

# **KG COLLEGE OF ARTS & SCIENCE**

## **LEFTOVER FOOD SUPPLY MANAGEMENT SYSTEM**

### **1.INTRODUCTION**

#### **1.1PROJECT OVERVIEW**

The Leftover Food Supply Management System is a Salesforce-based application designed to facilitate the efficient collection and distribution of surplus food to underserved communities. It connects donors with drop-off points and volunteers to ensure timely and hygienic delivery. The system is built to streamline key operations such as donor registration, volunteer task assignment, and delivery tracking. To enhance efficiency and accountability, the application utilizes Salesforce automation tools like Flows, Approval Processes, and Email Alerts.

#### **1.2PURPOSE**

The primary goal of this project is to empower organizations to efficiently manage the collection and distribution of surplus food. The system aims to reduce manual effort, improve the accuracy of tracking, and ensure timely coordination among donors, volunteers, and drop-off points.

Of course, Hem. Here is a structured outline for a document on a "Leftover Food Supply Management System," including the sections you requested for the beginning and the end.

## 1.3 PROBLEM STATEMENT

The core problem is the inefficient and unorganized management of surplus food.

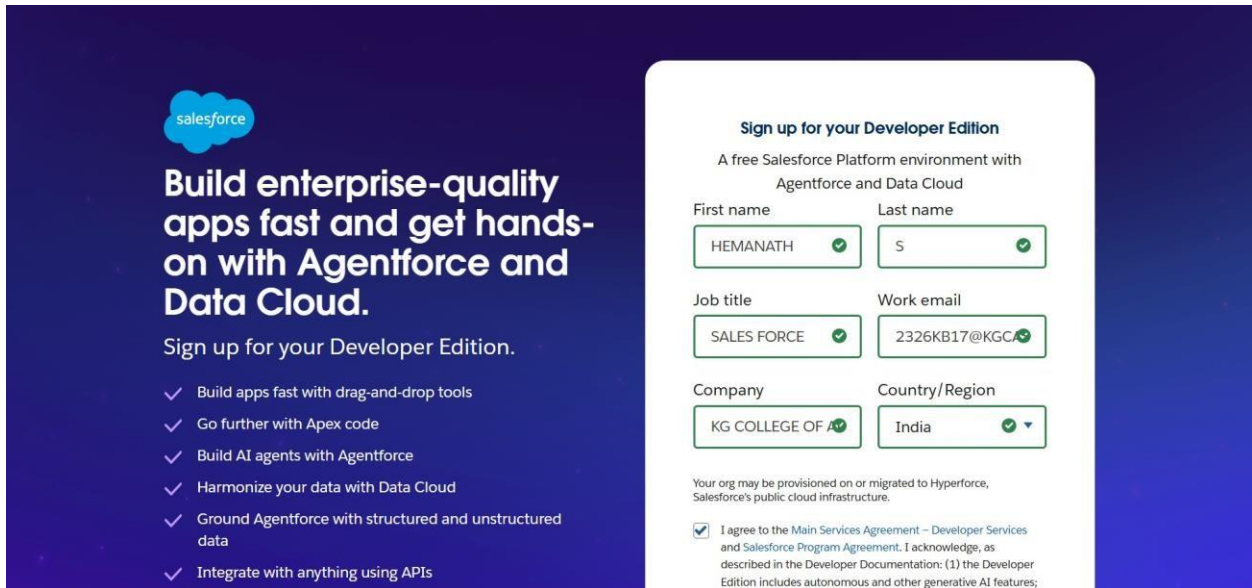
Key challenges include:

- **LACK OF REAL-TIME INFORMATION:** Food donors (e.g., restaurants) have no immediate way to communicate the availability of surplus food to potential recipients (e.g., NGOs, shelters).
- **LOGISTICAL HURDLES:** There is no coordinated system for the timely pickup and delivery of perishable food, leading to spoilage.
- **FOOD SAFETY AND QUALITY CONCERNS:** Recipients have concerns about the safety and hygiene of leftover food, and donors fear liability issues.
- **SCALABILITY ISSUES:** Existing manual efforts by individual organizations are often limited in their geographical reach and cannot scale effectively to meet the demand.
- **DATA AND ANALYTICS GAP:** There is a lack of data on food waste hotspots, donation patterns, and demand, which prevents strategic planning and optimization.

