

TO SUPPLY LEFT OVER FOOD TO POOR

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1. Project Overview

FoodConnect is a transformative initiative that tackles two pressing global issues: food waste and hunger. By leveraging cutting-edge Salesforce technology, we aim to connect surplus food from restaurants, grocery stores, events, and households with underprivileged communities in need of nourishment.

2. Objectives

At the heart of FoodConnect lies a mission to address food waste and hunger while empowering communities through efficient technology. Our objectives are crafted to deliver measurable impact and foster a culture of sharing and accountability.

Business Goals:

- A. **Reduce Food Waste:** Redirect surplus food from donors such as restaurants, grocery stores, and events to those in need, minimizing wastage and maximizing its value.
- B. **Combat Hunger:** Build a reliable network that connects food suppliers with nonprofits, shelters, and underserved communities, ensuring timely access to nutritious meals.
- A. **Streamline Operations:** Simplify and enhance volunteer coordination, task management, and communication to create a seamless experience for all stakeholders.
- B. **Promote Transparency and Accountability:** Leverage technology to provide clear tracking, reporting, and insights into food collection, distribution, and impact

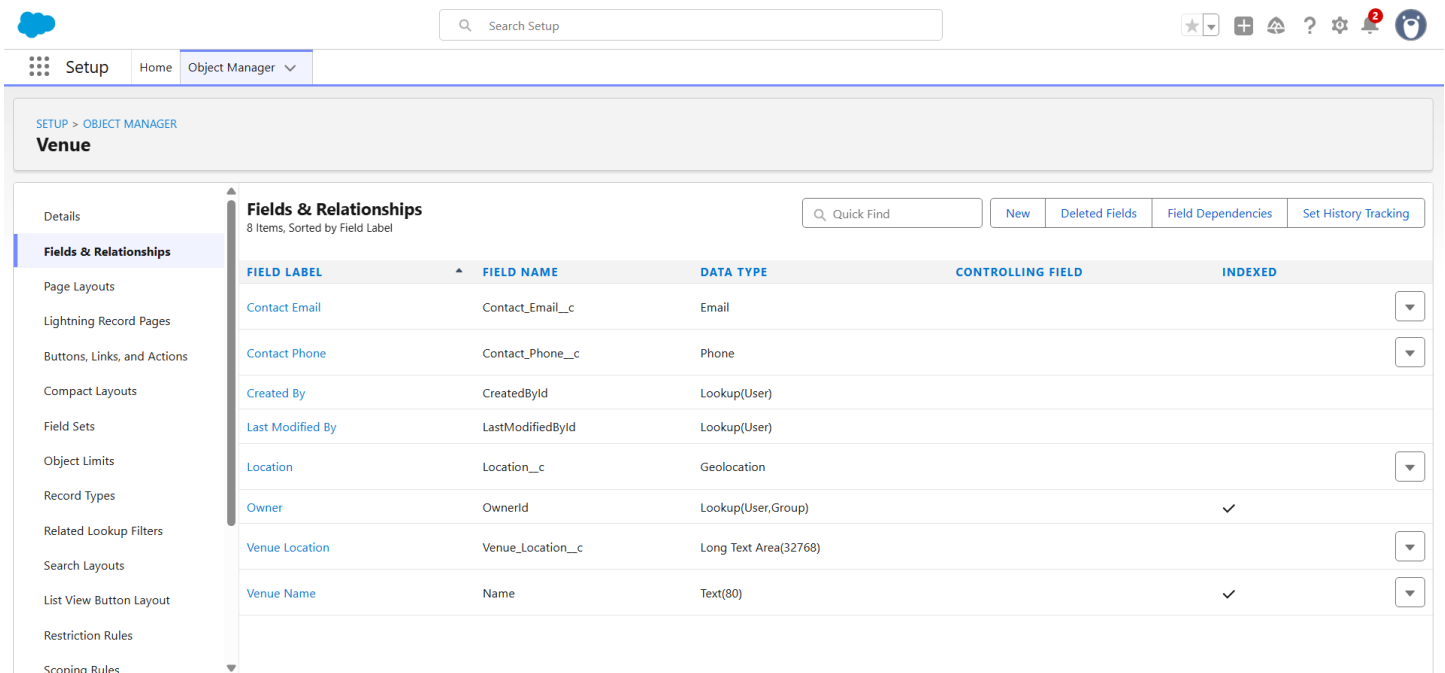
3. Salesforce Key Features and Concepts Utilized

FoodConnect leverages the power of Salesforce to create an efficient, userfriendly platform that streamlines food redistribution and volunteer management.

Here’s how we’ve utilized Salesforce features to bring this initiative to life.

Custom Objects

Venues: Store vital information about food donation locations, including address, capacity, and contact details, ensuring organized management of distribution points



The screenshot shows the Salesforce Setup interface for the 'Venue' object. The left sidebar contains a navigation menu with options like Details, 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, and Scoping Rules. The main content area is titled 'Fields & Relationships' and shows a list of 8 items, sorted by Field Label. The table below lists the fields and their properties.

