

To Supply Leftover Food To Poor

Project Overview

Food Connect is a nonprofit, technology-driven platform founded in 2014 in Philadelphia, dedicated to bridging gaps in the food system by rescuing surplus food and getting it to those in need—efficiently, equitably, and sustainably. The goal is to reduce food waste by redistributing leftover food to the poor and marginalized communities. The CRM system will manage the entire process—from receiving food donations to organizing and tracking distributions—ensuring that food reaches those who need it most.

Key Features :

1. Mission & Vision

To foster healthier, more resilient communities by ensuring that no good food goes to waste—and no one goes hungry. Food Connect achieves this by enabling real-time collaboration across donors, volunteers, shelters, and rescue partners to streamline food rescue and distribution

2. Core Objectives

Scale and connect: Integrate food vendors, rescue organizations, volunteers, and recipients in a unified platform

Optimize logistics: Automate volunteer assignments, route planning, and multi-stop deliveries to preserve food safety and reduce hunger

Track outcomes: Monitor meals, deliveries, distances, and donor-to-recipient metrics through dashboards and detailed reporting

Maximize impact: Deliver over 20,000 meals monthly, with a capacity to scale beyond 250,000 meals annually in California and other pilot regions

Enable responsive programs: By enabling on-demand matching of surplus goods with nearby agencies, currently in Philadelphia, Kansas City, San Francisco, and the Twin Cities

3. Geographic Reach & Pilot Programs

Flexible architecture supports multi-stop deliveries to healthcare facilities, schools, and senior centers.s

This CRM system meets critical business needs by addressing food insecurity, reducing food waste, and enhancing the efficiency of charitable food distribution efforts. It helps organizations work more effectively, ensuring that no food goes to waste while supporting those in dire need.

Objectives:

Phase 1: Requirement Analysis & Planning

- **Connecting Donors to Recipients**

The foremost objective is to **reduce food waste and support food security** by efficiently bridging surplus food donors (restaurants, grocery stores, caterers) with nonprofit recipients and community organizations. A unified Salesforce-based platform centralizes donor, recipient, and volunteer data, replacing fragmented spreadsheets or siloed systems. This enables near real-time intake tracking, automated listing of surplus food offers, and streamlined coordination to match food availability with demand efficiently.

- **Automating Matching, Logistics & Field Operations**

A key goal is to **accelerate and automate the donation flow**: from intake to delivery. Through custom objects (e.g., Donations, Pickups, Execution Logs), Salesforce Flows, and Apex triggers, the system matches food based on proximity, urgency, and type—then assigns tasks to volunteers or transport partners. Delivery teams update status in the field (e.g. pickup/delivery timestamps, quantities distributed), ensuring transparency and accountability at each stage.

- **Measuring Impact & Empowering Stakeholder Engagement**

The project focuses on **impact visibility and stakeholder engagement** through dashboards and reporting. Custom report types track total volume distributed, volunteer engagement, donor participation trends, and geographic coverage of deliveries. Integration with Salesforce Marketing or Data Cloud allows personalized outreach and renewal campaigns, helping organizations maintain long-term donor relationships and demonstrate quantifiable impact—such as time saved or waste diverted.

Phase 2 :Salesforce Development - Backend & Configurations

Setup environment & DevOps workflow: A dedicated Salesforce sandbox environment was set up for the development and initial testing of the FOODCONNECT CRM. This enabled isolated customization without impacting production data. A simple DevOps process was followed using Change Sets to migrate metadata from the sandbox to production, ensuring controlled deployments and version management.

Customization of Objects, Fields, Validation Rules, Automation:

Create Venue Object

To create an object:

1. From the setup page >> Click on Object Manager >> Click on Create >>Click on Custom Object.
 - Enter the label name >> Venue
 - Plural label name >> Venues
 - Enter Record Name Label and Format

1.Record Name >> Venue Name

2.Data Type >> Text

2.Click on Allow reports and Track Field History, Allow Activities.

3.Allow search >> Save.

SETUP > OBJECT MANAGER

Venue

Details

Description

API Name
Venue__c
Custom ✓
Singular Label
Venue
Plural Label
Venues

Enable Reports
✓
Track Activities
✓
Track Field History
✓
Deployment Status
Deployed
Help Settings
Standard salesforce.com Help Window

Create Drop-Off Point Object

To create an object:

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
 - Enter the label name >> Drop-Off Point
 - Plural label name>> Drop-Off Points
 - Enter Record Name Label and Format
 - a. Record Name >> Drop-Off point Name
 - b. Data Type >> Text
2. Click on Allow reports and Track Field History, Allow Activities

3. Allow search >> Save.

The screenshot shows the Salesforce Setup interface. At the top, there's a navigation bar with icons for Home, Object Manager, and a search bar labeled "Search Setup". Below the navigation is a breadcrumb trail: "SETUP > OBJECT MANAGER". The main title is "Drop-Off Point". On the left, a sidebar lists various setup categories: Fields & Relationships, 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, Restriction Rules, Scoping Rules, Object Access, Triggers, and Flow Triggers. The right side of the screen displays the "Details" section for the "Drop-Off Point" object. It includes fields for API Name (set to "Drop_Off_Point__c"), Singular Label (set to "Drop-Off Point"), Plural Label (set to "Drop-Off Points"), and several checkboxes for reports and activities. At the bottom right of the details section are "Edit" and "Delete" buttons.

Create Task Object

To create an object:

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
 1. Enter the label name>> Task
 2. Plural label name>> Tasks
 3. Enter Record Name Label and Format
 - Record Name >> Task Name
 - Data Type >> Text
2. Click on Allow reports and Track Field History,Allow Activities
2. Allow search >> Save

SETUP > OBJECT MANAGER

Task

Details

Description	Enable Reports
API Name Task__c Custom	✓
Singular Label Task	✓
Plural Label Tasks	✓
Deployment Status Deployed	✓
Help Settings Standard salesforce.com Help Window	

Fields & Relationships

- 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
- Restriction Rules
- Scoping Rules
- Object Access
- Triggers
- Flow Triggers

Create Volunteer Object

To create an object:

- From the setup page >> Click on Object Manager>> Click on Create >> Click on Custom Object.
- Enter the label name>> Volunteer
- Plural label name>> Volunteers
- Enter Record Name Label and Format
 - Record Name >> Volunteer Name
 - Data Type >> Text
- Click on Allow reports and Track Field History, Allow Activites
- Allowsearch >>Save.

SETUP > OBJECT MANAGER

Volunteer

Details

Description	Enable Reports
API Name Volunteer__c Custom	✓
Singular Label Volunteer	✓
Plural Label Volunteers	✓
Deployment Status Deployed	✓
Help Settings Standard salesforce.com Help Window	

Fields & Relationships

- 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
- Restriction Rules
- Scoping Rules
- Object Access
- Triggers
- Flow Triggers

Create Execution Details Object

To create an object:

1. From the setup page >> Click on Object Manager >> Click on Create >> Click on Custom Object.
 1. Enter the label name >> Execution Detail
 2. Plural label name >> Execution Details
 3. Enter Record Name Label and Format
 - Record Name >> Execution Detail Name
 - Data Type >> Text

2. Click on Allow reports and Track Field History, Allow Activities

3. Allow search >> Save.

Creation of Relationship fields in objects

Creation of Lookup Relationship Field on Volunteer Object:

1. Go to setup >> click on Object Manager >> type object name (Volunteer) in the search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Master Detail relationship
4. Select the related object “Drop-Off point” and click next.

