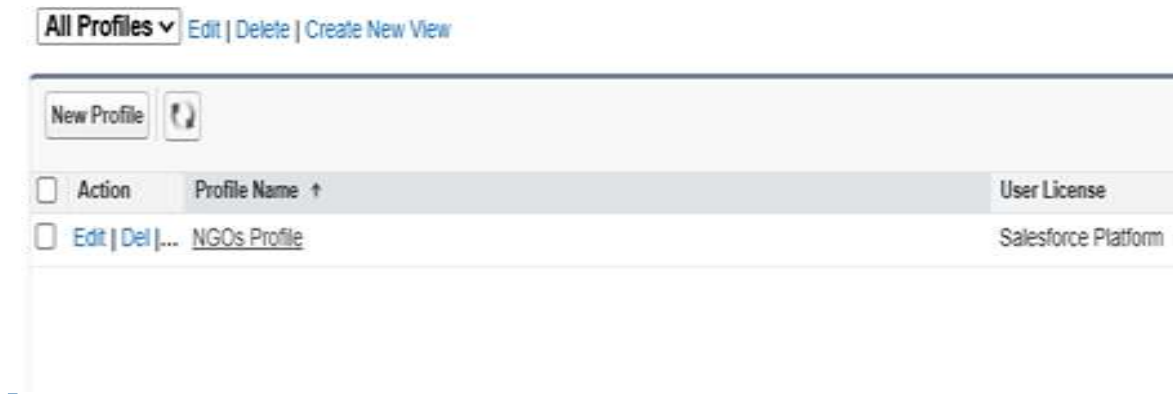
Batches

View Request	View Result	Batch ID	Start Time	End Time	Total Processing Time (ms)	API Active Processing Time (ms)	Apex Processing Time (ms)	Records Processed	Records Failed	Retry Count	State Message	Status
View Request	View Result	751gL00000773IB	7/18/2025, 9:56 AM	7/18/2025, 9:56 AM	83	39	0	1	0	0		Completed

5.2 Ensuring Data Access and Security:

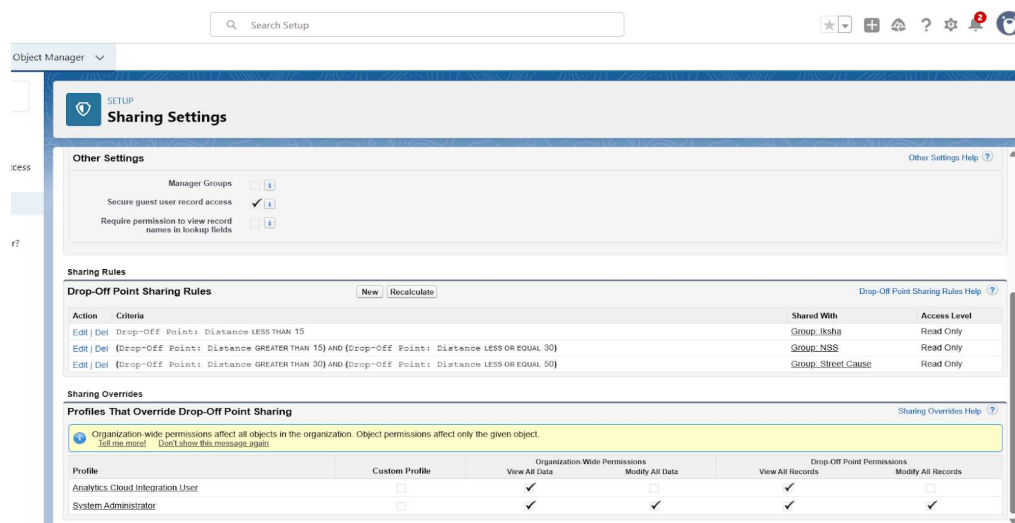
- Profiles:
Developed an NGO's Profile to control access for coordinators and volunteers so that they can only view and update the records appropriate to their work.

Profiles



Sharing Rules:

- o Set distance-based sharing rules on Drop-off Point records to share them with public groups by distance:
- o Iksha group: Distance < 15 km
- o NSS group: Distance = between 15 km and 30 km
- o Street Cause group: Distance = between 30 km and 50 km
- o This configuration ensures that volunteers and groups view only local drop-off points, improving operational effectiveness and data safety in FoodConnect



6. Phase V: Deployment, Documentation & Maintenance:

6.1 Deployment:

- o Development and testing for the FoodConnect project were carried out directly within the Salesforce Developer Org. No independent deployment was carried out, nor was Change Set utilized, as the project was developed and proved out in the same environment.

6.2 Documentation:

- o Features, flows, triggers, objects, and sharing rules were documented in a structured manner. Screenshots of each module and setup were created to maintain clarity and ease of readability for future purposes.

6.3 Maintenance:

- o The system is maintained by:
 - o Periodically reviewing triggers and flows to make sure they are functioning as intended.
 - o Tracking errors with Debug Logs and Setup Audit Trail in Salesforce.
 - o Gathering user feedback to enhance layouts, reports, and processes, if necessary.
- Troubleshooting Method:
 - o During development, any problems like:
 - o Flows failing to create records properly
 - o Trigger logic errors were fixed by inspecting error messages, reviewing debug flow details, and fixing logic. Every fix was tested right away to verify correct functioning.

Phase 6: Conclusion:

- FoodConnect project was created to design a straightforward, efficient system to control leftover food distribution to poor and needy individuals. With Salesforce, the project simplified the process by:
 - Registering the donor venues of leftover food.
 - Automatically assigning work to volunteers for pickup and delivery.
 - Monitoring drop-off locations and execution information efficiently.
 - Applying automation, such as flows and triggers, to minimize manual effort.
 - Setting up sharing rules so that only appropriate volunteers can view neighboring drop-off points.
- The project demonstrates how Salesforce may be employed outside of business CRM to address real-life social issues such as food wastage and hunger. It accelerates the donation and delivery process, making it more organized and transparent for both NGOs and the beneficiaries.
- In the future, FoodConnect can be made even more efficient by implementing WhatsApp notifications, AI-driven volunteer scheduling, and chatbot integration to increase its capabilities and accessibility.

FoodConnect

Home

Venues

Drop-Off Points

Tasks

Volunteers

Execution Details

Reports

Dashboards

Search...

Dashboard

Task Execution Details

Open

Refresh

Subscribe

As of Jul 21, 2025, 7:45 AM

Viewing as praveen Praveen

venue and Drop Off point

Venue Name	Drop-Off Point ...	Dista
grand hostel	p street	1.196
Green Leaf Hotel	NSS Food Centre	1.338
hope community center	park	566.4
master hostel	station	217.5
NCC camp	ncc base	1.196
Sri Ram Mess	Street Cause Camp	1.112

View Report (venue and ...

As of Jul 21, 2025, 7:45 AM

Volunteer Task

Record Count

1

1

1

1

1

2

7/20/2025

7/21/2025

7/22/2025

7/23/2025

7/24/2025

Date

View Report (Volunteer T...

As of Jul 21, 2025, 7:45 AM

Venue Form

Venue Name

Email

you@example.com

Phone

Venue Location

Latitude

longitude

Next

18

https://docs.google.com/document/d/1LYD2AGySPQxA8ULU3D11Hyae8eO0Aug2/edit

19/20