FIELD LABEL	FIELD NAME	DATA TYPE	CONTROLLING FIELD	INDEXED
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)		✓

Tasks: Track and manage volunteer assignments with fields for descriptions, deadlines, and responsible individuals.

orgfarm-f7a365849c-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/011dL00000B3dUk/FieldsAndRelationships/view

Setup Home Object Manager

SETUP > OBJECT MANAGER

Task

Details

Fields & Relationships
16 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)		
Date	Date__c	Date		
Distance	Distance__c	Number(14, 4)		
Drop-Off Point	Drop_Off_Point__c	Lookup(Drop-Off Point)		✓
Feedback	Feedback__c	Long Text Area(32768)		
Food Category	Food_Category__c	Picklist (Multi-Select)		
Last Modified By	LastModifiedById	Lookup(User)		
Name of the Person	Name_of_the_Person__c	Text(30)		
Number of People Served	Number_of_People_Served__c	Number(18, 0)		

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

Drop-Off Points: Record specific delivery locations, making it easier for volunteers to plan and execute tasks effectively.

orgfarm-f7a365849c-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/011dL00000B3feb/FieldsAndRelationships/view

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	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__c	Venue__c	Lookup(Venue)		✓

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

Volunteers: Maintain a centralized database of volunteers, including their contact details, availability, and assigned tasks.

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Setup Home Object Manager

SETUP > OBJECT MANAGER
Volunteer

Details
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

Fields & Relationships
14 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)		✓
Email	Email__c	Email		
Execution ID	Execution_ID__c	Auto Number		

Execution Details: Document completed tasks, linking them to specific volunteers and drop-off points for a detailed activity history.

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Setup Home Object Manager

SETUP > OBJECT MANAGER
Execution Detail

Details
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

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)		✓

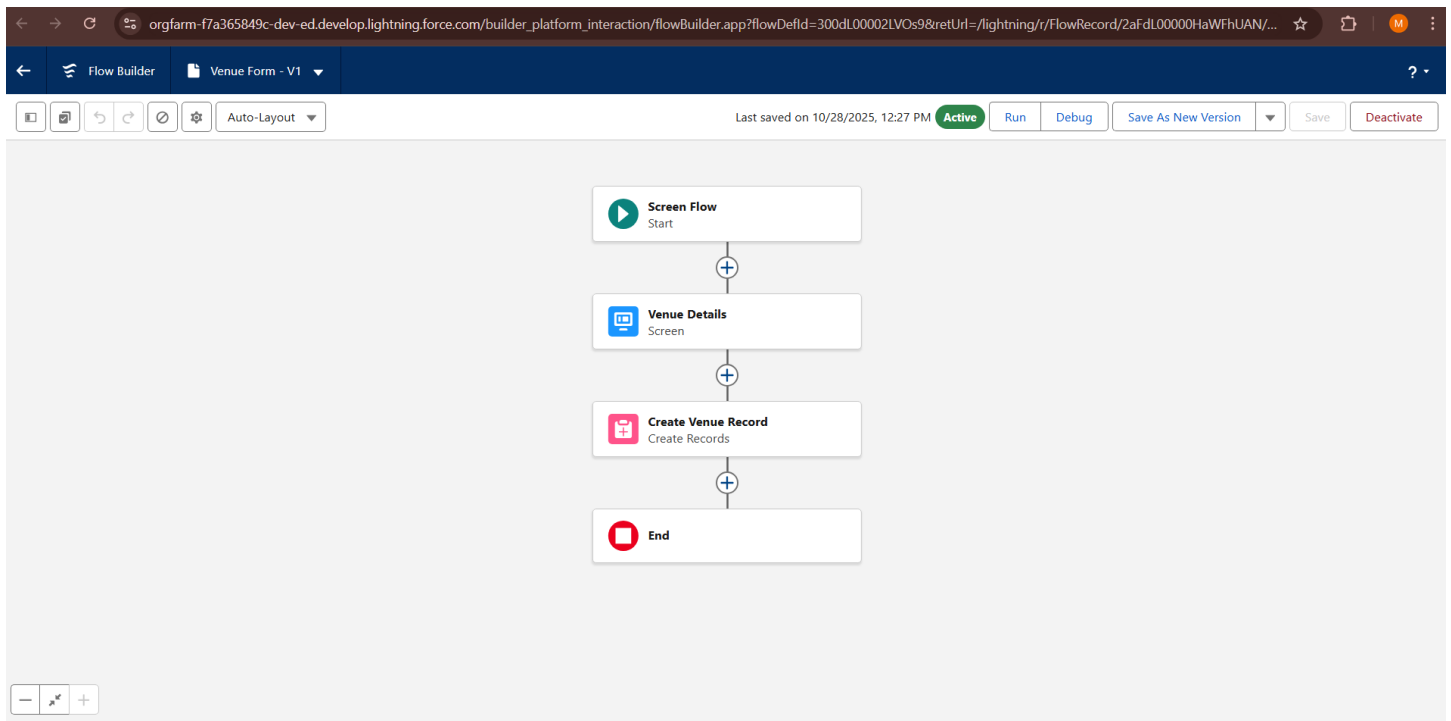
Relationships

- **Master-Detail Relationships:** Create structured connections, such as linking tasks to their execution details, ensuring data consistency and logical organization.