SETUP > OBJECT MANAGER
Volunteer

Custom Field Definition Detail

Field Information

Field Label	Drop-Off Point	Object Name	Volunteer
Field Name	Drop_Off_Point	Data Type	Lookup
API Name	Drop_Off_Point__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			

Created By: Gali Leela Aravinda, 7/15/2025, 7:04 AM Modified By: Gali Leela Aravinda, 7/15/2025, 7:04 AM

Lookup Options

Related To	Drop-Off Point	Child Relationship Name	Volunteers
Related List Label	Volunteers		
Required	<input type="checkbox"/>		

What to do if the lookup record is deleted? Clear the value of this field.

Validation Rules

No validation rules defined.

Validation Rules Help

Always show me more records per related list

5. Field Name: Drop_off point

6. Field label: Auto generated

7. Next >> Next >> Save.

Creation of Master Detail Relationship Field on Execution Details Object:

8. Go to setup >> click on Object Manager >> type object name (Execution Details) in the search bar >> click on the object.
9. Now click on “Fields & Relationships” >> New

SETUP > OBJECT MANAGER
Execution Detail

Custom Field Definition Detail

Field Information

Field Label	Volunteer	Object Name	Execution Detail
Field Name	Volunteer	Data Type	Master-Detail
API Name	Volunteer__c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			

Created By: Gali Leela Aravinda, 7/15/2025, 7:06 AM Modified By: Gali Leela Aravinda, 7/15/2025, 7:06 AM

Master-Detail Options

Related To	Volunteer	Child Relationship Name	Execution_Details
Related List Label	Execution Details		
Sharing Setting	Read/Write: Allows users with at least Read/Write access to the Master record to create, edit, or delete related Detail records.		
Reparentable Master Detail	<input type="checkbox"/>		

Lookup Filter

No lookup filters defined.

Validation Rules

No validation rules defined.

Validation Rules Help

Always show me more records per related list

Master Detail relationship

10. Select

11. Select the related object “Volunteer” and click next.

12. Field Name: Volunteer

13. Field label: Auto generated

14. Next >> Next >> Save.

Creation of Master Detail Relationship Field on Execution Details Object :

15. Go to setup >> click on Object Manager >> type object name(Execution Details) in the search bar >> click on the object.

16. Now click on “Fields & Relationships” >> New

17. Select Master Detail relationship

18. Select the related object “Task” and click next.

19. Field Name: Task

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named 'Task' is being created for the 'Execution Detail' object. The 'Fields & Relationships' tab is selected. The 'Field Information' section shows the field label as 'Task', field name as 'Task', API name as 'Task__c', and data type as 'Master-Detail'. The 'Master-Detail Options' section shows the related object as 'Task' and the child relationship name as 'Execution_Details'. The 'Validation Rules' section indicates no validation rules are defined. The left sidebar lists various setup categories like Page Layouts, Lightning Record Pages, and Buttons, Links, and Actions.

20. Field

label: Auto generated

21. Next >> Next >> Save.

Creation of Lookup Relationship Field on Drop-Off Point Object:

22. Go to setup >> click on Object Manager >> type object name (Drop-Off Point) in the search bar >> click on the object.

23. Now click on “Fields & Relationships” >> New

24. Select Lookup relationship

25. Select the related object “Venue” and click next.

22. Field Name: Venue
23. Field label: Venue_c
24. Next >> Next >> Save.

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named 'Venue_c' is being created for the 'Drop-Off Point' object. The field is defined as a lookup type ('Lookup') pointing to the 'Venue' object. It has a field label of 'Venue' and an API name of 'Venue_c'. The 'Field Information' section includes fields for Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The 'Lookup Options' section shows it is related to 'Venue' and 'Drop-Off Points'. The 'Validation Rules' section indicates no validation rules are defined. The 'Custom Field Definition Detail' tab is selected, showing options to Edit, Set Field-Level Security, View Field Accessibility, and Where is this used?

Creation of Lookup Relationship Field on Task Object:

29. Go to setup>> click on Object Manager >> type object name (Task) in the search bar >> click on the object.
29. Now click on “Fields & Relationships” >> New
29. Select Lookup relationship
29. Select the related object “Venue” and click next.
29. Field Name: Sponsored By
30. Field label: Auto generated
31. Next >> Next >> Save.

The screenshot shows the Salesforce Setup interface under the Object Manager. A custom field named 'Sponsored By' is being created for the 'Task' object. The field is defined as a lookup type ('Lookup') pointing to the 'Venue' object. It has a field label of 'Sponsored By' and an API name of 'Sponsored_By__c'. The 'Field Information' section includes fields for Description, Help Text, Data Owner, Field Usage, Data Sensitivity Level, and Compliance Categorization. The 'Lookup Options' section shows it is related to 'Venue' and 'Tasks'. The 'Validation Rules' section indicates no validation rules are defined. The 'Custom Field Definition Detail' tab is selected, showing options to Edit, Set Field-Level Security, View Field Accessibility, and Where is this used?

Creation of Lookup Relationship Field on Task Object:

36. Go to setup>> click on Object Manager >> type object name(Task) in the search bar >> click on the object.

36. Now click on “Fields & Relationships” >> New

36. Select Lookup relationship

The screenshot shows the Salesforce Setup interface. The top navigation bar includes 'Search Setup', 'Home', 'Object Manager', and various icons. The main area is titled 'SETUP > OBJECT MANAGER' and 'Venue'. On the left, a sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The 'Fields & Relationships' category is currently selected. In the center, a 'Custom Field Definition Detail' page is displayed for a 'Venue Custom Field Contact Email'. The 'Field Information' section shows the field label 'Contact Email', field name 'Contact_Email', API name 'Contact_Email_c', and data type 'Email'. The 'General Options' section has 'Required' checked. The 'Validation Rules' section is empty. At the bottom, there are links to 'Back To Top' and 'Validation Rules Help'.

39. Select the related object “Drop-Off point” and click next.

36. Field Name: Drop-Off point

36. Field label: Auto generated

36. Next >> Next >> Save.

Creation of fields for the Venue object

1. Go to setup>> click on Object Manager >> type object name(Venue) in search bar >> click on the object.

2. Now click on “Fields & Relationships” >> New

3. Select Data type as a “Email” and Click on Next

4. Fill the Above as following:

- Field Label: Contact Email
- Field Name: Contact Email

- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

5. Go to setup >> click on Object Manager >> type object name(Venue) in search bar >> click on the object.
5. Now click on “Fields & Relationships” >> New
5. Select Data type as a “Phone” and Click on Next