# DEVELOPMENT PHASE

## Creating Developer Account:

By using this URL - <https://www.salesforce.com/form/developer-signup/?d=pb>



The image shows the Salesforce Developer Edition signup form. On the left, a blue banner with the Salesforce logo says "Build enterprise-quality apps fast and get hands-on with Agentforce and Data Cloud. Sign up for your Developer Edition." Below this are five bullet points: "Build apps fast with drag-and-drop tools", "Go further with Apex code", "Build AI agents with Agentforce", "Harmonize your data with Data Cloud", and "Ground Agentforce with structured and unstructured data". On the right, the form is titled "Sign up for your Developer Edition" and describes it as "A free Salesforce Platform environment with Agentforce and Data Cloud". The form fields are: First name (HEMANATH), Last name (S), Job title (SALES FORCE), Work email (2326KB17@KGC), Company (KG COLLEGE OF), and Country/Region (India). A checkbox at the bottom is checked, indicating agreement to the Main Services Agreement and Salesforce Program Agreement. A note at the bottom states: "Your org may be provisioned on or migrated to Hyperforce, Salesforce's public cloud infrastructure."

**Sign up for your Developer Edition**

A free Salesforce Platform environment with Agentforce and Data Cloud

First name: HEMANATH ✓ Last name: S ✓

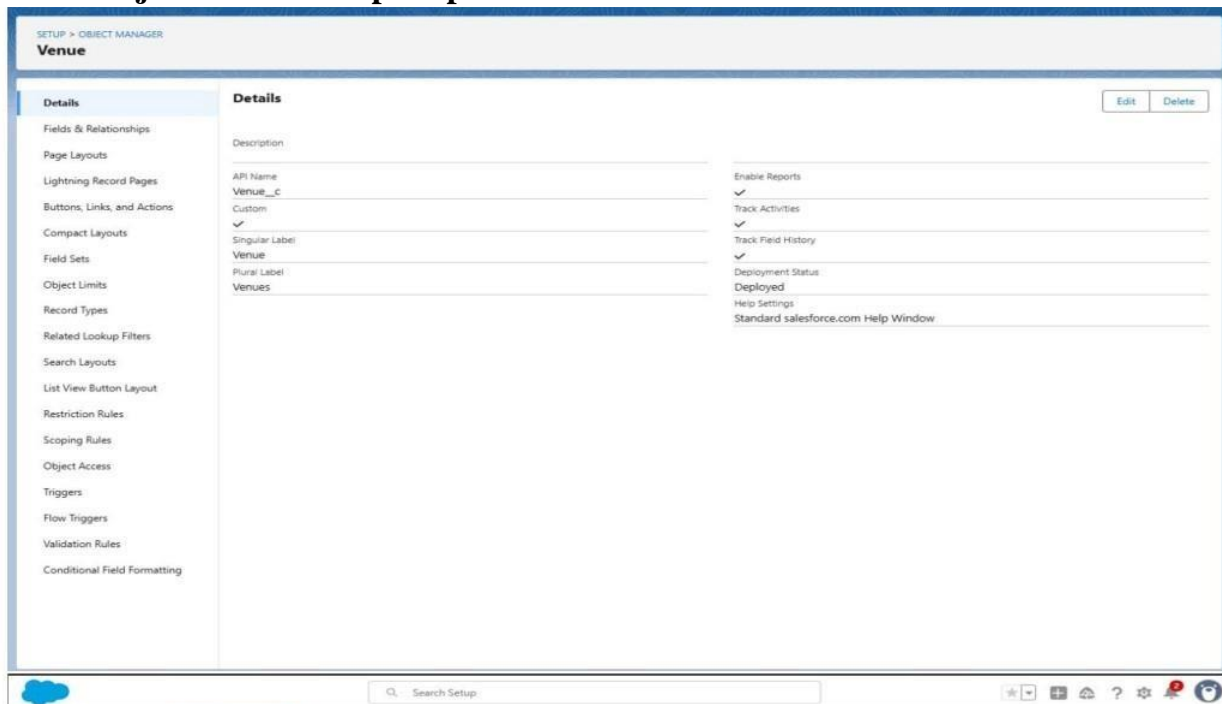
Job title: SALES FORCE ✓ Work email: 2326KB17@KGC ✓