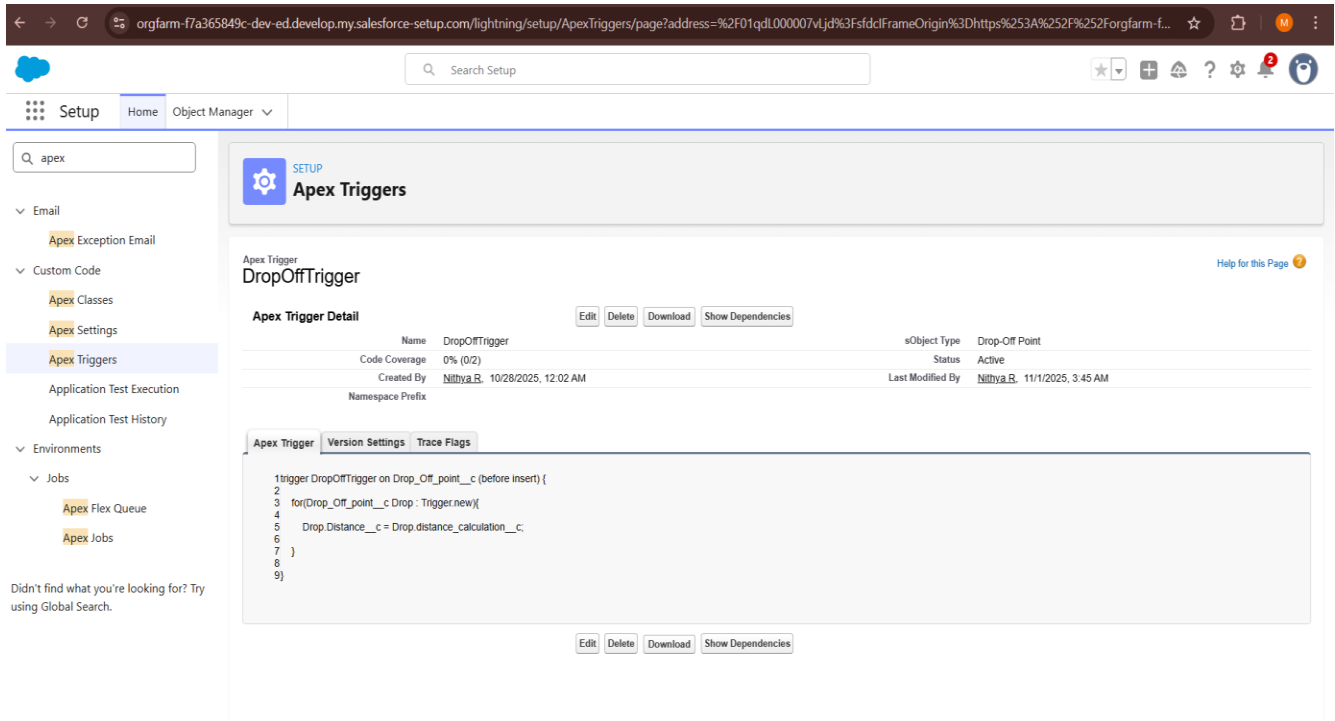
- **Lookup Relationships:** Enable flexible associations, like connecting volunteers to drop-off points, allowing for dynamic task allocation based on location and availability.

Automations and Workflows

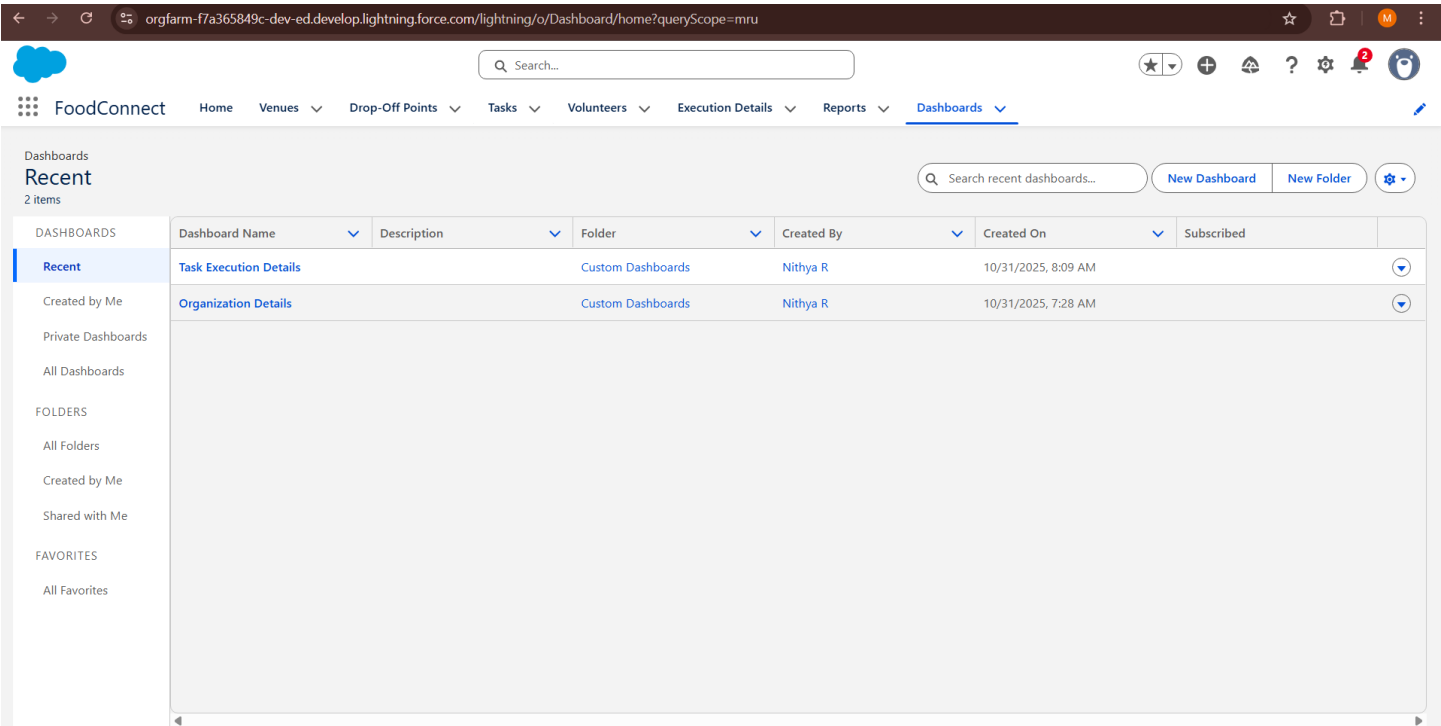
Flows: Automate processes like creating venue records or assigning tasks, guiding users through step-by-step workflows to ensure accuracy and efficiency.