8. Fill the

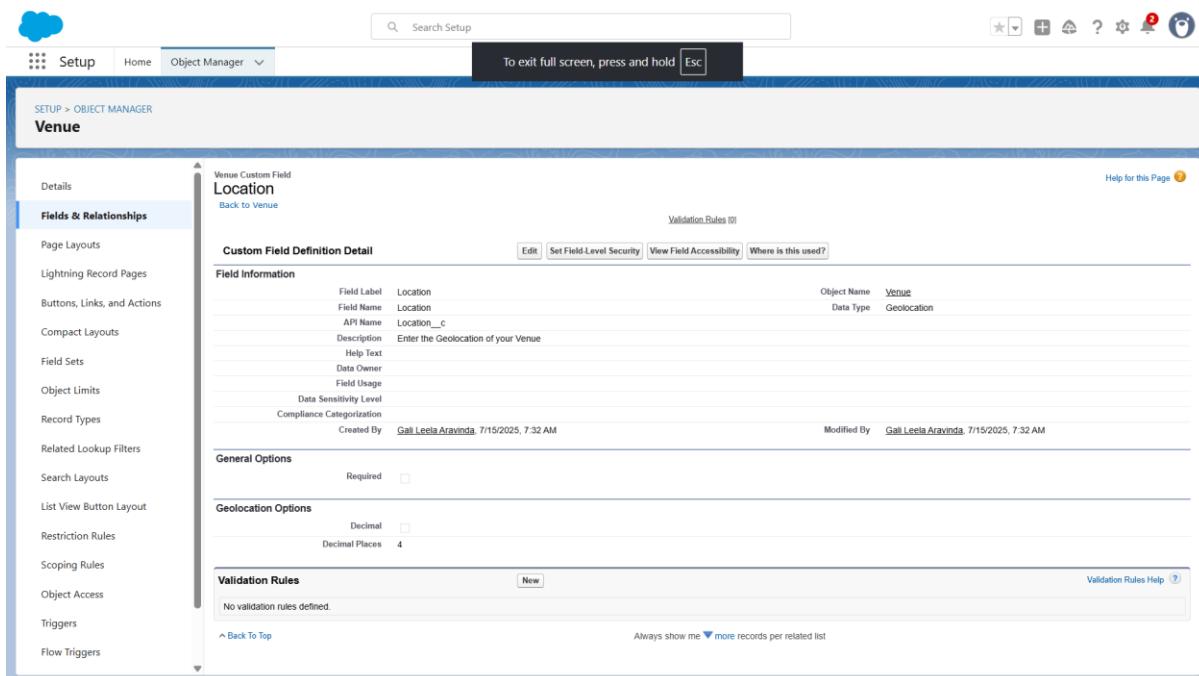
Above as following:

- Field Label: Contact Phone

- Field Name: Contact Phone
- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Venue) in search bar >>click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Geolocation” and Click on Next



4. Fill the

Above as following:

- Field Label: Location
- Decimal Places: 4
- Field Name: Location
- Description: Enter the Geolocation of your Venue
- Click on Next >> Next >> Save and new.

To create other fields in an object:

9. Go to setup >> click on Object Manager >> type object name(Venue) in search bar >> click on the object.
9. Now click on “Fields & Relationships” >> New
9. Select Data type as a “Long Text Area” and Click on Next

12. Fill the

Above as following:

- Field Label : Venue Location
- Field Name : Venue_Location
- Click on Next >> Next >> Save and new.

Creation of fields for the Drop-Off point object

Go to setup >> click on Object Manager >> type object name(Drop-Off point) in search bar >> click on the object.

2. Now click on “Fields & Relationships” >> New

3. Select Data type as a “Geolocation” and Click on Next

4. Fill the Above as following:

- Field Label: Location 2
- Field Name: gets auto generated
- Description: Enter the Geolocation of the Drop off Point
- Geolocation Options: select Decimal
- Decimal Places: 4
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name (Drop-Off point) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Formula” and Click on Next
4. Fill the Above as following:
 - Field Label: distance calculation
 - Field Name: distance_calculation
 - Formula Return Type: Number
 - Formula Options: DISTANCE(Location_2__c , Venue__r.Location__c , 'km')
 - Click on Next >> Next >> Save and new.

To create another fields in an object:

5. Go to setup >> click on Object Manager >> type object name (Drop-Off point) in search bar >> click on the object.

6. Now click on “Fields & Relationships” >> New
7. Select Data type as a “Picklist” and Click on Next
8. Fill the Above as following:
 - Field Label: State
 - Field Name: State
 - Enter values, with each value separated by a new line:

Andhra Pradesh

Arunachal Pradesh

Assam

Bihar

Chhattisgarh

Goa

Gujarat

Haryana

Himachal Pradesh

Jharkhand

Karnataka

Kerala

Maharashtra

Madhya Pradesh

Manipur

Meghalaya

Mizoram

Nagaland

Odisha

Punjab

Rajasthan

Sikkim

Tamil Nadu

Tripura

Telangana

Uttar Pradesh

Uttarakhand

West Bengal

Andaman & Nicobar (UT)

Chandigarh (UT)

Dadra & Nagar Haveli and Daman & Diu (UT)

Delhi [National Capital Territory (NCT)]

Jammu & Kashmir (UT)

Ladakh (UT)

Lakshadweep (UT)

Puducherry (UT)

- Click on required check box

The screenshot shows the Salesforce Object Manager interface. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main title is 'SETUP > OBJECT MANAGER Drop-Off Point'. On the left, a sidebar lists various setup categories like 'Fields & Relationships', 'Page Layouts', and 'Buttons, Links, and Actions'. The central area displays the 'Custom Field Definition Detail' for the 'State' field. Key details shown include:

- Field Information:** Field Label: State, Field Name: State, API Name: State__c.
- General Options:** Required is checked, Default Value is set to a picklist value.
- Picklist Options:** Restrict picklist to the values defined in the value set is checked, Controlling Field is set to [New].
- Picklist Values Used:** Active and inactive picklist values: 36 (1,000 max).

Buttons at the bottom right include 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. A 'Help for this Page' link is also present.

- Click on Next >> Next >> Save and new.

To create another fields in an object:

9. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.

10. Now click on “Fields & Relationships” >> New

11. Select Data type as a “Number” and Click on Next

The screenshot shows the Salesforce Setup interface for creating a custom field. The left sidebar lists various setup categories like Details, Fields & Relationships, Page Layouts, etc. The main area is titled 'Task Custom Field Distance'. It shows the 'Custom Field Definition Detail' page with the following details:

- Field Information:** Field Label: Distance, Field Name: Distance, API Name: Distance__c, Object Name: Task, Data Type: Number.
- General Options:** Required is checked, Unique is unchecked, External ID is unchecked, AI Prediction is unchecked, Default Value is empty.
- Number Options:** Length is 14, Decimal Places is 4.
- Validation Rules:** No validation rules defined.

9. Fill the Above as following:

- Field Label: Distance
- Field Name: Distance
- Length: 14
- Decimal Places: 4
- Click on required check box
- Click on Next >> Next >> Save and new.

Creation of fields for the Task object

Go to setup>> click on Object Manager >> type object name (Task) in search bar >> click on the object.

2. Now click on “Fields & Relationships” >> New

3. Select Data type as a “Auto Number” and Click on Next

4. Fill the Above as following:

- Field Label: Task ID
- Display Format: TASK- {0}
- Starting Number: 1
- Field Name: gets auto generated
- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Date” and Click on Next
4. Fill the Above as following:
 - Field Label: Date
 - Field Name: Date
 - Click on required check box
 - Click on Next >> Next >> Save and new.

To create another fields in an object:

5. Go to setup >> click on Object Manager >> type object name (Task) in search bar >> click on the object.
5. Now click on “Fields & Relationships” >> New
5. Select Data type as a “Picklist (Multi-Select)” and Click on Next

5. Fill the Above as following:

- Field Label: Food Category
- Field Name: Food Category

- Enter values, with each value separated by a new line :

Veg

Non-Veg

Salad

Snack

- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

9. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.
9. Now click on “Fields & Relationships” >> New
9. Select Data type as a “Number” and Click on Next

The screenshot shows the Salesforce Setup interface for creating a custom field. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main area is titled 'Task Custom Field' and 'Number of People Served'. The 'Fields & Relationships' tab is selected. The 'Custom Field Definition Detail' section contains the following information:

Field Information		Object Name	Data Type
Field Label	Number of People Served	Task	Number
Field Name	Number_of_People_Served		
API Name	Number_of_People_Served_c		
Description			
Help Text			
Data Owner			
Field Usage			
Data Sensitivity Level			
Compliance Categorization			
Created By	Gali Leela Aravinda, 7/15/2025, 8:42 AM	Modified By	Gali Leela Aravinda, 7/15/2025, 8:42 AM

The 'General Options' section includes 'Required' (checked), 'Unique' (unchecked), 'External ID' (unchecked), 'AI Prediction' (unchecked), and 'Default Value' (empty). The 'Number Options' section shows 'Length' set to 18 and 'Decimal Places' set to 0. The 'Validation Rules' section at the bottom indicates 'No validation rules defined.'