Company: KG COLLEGE OF ✓ Country/Region: India ✓

☒ I agree to the Main Services Agreement – Developer Services and Salesforce Program Agreement. I acknowledge, as described in the Developer Documentation: (1) the Developer Edition includes autonomous and other generative AI features;

Your org may be provisioned on or migrated to Hyperforce, Salesforce's public cloud infrastructure.

## Created objects: venue drop off point task volunteer execution details:



The image shows the Salesforce Setup page for the 'Venue' object. The left sidebar contains a list of setup options: 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, Object Access, Triggers, Flow Triggers, Validation Rules, and Conditional Field Formatting. The main area is titled 'Details' and contains the following information: Description (empty), API Name (Venue\_\_c), Custom (checked), Singular Label (Venue), Plural Label (Venues), Enable Reports (checked), Track Activities (checked), Track Field History (checked), Deployment Status (Deployed), Help Settings, and Standard salesforce.com Help Window. At the bottom, there is a search bar and a row of icons.

SETUP > OBJECT MANAGER

**Venue**

**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

Object Access

Triggers

Flow Triggers

Validation Rules

Conditional Field Formatting

**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

Search Setup

Setup > Object Manager

Drop-Off Point

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

Object Access

Triggers

Flow Triggers

Validation Rules

Conditional Field Formatting

Details

Description

API Name

Drop\_Off\_Point\_\_c

Custom

✓

Singular Label

Drop-Off Point

Plural Label

Drop-Off Points

Enable Reports

✓

Track Activities

✓

Track Field History

✓

Deployment Status

Deployed

Help Settings

Standard salesforce.com Help Window

EditDelete

Setup > Object Manager

Task

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

Object Access

Triggers

Flow Triggers

Validation Rules

Conditional Field Formatting

Details

Description

API Name

Task\_\_c

Custom

✓

Singular Label

Task

Plural Label

Tasks

Enable Reports

✓

Track Activities

✓

Track Field History

✓

Deployment Status

Deployed

Help Settings

Standard salesforce.com Help Window

EditDelete



## Volunteer

### Details

### Fields & Relationships

Page Layouts

Lightning Record Pages

### Buttons, Links, and Actions

### Compact Layouts

### Field Sets

Object Link

### Record Types

### Related Lookup Filters

Search Layouts

List View Button Layout

### Restriction Rules

### Scoping Rules

### Object Access

### Triggers

### Flow Triggers

### Validation Rules

### Conditional Field Formatting

### Details

Description

API Name

Custom



Volunteer

Plural Label  
voluntarism

Enable Reports

Track Activities

✓

✓

Deployment Status  
Deployed[Help Settings](#)

Standard salesforce.com Help Window

Edit

Delete

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
- Object Access
- Triggers
- Flow Triggers
- Validation Rules
- Conditional Field Formatting

**Details**

EditDelete

Description

API Name  
Execution\_Detail\_\_c

Custom  
✓

Singular Label  
Execution Detail

Plural Label  
Execution Details

Enable Reports  
✓

Track Activities  
✓

Track Field History  
✓

Deployment Status  
Deployed

Help Settings  
Standard salesforce.com Help Window

https://orgfami-0e04b032a4-dev-ed.develop.lightning.force.com/one.ap...