Apex Triggers: Implement custom logic, such as calculating distances between venues and volunteers, to optimize task assignments and reduce delivery times.

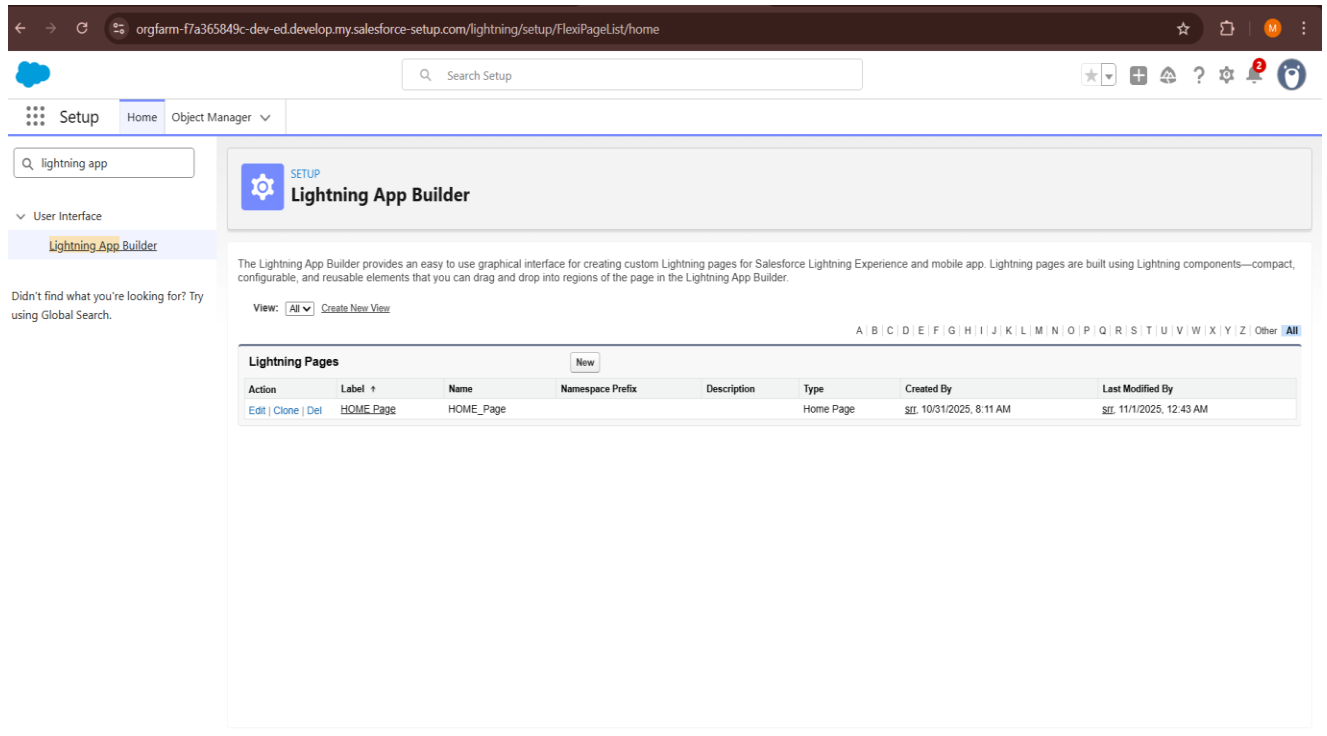


Dashboards: Provide visual representations of key data, empowering stakeholders to make informed decisions and track progress in real-time.



User Experience Enhancements

- **Lightning App:** Deliver a sleek, intuitive interface that simplifies navigation and ensures users can quickly access essential features.



Detailed Steps to Solution Design

Building FoodConnect involved a structured and thoughtful approach to ensure the platform meets the needs of donors, volunteers, and recipients while leveraging the robust capabilities of Salesforce. Below is a step-by-step breakdown of the design and implementation process:

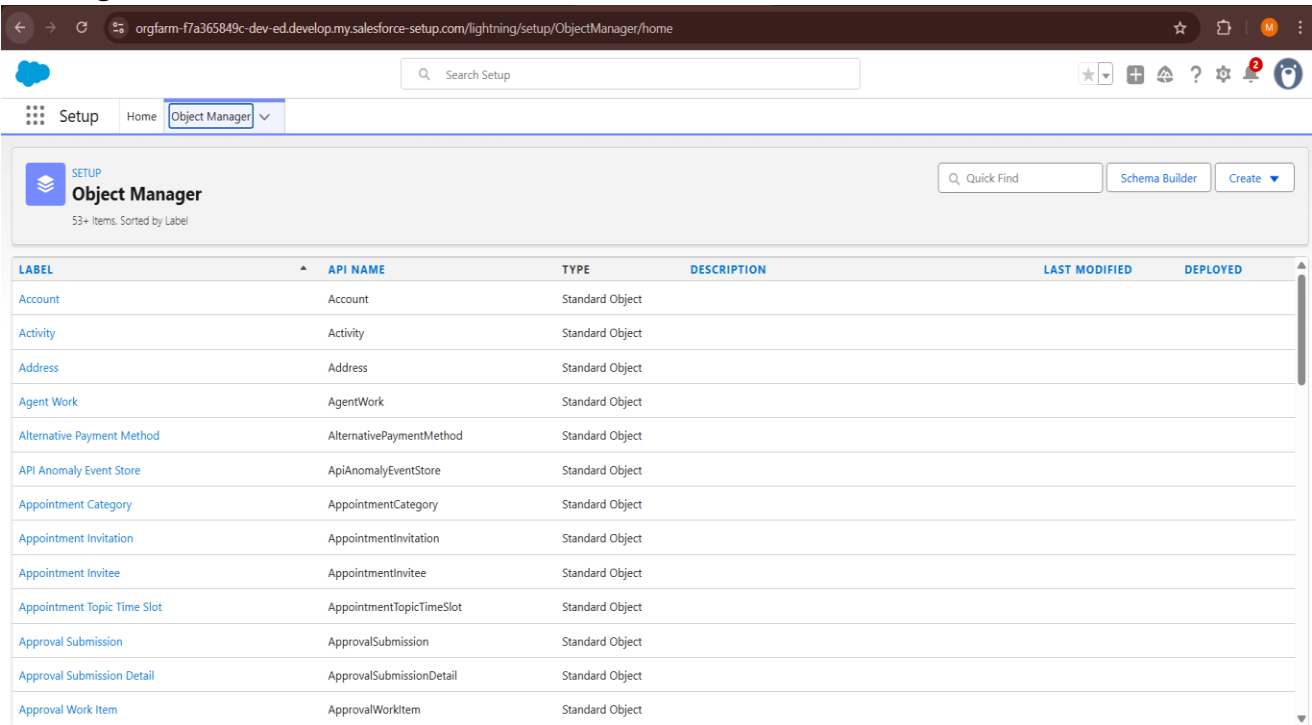
Step 1: Developer Account Setup

- Registered for a Salesforce Developer account to create a dedicated environment for development and testing.
- Verified the account to unlock full access to Salesforce features, ensuring a smooth setup process.

Step 2: Custom Object Creation

- Used Salesforce Object Manager to design custom objects for Venues, Drop-Off Points, Tasks, Volunteers, and Execution Details.

Configured fields such as text, numbers, dates, and relationships to capture all relevant data, ensuring each object reflects the real-world requirements of food distribution logistics.

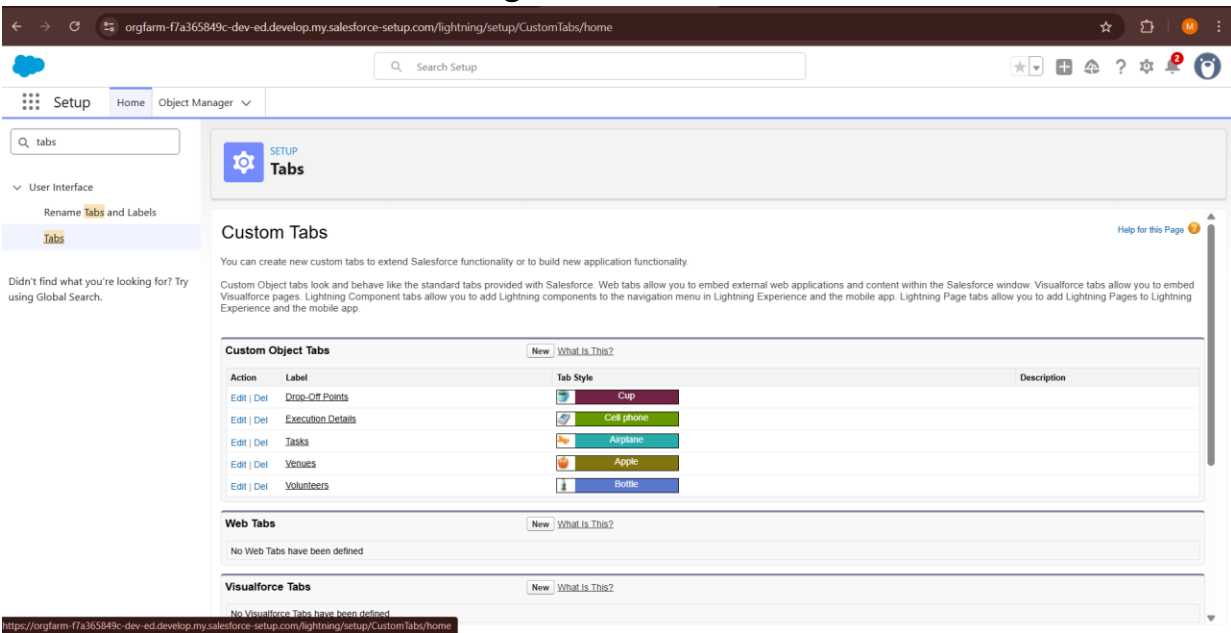


The screenshot shows the Salesforce Object Manager interface. The browser address bar displays the URL: `orgfarm-f7a365849c-dev-ed.develop.my.salesforce-setup.com/lightning/setup/ObjectManager/home`. The page header includes the Salesforce logo, a search bar, and navigation tabs for Setup, Home, and Object Manager. The main content area is titled "Object Manager" and shows a list of 53 items, sorted by label. The table below lists the first 15 items, which are all standard objects.