9. Fill the Above as following:

- Field Label: Number of People Served
- Field Name: Number_of_People_Served
- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

13. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.

13. Now click on “Fields & Relationships” >> New

13. Select Data type as a “Text” and Click on Next

The screenshot shows the Salesforce Setup interface under the Object Manager for the 'Task' object. A new custom field named 'Name of the Person' is being created. The 'Field Label' is set to 'Name of the Person', and the 'Field Name' is 'Name_of_the_Person'. The 'Data Type' is set to 'Text'. The 'Required' checkbox is unchecked. Other field details like API Name, Description, and Created By are also visible.

13. Fill the Above as following:

- Field Label: Name of the Person
- Field Name: Name_of_the_Person
- Click on Next >> Next >> Save and new.

To create another fields in an object:

17. Go to setup>> click on Object Manager >> type object name(Task) in search bar >> click on the object.

17. Now click on “Fields & Relationships” >> New

Select Data type as a “Phone” and Click on Next

The screenshot shows the Salesforce Setup interface under the Object Manager for the 'Task' object. A new custom field named 'Phone' is being created. The 'Field Label' is 'Phone', and the 'Field Name' is 'Phone'. The 'Data Type' is set to 'Phone'. The 'Required' checkbox is checked. Other field details like API Name, Description, and Created By are also visible.

17. Fill the Above as following:

- Field Label: Phone
- Field Name: Phone
- Click on Next >> Next >> Save and new.

To create another fields in an object:

21. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.

21. Now click on “Fields & Relationships” >> New

21. Select Data type as a “Pick List” and Click on Next

The screenshot shows the Salesforce Setup interface for creating a custom field. The top navigation bar includes 'Setup', 'Home', and 'Object Manager'. The main title is 'Task Custom Field Rating'. The left sidebar lists various setup categories. The main content area is titled 'Custom Field Definition Detail' for the 'Rating' field. It shows the following details:

- Field Information:** Field Label: Rating, Field Name: Rating, API Name: Rating__c, Description: Help Text, Data Owner: Field Usage, Data Sensitivity Level: Compliance Categorization.
- General Options:** Required (checked), Default Value: [New].
- Picklist Options:** Restrict picklist to the values defined in the value set (checked), Controlling Field: [New].
- Picklist Values Used:** Active and inactive picklist values: 5 (1,000 max).
- Field Dependencies:** A 'New' button.

Buttons at the top right include 'Edit', 'Set Field-Level Security', 'View Field Accessibility', and 'Where is this used?'. A 'Help for this Page' link is also present.

21. Fill the Above as following:

- Field Label: Rating
- Field Name: Rating
- Enter values, with each value separated by a new line:

1

2

3

4

5

- Click on Next >> Next >> Save and new.

To create another fields in an object:

25. Go to setup >> click on Object Manager >> type object name (Task) in search bar >> click on the object.
25. Now click on “Fields & Relationships” >> New
25. Select Data type as a “Long Text Area” and Click on Next

The screenshot shows the Salesforce Setup interface for creating a custom field. The left sidebar lists various setup categories like Details, Fields & Relationships, and Page Layouts. The main area is titled 'Task Custom Field Feedback' under 'Task'. The 'Field Information' section shows the field label 'Feedback', field name 'Feedback', API name 'Feedback__c', and data type 'Long Text Area'. The 'General Options' section includes a 'Default Value' field. The 'Long Text Area Options' section shows '# Visible Lines' set to 3 and a 'Length' of 32,768. The 'Validation Rules' section indicates 'No validation rules defined.' A note at the bottom says 'Always show me ▾ more records per related list'.

25. Fill the Above as following:

- Field Label: Feedback
- Field Name: Feedback
- Click on Next >> Next >> Save and new.

Creation of fields for the Task object

Go to setup>> click on Object Manager >> type object name(Task) in search bar >> click on the object.

2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Auto Number” and Click on Next

The screenshot shows the 'Task' object setup page. A new custom field 'Task ID' is being created. The 'Field Label' is set to 'Task ID', 'Field Name' to 'Task_ID', and 'API Name' to 'Task_ID__c'. The 'Data Type' is 'Auto Number' with a display format of 'TASK-{0}'. Other settings like 'General Options' and 'Auto Number Options' are also visible.

4. Fill the Above as following:

- Field Label: Task ID
- Display Format: TASK-{0}
- Starting Number: 1
- Field Name: gets auto generated
- Click on required check box
- Click on Next >> Next >> Save and new.

To create another fields in an object:

1. Go to setup >> click on Object Manager >> type object name(Task) in search bar >> click on the object.
2. Now click on “Fields & Relationships” >> New
3. Select Data type as a “Date” and Click on Next

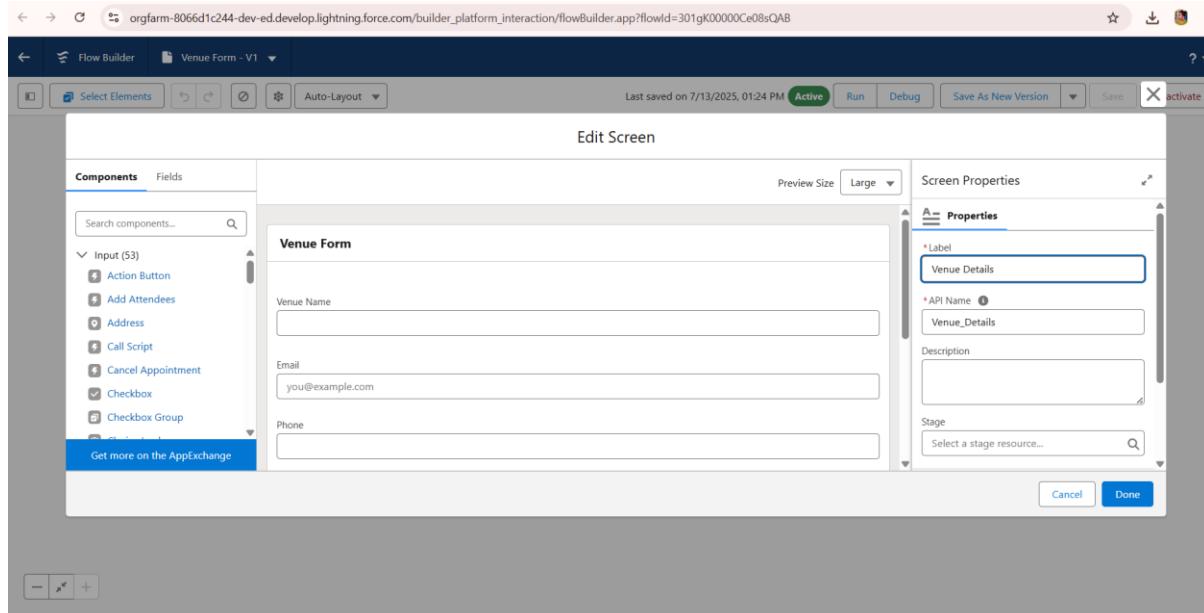
The screenshot shows the 'Task' object setup page. A new custom field 'Date' is being created. The 'Field Label' is 'Date', 'Field Name' is 'Date', and 'API Name' is 'Date__c'. The 'Data Type' is 'Date'. Other settings like 'General Options' and 'Validation Rules' are also visible.