## Configured fields and relationships

Setup Home Object Manager

SETUP > OBJECT MANAGER

### Venue

**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
- Object Access
- Triggers
- Flow Triggers
- Validation Rules
- Conditional Field Formatting

**Fields & Relationships**

Quick FindNewDeleted FieldsField DependenciesSet History Tracking

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)		✓

Setup

Home

Object Manager

Search Setup

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	CreatedBy	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)		✓

Setup

Home

Object Manager

Search Setup

Setup > OBJECT MANAGER

Task

Details

Details

Edit

Delete

Description

API Name: Task\_\_c

Custom

Singular Label: Task

Plural Label: Tasks

Enable Reports

Track Activities

Track Field History

Deployment Status: Deployed

Help Settings

Standard salesforce.com Help Window

Setup

Home

Object Manager

Search Setup

SETUP > OBJECT MANAGER

Task

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

Object Access

Triggers

Flow Triggers

Validation Rules

Conditional Field Formatting

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
Created By	CreatedBy	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(200)		
Number of People Served	Number_of_People_Served__c	Number(18, 0)		
Owner	OwnerId	Lookup(User,Group)		
Phone	Phone__c	Phone		
Rating	Rating__c	Picklist		
Sponsored By	Sponsored_By__c	Lookup(Venue)		
Task ID	Task_ID__c	Auto Number		
Task Name	Name	Text(80)		



Setup

Home

Object Manager

Search Setup

Star

Plus

Help

Settings

Notifications

Profile

SETUP > OBJECT MANAGER

Execution Detail

Details

Fields & Relationships

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)		<input checked="" type="checkbox"/>
Last Modified By	LastModifiedById	Lookup(User)		
Task	Task_c	Master-Detail(Task)		<input checked="" type="checkbox"/>
Volunteer	Volunteer__c	Master-Detail(Volunteer)		<input checked="" type="checkbox"/>

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

Validation Rules

Conditional Field Formatting

Search Setup

Star

Plus

Help

Settings

Notifications

Profile

New Lightning App

App Options

Navigation and Form Factor

Navigation Style

☒ Standard navigation

☐ Console navigation

Supported Form Factors

☒ Desktop and phone

☐ Desktop

☐ Phone

Setup and Personalization

Setup Experience

☒ Setup (full set of Setup options)

☐ Service Setup

App Personalization Settings

☐ Disable end user personalization of nav items in this app

☐ Disable temporary tabs for items outside of this app

Back

Next

Salesforce Branding

12 Queue Management

QueueManagement

Create and manage queues for your business.