LABEL	API NAME	TYPE	DESCRIPTION	LAST MODIFIED	DEPLOYED
Account	Account	Standard Object			
Activity	Activity	Standard Object			
Address	Address	Standard Object			
Agent Work	AgentWork	Standard Object			
Alternative Payment Method	AlternativePaymentMethod	Standard Object			
API Anomaly Event Store	ApiAnomalyEventStore	Standard Object			
Appointment Category	AppointmentCategory	Standard Object			
Appointment Invitation	AppointmentInvitation	Standard Object			
Appointment Invitee	AppointmentInvitee	Standard Object			
Appointment Topic Time Slot	AppointmentTopicTimeSlot	Standard Object			
Approval Submission	ApprovalSubmission	Standard Object			
Approval Submission Detail	ApprovalSubmissionDetail	Standard Object			
Approval Work Item	ApprovalWorkItem	Standard Object			

Step 3: Custom Tabs for Navigation

- Created custom tabs for each object, improving navigation and making it easier for users to access and manage data.

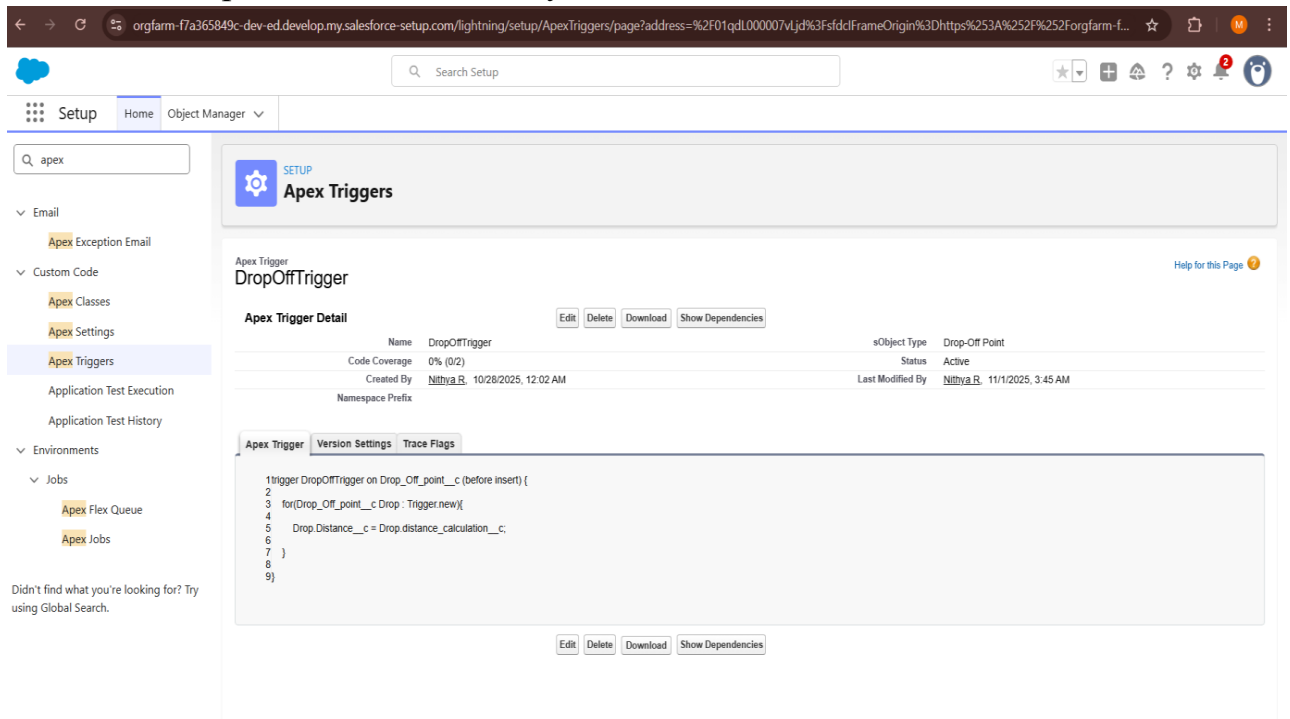


The screenshot shows the Salesforce Custom Tabs interface. The browser address bar displays the URL: `orgfarm-f7a365849c-dev-ed.develop.my.salesforce-setup.com/lightning/setup/CustomTabs/home`. The page header includes the Salesforce logo, a search bar, and navigation tabs for Setup, Home, Object Manager, and Custom Tabs. The main content area is titled "Custom Tabs" and provides instructions on how to create custom tabs. Below the instructions, there are three sections: Custom Object Tabs, Web Tabs, and Visualforce Tabs. The Custom Object Tabs section shows a table with 5 rows, each representing a custom object tab. The Web Tabs and Visualforce Tabs sections are currently empty.

Action	Label	Tab Style	Description
Edit Del	Drop-Off Points	Cup	
Edit Del	Execution Details	Cell phone	
Edit Del	Tasks	Airplane	
Edit Del	Venues	Apple	
Edit Del	Volunteers	Bottle	

Step 4: Lightning App Development

- Developed a Lightning App named "FoodConnect" using Salesforce App Manager.
- Included essential navigation items like custom objects, reports, and dashboards to provide a user-friendly interface.