Create Flow to create a record in Venue object

1. Go to setup >> type Flow in quick find box >> Click on the Flow and Select the New Flow.
2. Select the Screen flow. Click on create.
3. Click on the '+' icon in between start and end and click on screen element.
4. Under the Screen Properties:

Label: Venue Details

API Name: Venue_Details



5. Now let's add components in this flow. Click on Text Component and name it as:

Label: Venue Name

API Name: Venue_Name

6. Click on Email Component and name it as:

Label: Email

API Name: Contact_Email

7. Click on Phone Component and name it as:

Label: Phone

API Name: Contact_Phone

8. Click on Text Component and name it as:

Label: Venue Location

API Name: Venue_Location

9. Click on Number Component and name it as:

Label: Latitude

API Name: Latitude

10. Click on Number Component and name it as:

Label: longitude

API Name: longitude

11. Next click on Done. This would like below

12. Click on the '+' icon in between Venue details and end and click on create record element.

12. Now label it as

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 for the Venue: Click on 'Add Field' 5 times

Field: Value = Contact_Email_c : {! Contact_Email.value}

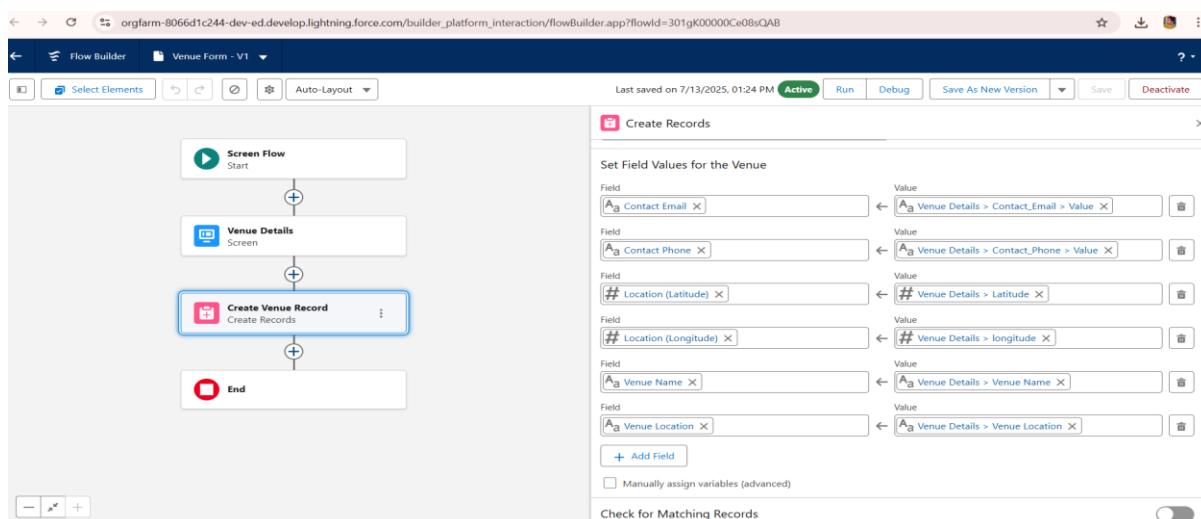
Field: Value = Contact_Phone_c : {! Contact_Phone.value}

Field: Value = Name: {! Venue Name}

Field: Value = Venue_Location_c : {! location}

Field: Value = Location_Latitude_s : {! latitude}

Field: Value = Location_Longitude_s : {!longitude}



14. This would look like:

15. Click on Save as:

Flow Label: Venue Form

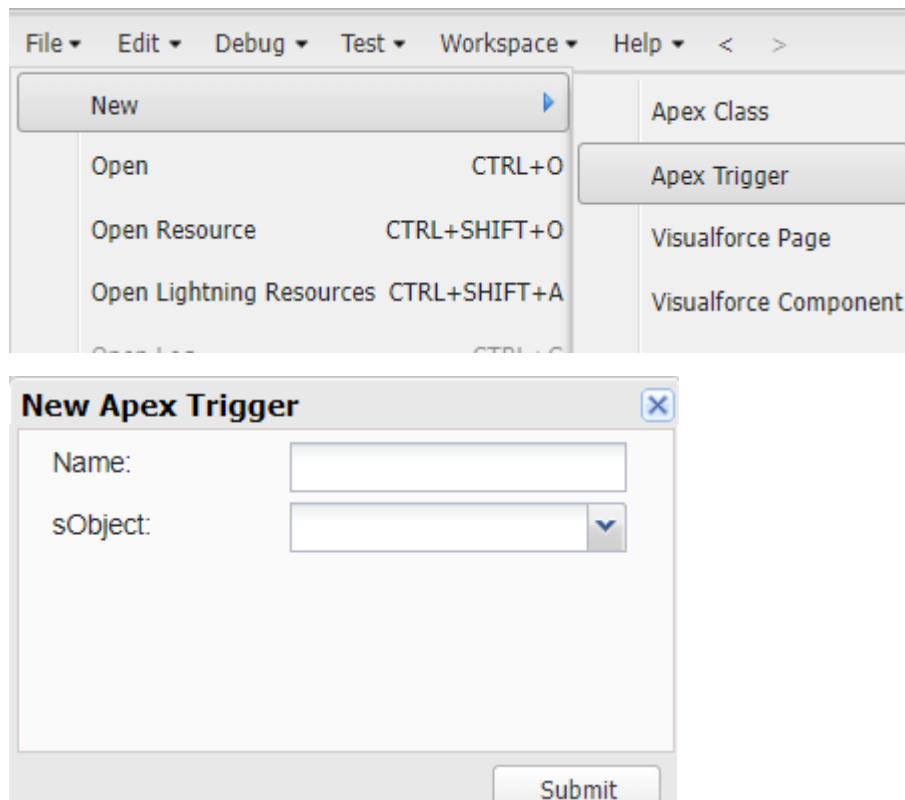
Flow API Name: Venue_Form

Apex Classes, Triggers, Asynchronous Apex:

Custom Apex triggers were developed to automatically update stock status and generate distribution records when a pickup is marked completed. Additionally, asynchronous Apex (Batch Apex) was implemented to periodically send summary emails to donors and NGOs highlighting food saved and beneficiaries served over the week. This ensures timely communication and promotes continued engagement without impacting real-time system performance.

Create a Trigger

1. Log into the trailhead account, navigate to the gear icon in the top right corner.
2. Click on developer console and you will be navigated to a new console window.
3. Click on the File menu in the toolbar and click on new >> Trigger.
4. Enter the trigger name and the object to be triggered.