22/08/2023, 12:06 pm

Lightning

✓

Salesforce Navigation

12 Sales

Sales

The world's most popular sales force automation (SFA) solution

22/08/2023, 12:06 pm

Classic

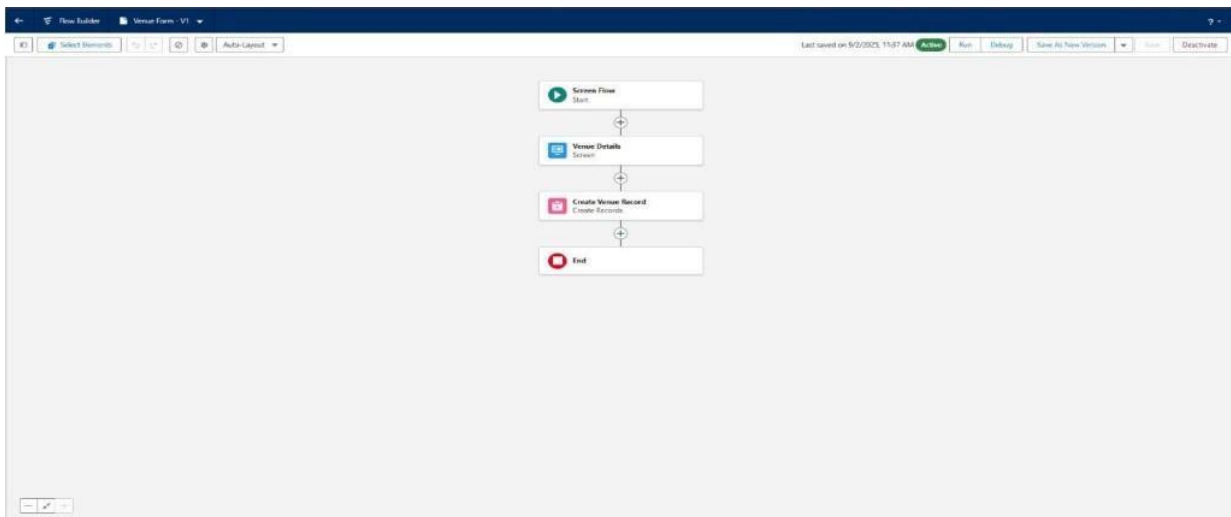
## Available Items

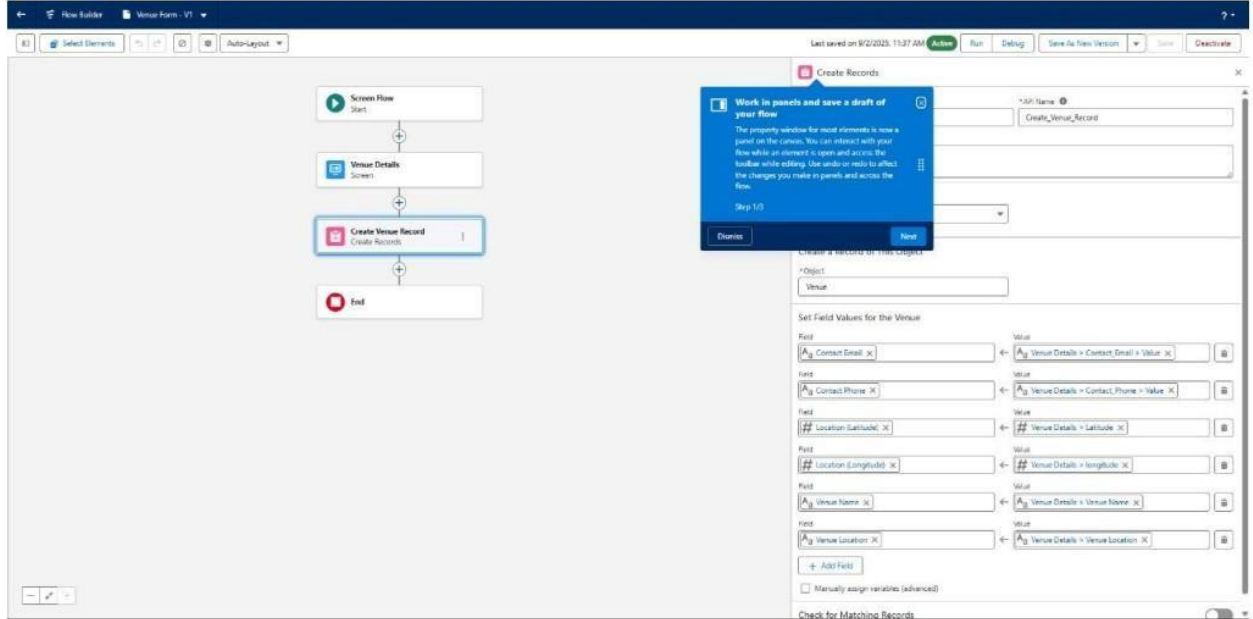
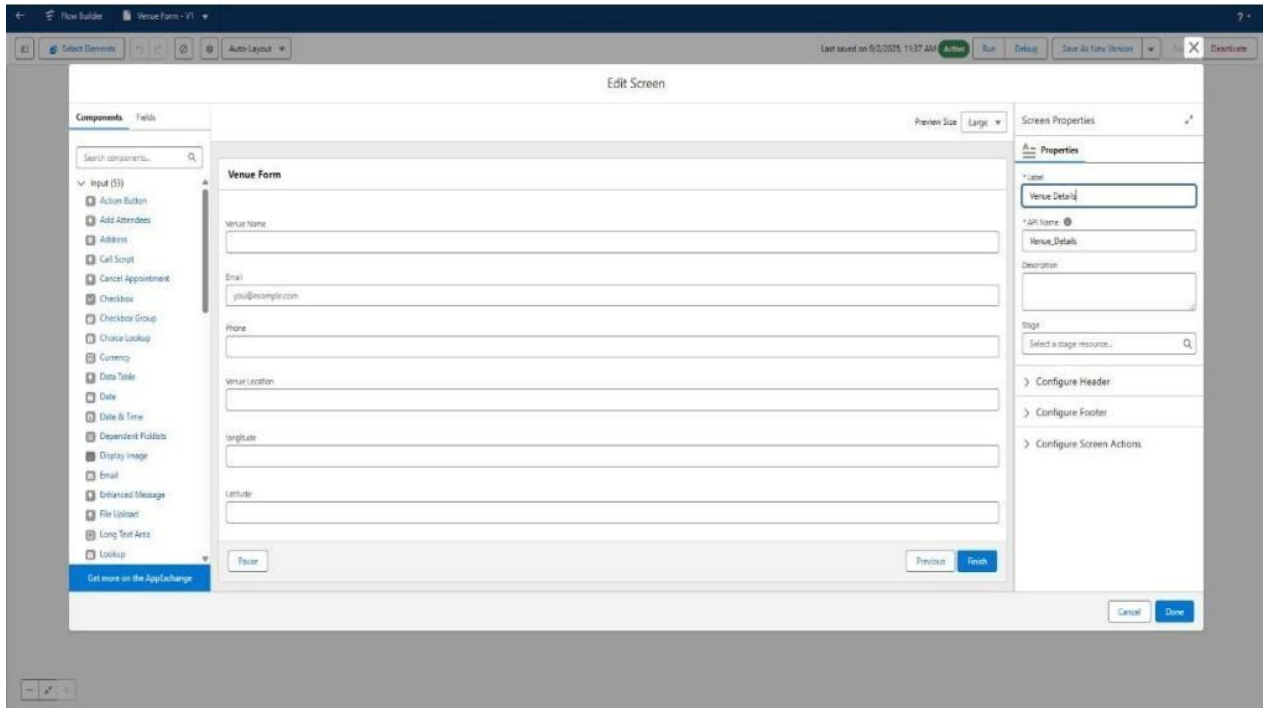
🔄 Create ▼