-
- Assigned user profiles to ensure role-based access and security

Step 5: Establishing Data Relationships

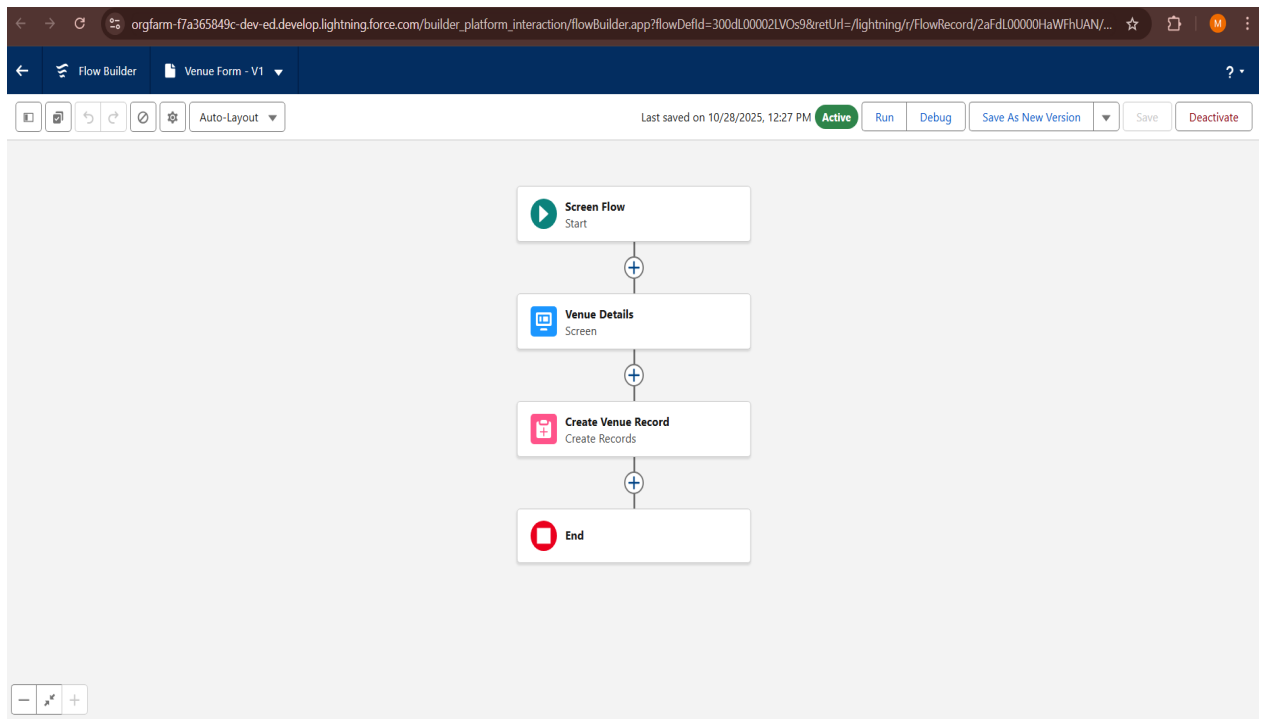
- Defined relationships between objects using Master-Detail and Lookup fields.
For example:
 - Master-Detail between Tasks and Execution Details to track completed activities.
 - Lookup between Volunteers and Drop-Off Points to assign tasks efficiently.

Step 6: Field Configuration

- Configured fields for each custom object to capture data accurately. For instance:
 - Venue: Name, Address, Capacity, Contact Information.
 - Tasks: Description, Due Date, Assigned Volunteer
 - Volunteers: Contact Details, Availability.

Step 7: Flow Design

- Designed a guided screen flow to simplify the process of entering Venue information.
- Automated record creation to ensure



data accuracy and reduce manual errors

Step 8: Trigger Implementation

- Developed Apex triggers to enhance automation, such as calculating distances between venues and volunteers.
- These triggers help assign tasks based on proximity, improving logistical efficiency

Setup

Home

Object Manager

apex

Email

Custom Code

Apex Classes

Apex Settings

Apex Triggers

Application Test Execution

Application Test History

Environments

Jobs

Apex Exception Email

Apex Flex Queue

Apex Jobs

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SETUP

Apex Triggers

Apex Trigger

DropOffTrigger

Help for this Page

Apex Trigger Detail

Edit

Delete

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Show Dependencies

Name	DropOffTrigger	sObject Type	Drop-Off Point
Code Coverage	0% (0/2)	Status	Active
Created By	Nithya R. 10/28/2025, 12:02 AM	Last Modified By	Nithya R. 11/1/2025, 3:45 AM
Namespace Prefix			

Apex Trigger

Version Settings

Trace Flags

```
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 }
```

Edit

Delete

Download

Show Dependencies

Step 9: User Management and Permissions

- Set up user profiles for administrators, volunteers, and other stakeholders.
- Configured permissions to ensure secure and role-appropriate access to data and functionalities.

Step 10: Reporting and Dashboards

- Created custom report types to analyze key metrics, such as volunteer participation, task completion rates, and food distribution impact.
- Built interactive dashboards to visualize data trends and provide actionable insights, empowering stakeholders to make informed decisions

Key Scenarios Addressed by Salesforce in the Implementation Project

The FoodConnect project leverages Salesforce's capabilities to address a variety of real-world scenarios, ensuring efficient food redistribution and volunteer management. Below are the key scenarios tackled during the implementation:

Salesforce can handle during the implementation.

Efficient Management of Food Donation Venues

- Scenario: A donor provides surplus food, and the details of the donation venue need to be recorded accurately.
- Salesforce Solution: Custom objects and fields were created to capture critical venue details, including name, address, capacity, and contact information, ensuring seamless record-keeping and accessibility.

Task Assignment and Tracking for Volunteers

- Scenario: Volunteers need to be assigned tasks based on their availability and proximity to venues or drop-off points
- Salesforce Solution: Using Master-Detail relationships and Apex triggers, tasks are automatically assigned to the most suitable volunteers, and progress is tracked in real-time through the Tasks object.