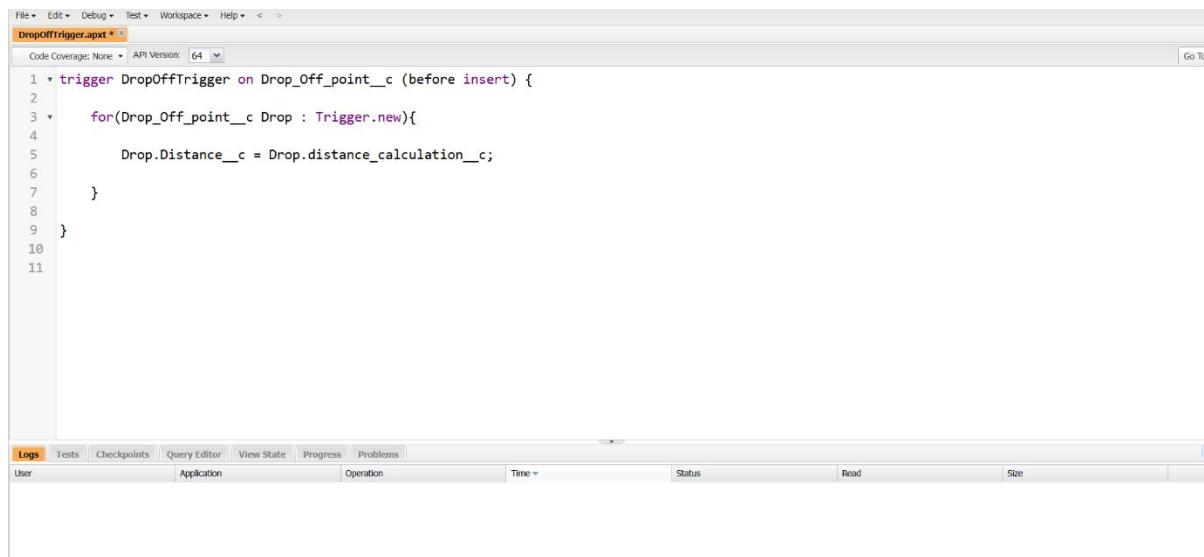
5. Enter Name: DropOffTriggers
6. Object: Drop-Off Point
6. Click on Submit.

Trigger Code

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

Code:

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

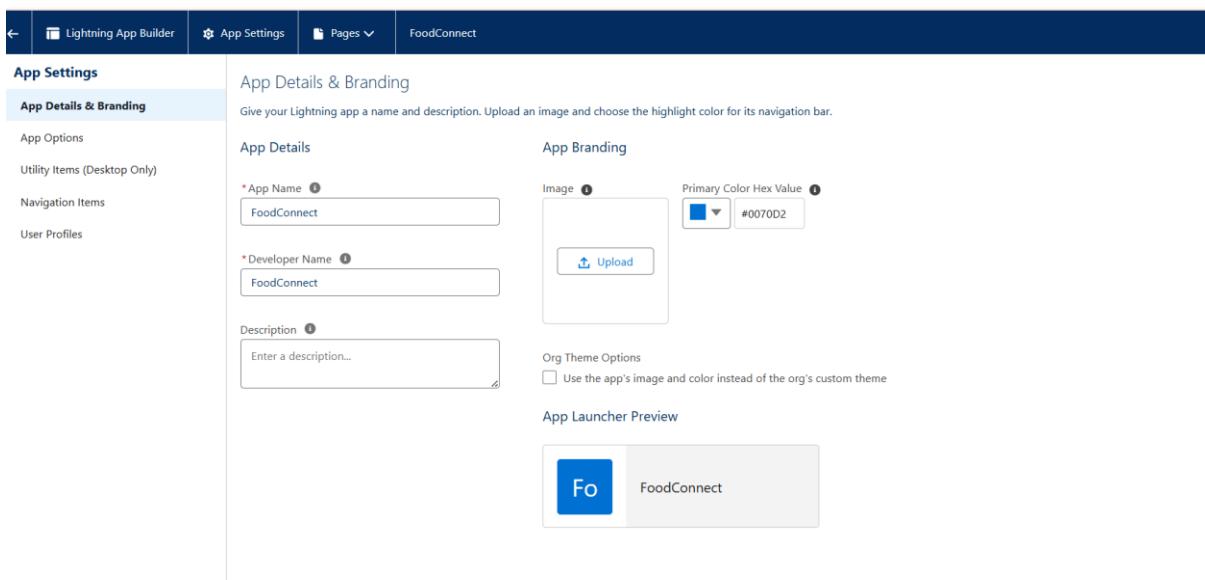


Phase 3: UI/UX Development & Customization:

Create a Lightning App

To create a lightning app page:

1. Go to setup page >> search “app manager” in quick find >> select “app manager” >> click on new lightning App.



- Fill the app name in app details and branding as follow App Name:FoodConnect Developer_Name:Thiswillautopopulated Image : optional (if you want to give any image you can otherwise not mandatory) Primary color hex value : keep this default.
- Then click Next >> (App option page) Set Navigation Style as Standard Navigation >> Next.

4. (Utility Items) keep it as default >> Next.

5. To Add Navigation Items:

Search for the item in the (Home, Venue, Drop-Off Point, Task, Volunteer, Execution Details, Reports) from the search bar and move it using the arrow button >> Next >> Next.

6. To Add User Profiles:

Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.

Creation of Report on Venue with DropOff with Volunteer

1. Go to the app (FoodConnect) >> click on the reports tab
2. Click on New Folder.

Folder Label: Custom Reports

Folder Unique Name: CustomReports

3. Open Custom Reports and click on New Report
3. Select Report Type: Venue with DropOff with Volunteer
3. Then click on Start Report.
3. In GROUP ROWS: Add Volunteer Name
3. In Columns: Add Venue Name, Drop-Off point Name, Distance.

Total Records	Total Distance
5	6,386
Subtotal	
Total (5)	

8. Now click on Save & Run.
8. Give Label as:
8. Report Name: venue and Drop Off point
8. Report Unique Name: Auto Populated
8. Click on Select Folder and select Custom Report, then click on Save.

Creation of Report on Volunteers with Execution Details and Tasks

1. Go to the app (FoodConnect) >> click on the reports tab
2. Click on Custom Reports Folder and click on New Report
3. Select Report Type: Volunteers with Execution Details and Tasks.
4. Then click on Start Report.
5. In GROUP ROWS: Volunteer ID
6. In Columns: Add Volunteer: Volunteer Name, Task: Task Name, Execution Detail : Execution Detail Name, Volunteer: Owner Name, Task: Date, Task : Rating.

The screenshot shows a report titled "Volunteer Task" within the FoodConnect application. The report displays one record with the following details:

Volunteer: ID	Volunteer: Volunteer Name	Execution Detail: Execution Detail Name	Task: Task Name	Volunteer: Owner Name	Task: Date	Task: Rating
a03g000000053xof (1)	Lalli	Food Distribution	task 1	Gali Leela Aravinda	7/15/2020	5
Subtotal						
Total (1)						

7. Now click on Save & Run.
7. Give Label as:
Report Name: Volunteer Task
Report Unique Name: Auto Populated
1. Click on Select Folder and select Custom Report, then click on Save.

Adding venue and Drop Off point Report to the Dashboard

1. Go to the app (Food Connect) >> click on the Dashboards tab.

2. Click on New Folder.

Folder Label: Custom Dashboards

Folder Unique Name: Auto Populated

3. Open Custom Dashboards and click on New Dashboards

3. Name: Organization Details

3. Click on Widget and select Chart or Table

3. In Select Report: Select venue and Drop Off point Report.

3. Then click on select

3. In Add Component:

Display As: Select Lightning Table

Component Theme: Select Dark (Optional)

1. Now click on save.

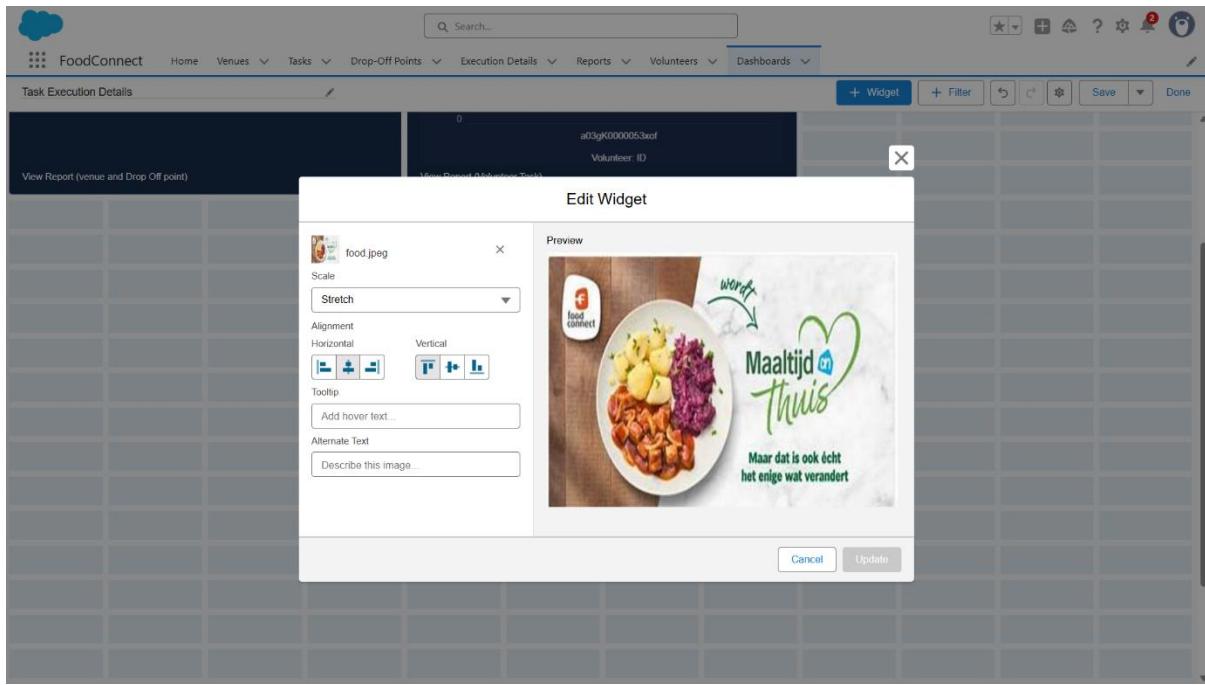
Adding Volunteer Task Report to the Dashboard

1. Click on Widget and select Chart or Table
2. In Select Report: Select Volunteer Task Report.
3. Then click on select
4. In Add Component:

Display As: Select Line Chart

Component Theme: Select Dark (Optional)

1. Now click on save.



Phase 4: Data Migration, Testing & Security

Data Loading Process:

Historical data of partner restaurants, NGOs, and past donation records was migrated into Salesforce using the Data Loader, chosen for its capability to handle bulk records and ensure referential integrity across custom objects like Food Donation, Pickup Schedule, and Distribution Record. This ensured a smooth transition from manual tracking systems to the new automated CRM.

Field History Tracking, Duplicate Rules, Matching Rules:

Field History Tracking was enabled on key objects such as Food Donation and Pickup Schedule to maintain an audit trail of critical changes like pickup time adjustments or status updates. Duplicate Rules and Matching Rules were configured on the Donor and Recipient records to prevent redundant entries and ensure that every partner is uniquely identified, thereby preserving data quality.

Profiles, Roles, Role Hierarchy, Permission Sets, Sharing Rules:

A robust security model was implemented using Salesforce Profiles and Roles. Profiles controlled baseline access for different users like restaurant managers, NGO coordinators, and volunteer drivers. A Role Hierarchy was established to allow NGO managers to view records of volunteers under them while keeping data compartmentalized across different NGOs. Permission Sets were used to grant additional privileges, such as access to dashboards for analytics teams, while Sharing Rules ensured specific records (like a Pickup Schedule) could be shared with relevant volunteers automatically.

Profiles

1. Go to setup page >> type Profiles in Quick Find bar >> click on Profiles >> click on 'S'
2. Click on Clone beside Standard Platform User.

3. Under Clone Profile:

Profile Name: NGOs Profile

4. Then click on Save

Profiles

1. Go to setup page >> type Profiles in Quick Find bar >> click on Profiles >> click on 'S'

2. Click on Clone beside Standard Platform User.

3. Under Clone Profile:

Profile Name: NGOs Profile

4. Then click on Save

The screenshot shows the Salesforce Setup interface under the 'Users' section. A specific user record is selected: 'Iksha Foundation Iksha_Foundation'. The 'User Detail' section shows the following information:

Name	Iksha Foundation Iksha_Foundation	Role	Salesforce Platform
Alias	iksh	User License Profile	NGOs Profile
Email	aravindateela@gmail.com (Verify)	Active	<input checked="" type="checkbox"/>
Username	ikshaleela@sb.com	Marketing User	<input type="checkbox"/>
Nickname	User17527197781796451891	Offline User	<input type="checkbox"/>
Title		Knowledge User	<input type="checkbox"/>
Company		Flow User	<input type="checkbox"/>
Department		Service Cloud User	<input type="checkbox"/>
Division		Site.com Contributor User	<input type="checkbox"/>
Address		Site.com Publisher User	<input type="checkbox"/>
Time Zone	(GMT-07:00) Pacific Daylight Time (America/Los_Angeles)	WDC User	<input type="checkbox"/>
Locale	English (United States)	Mobile Push Registrations	<input type="checkbox"/>
Language	English	Data.com User Type	<input type="checkbox"/>
Delegated Approver		Accessibility Mode (Classic Only)	<input type="checkbox"/>
Manager		Debug Mode	<input type="checkbox"/>
Receive Approval Request Emails	Only if I am an approver	High-Contrast Palette on Charts	<input type="checkbox"/>
Federation ID		Load Lightning Pages While Scrolling	<input checked="" type="checkbox"/>
App Registration: One-Step Standard Authentication	<input type="checkbox"/>	Salesforce CRM Content User	<input checked="" type="checkbox"/>
App Registration: Salesforce Authenticator	<input type="checkbox"/>	Receive Salesforce CRM Content Email Alerts	<input checked="" type="checkbox"/>
Security Key (2F or WebAuthn)	<input type="checkbox"/>	Receive Salesforce CRM Content Alerts as Daily Digest	<input checked="" type="checkbox"/>
Lightning Login	<input type="checkbox"/>		

Creation of User2, User3

1. Create another Two Users by following steps in Activity - 1 with similar User License and Profile.

2. Give Different First Name, Last Name based on Different NGO's.

Creation of sharing rules

1. Go to setup >> type Sharing Settings in quick find box >> Click on the Sharing Settings.
2. Scroll down and find Drop-Off point Sharing Rules.
3. Click on new near Drop-Off point Sharing Rules and Name it as:

Label: Rule 1

Rule Name: Rule_1

4. Select your rule type: Select Based on criteria.
4. Select which records to be shared:

- Field: Operator: Value = Distance: less than: 15
6. Select the users to share with: Near Share With
Public Groups: Iksha
 7. Click on Save.
 7. Click on new near Drop-Off point Sharing Rules and Name it as:
Label: Rule 2
Rule Name: Rule_2
 9. Select your rule type: Select Based on criteria.
 9. Select which records to be shared:
Field: Operator: Value = Distance: greater than: 15
Field: Operator: Value = Distance: less or equal: 30
 11. Select the users to share with: Near Share With
Public Groups: NSS
 12. Click on Save.
 12. Click on new near Drop-Off point Sharing Rules and Name it as:
Label: Rule 3
Rule Name: Rule_3
 14. Select your rule type: Select Based on criteria.
 14. Select which records to be shared:
Field: Operator: Value = Distance: greater than: 30
Field: Operator: Value = Distance: less or equal: 50
 16. Select the users to share with: Near Share With
Public Groups: Street Cause
 17. Click on Save.