Coordination of Food Drop-Off Points

- Scenario: Food needs to be delivered to designated drop-off points efficiently and reliably.
- Salesforce Solution: Drop-Off Points were managed as a custom object, with detailed fields for location, capacity, and operational hours, enabling smooth coordination and tracking.

Volunteer Engagement and Management

- Scenario: Volunteers need to view their assignments, update their availability, and track their contributions.
- Salesforce Solution: A Volunteers object with a user-friendly interface allows volunteers to manage their profiles and view task details, enhancing engagement and retention.

Real-Time Communication and Notifications

- Scenario: Stakeholders require updates on task assignments, delivery schedules, or any changes in plans.
- Salesforce Solution: Automated workflows and notifications ensure that all participants are informed promptly, reducing delays and misunderstandings.

Data Integrity and Reporting

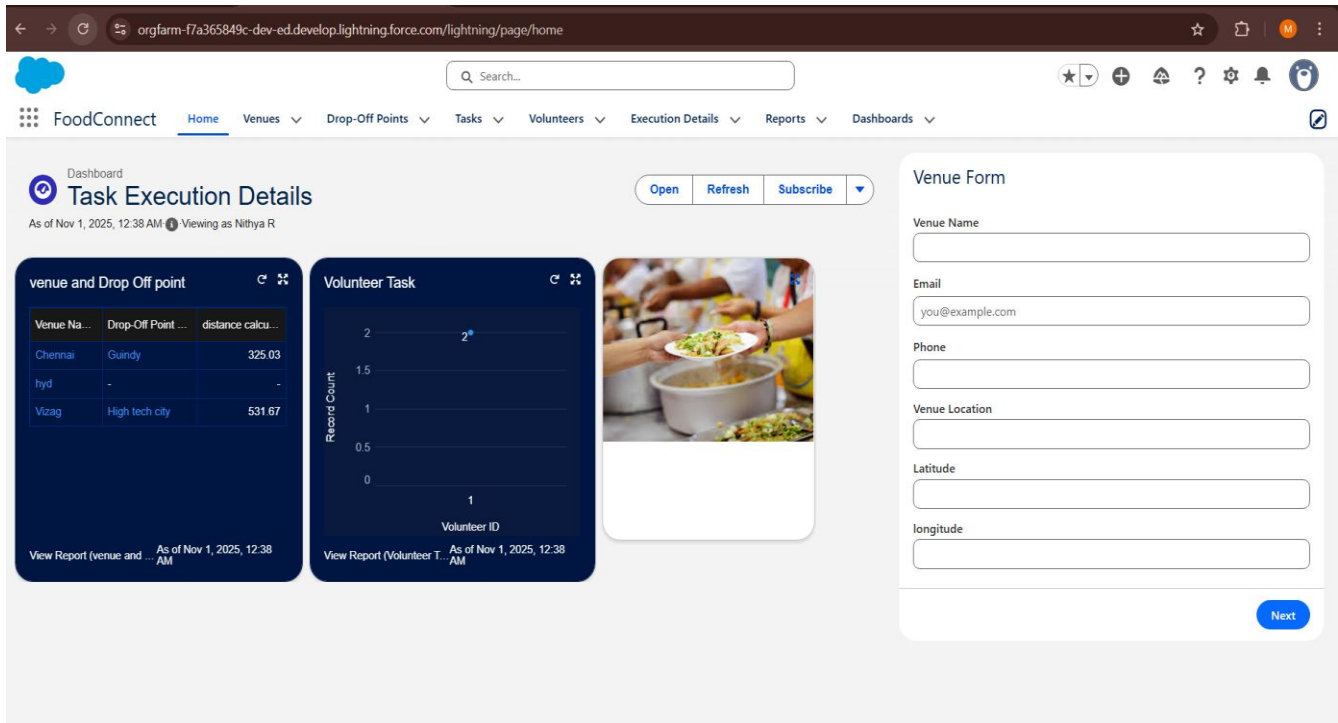
- Scenario: Stakeholders need to analyze the impact of food distribution efforts and identify areas for improvement.
- Salesforce Solution: Custom report types and dashboards provide actionable insights into task completion rates, volunteer participation, and food distribution metrics, ensuring data-driven decision-making.

Automation of Logistical Calculations

- Scenario: Volunteers need to be assigned to venues or drop-off points based on proximity to minimize travel time and enhance efficiency.
- Salesforce Solution: Apex triggers calculate distances between venues and volunteers, automating task assignments and optimizing logistics.

2. Secure and Role-Based Data Access

- Scenario: Different stakeholders require access to specific information based on their roles.
- Salesforce Solution: Profiles, sharing rules, and public groups ensure that users only access data relevant to their roles, maintaining security and confidentiality.



Conclusion

Summary of Achievements:

The FoodConnect project successfully delivered a comprehensive solution to address food waste and hunger by leveraging the power of Salesforce technology. Key accomplishments include:

- **Streamlined Food Distribution:** Developed a robust system to manage the collection, allocation, and delivery of surplus food to underserved communities.
- **Enhanced Volunteer Management:** Implemented efficient task assignment and tracking mechanisms to optimize volunteer engagement and contributions.
- **Data-Driven Insights:** Created detailed reports and dashboards, providing actionable insights into food redistribution metrics, volunteer participation, and overall impact.
- **User-Friendly Interface:** Designed an intuitive Lightning App, ensuring a seamless experience for all users, including donors, volunteers, and administrators.

- **Operational Efficiency:** Automated workflows and triggers to reduce manual effort, improve accuracy, and ensure timely execution of tasks.