Phase 5: Deployment, Documentation & Maintenance

Deployment Strategy:

The deployment of the FOODCONNECT CRM from the sandbox environment to production was carried out using **Change Sets**, which facilitated secure and organized migration of metadata components including custom objects, fields, validation rules, flows, and Apex code. This method ensured that all dependencies were properly packaged and tested before final deployment, minimizing the risk of disruptions in the live environment.

System Maintenance and Monitoring:

The CRM is designed for ease of ongoing maintenance. Scheduled reports and dashboards help monitor daily operations, highlighting metrics like pending pickups and distributions completed. Regular data quality reviews are performed to identify duplicates or

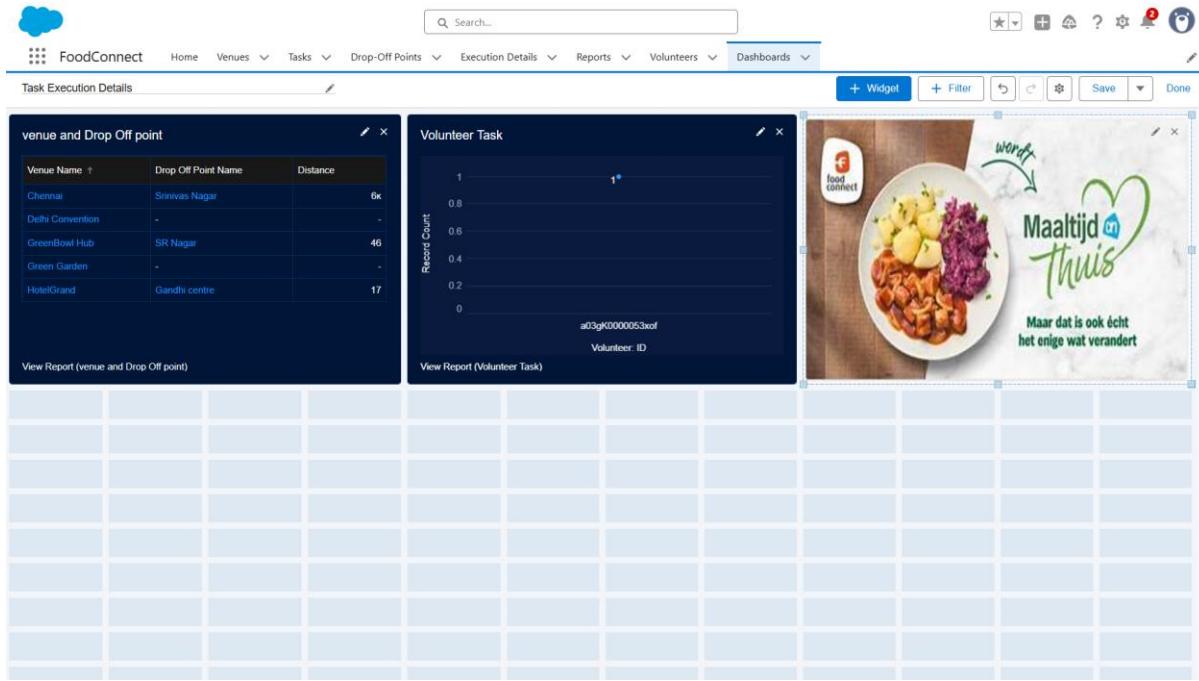
This screenshot shows the FoodConnect CRM interface for the 'Green Garden' venue. The top navigation bar includes links for Home, Venues, Tasks, Drop-Off Points, Execution Details, Reports, Volunteers, and Dashboards. A search bar and various system icons are also present. The main content area displays the venue details under the 'Details' tab, including the venue name (Green Garden), contact email (greengarden@example.com), location (16,5451, 17,5451), and creation information (Gali Leela Aravinda, 7/19/2025, 9:45 AM). The 'Activity' tab is open, showing a grid of icons for different actions like calls, emails, and tasks. A message indicates 'No activities to show.' Below this, sections for 'Upcoming & Overdue' and 'Past activity' are shown, both stating 'No past activity. Past meetings and tasks marked as done show up here.'

requirements. Any required enhancements or new features will be safely developed and tested in sandbox environments before being pushed to production.

This screenshot shows the FoodConnect CRM interface for the 'Delhi Convention' venue. The layout is identical to the previous screenshot, with the same navigation bar and search functionality. The 'Details' tab for the 'Delhi Convention' venue shows its name, contact email (delhiconvention@example.com), location (28,6139, 77,209), and creation information (Gali Leela Aravinda, 7/19/2025, 8:27 AM). The 'Activity' tab is also visible, showing no current activities and no past activity.

The screenshot shows the FoodConnect software interface for managing venues. The top navigation bar includes links for Home, Venues, Tasks, Drop-Off Points, Execution Details, Reports, Volunteers, and Dashboards. A search bar and various system icons are also present. The main content area is titled "Venue HotelGrand". It features a "Details" tab with fields for Venue Name (HotelGrand), Contact Email (hotelgrand@hyderabad.com), Contact Phone ((785) 124-8632), Location (17.5547, 23.4544), and Venue Location (Gandhi Centre, Hyderabad). The "Owner" field is populated with "Gali Leela Aravinda". The "Created By" field shows "Gali Leela Aravinda" from 7/19/2025, 8:17 AM. The "Last Modified By" field also shows "Gali Leela Aravinda" from the same date and time. On the right side, there is an "Activity" section with a toolbar for filtering and viewing activities. It displays a message stating "No activities to show. Get started by sending an email, scheduling a task, and more." Below this, another message says "No past activity. Past meetings and tasks marked as done show up here."

This screenshot shows the FoodConnect software interface for managing venues, similar to the previous one but for a different venue. The top navigation bar and search bar are identical. The main content area is titled "Venue GreenBowl Hub". The "Details" tab displays fields for Venue Name (GreenBowl Hub), Contact Email (greenbowl.guntur@foodconnect.in), Contact Phone ((895) 476-6557), Location (16.3067, 80.4365), and Venue Location (Arundelpet, Guntur). The "Owner" field is again "Gali Leela Aravinda". The "Created By" field shows "Gali Leela Aravinda" from 7/19/2025, 8:06 AM. The "Last Modified By" field shows "Gali Leela Aravinda" from the same date and time. The "Activity" section on the right is identical to the first, showing no activities or past activity.



Troubleshooting Approach:

A systematic troubleshooting guide is maintained to resolve common issues such as failed pickups, notification errors, or data mismatches. Debug logs are reviewed to trace problems in Apex triggers or automation flows. Additionally, the CRM documentation includes details of object relationships, business logic, and error messages to assist technical teams in quickly diagnosing and fixing problems. This structured approach ensures system stability and minimizes downtime, supporting the mission of timely delivery of leftover food to the needy.

Conclusion:

The **FOODCONNECT** platform, built on Salesforce CRM, serves as a powerful catalyst in the fight against food waste and hunger. By automating end-to-end workflows—from collecting surplus food to coordinating distribution—the system eliminates manual bottlenecks and ensures timely delivery to communities in need. Leveraging structured data models and automated flows creates a single source of truth for food donation lifecycle tracking. This real-time visibility enhances trust and accountability across donors, volunteers, and recipients. Just as leading nonprofits use Salesforce to cultivate supporters, FOODCONNECT sends mission-critical updates and reminders, boosting volunteer participation and deepening donor relationships. By adopting a modular, Cloud-driven architecture, this solution supports easy inclusion of new donors, NGOs, and volunteers—mirroring best practices reported in top nonprofit CRM implementations. With foundational elements in place, it is primed to incorporate AI-driven demand forecasting, chatbot-based donor support, and personalized marketing—strategies already proven effective through Salesforce's nonprofit ecosystem.