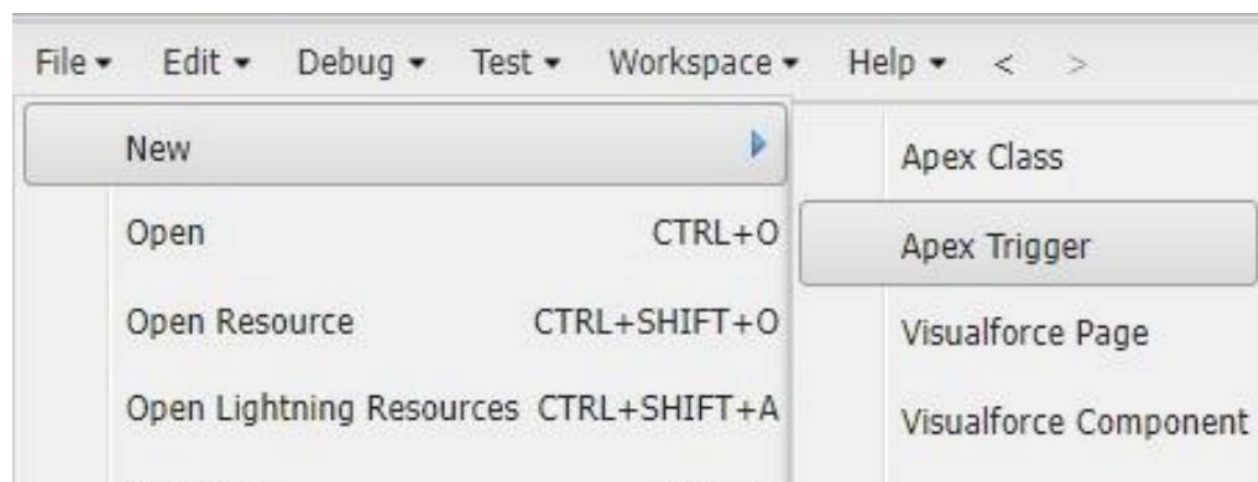
- Accounts
- All Sites
- Alternative Payment Methods
- Analytics
- App Launcher
- Appointment Categories
- Appointment Invitations
- Approval Requests
- Asset Action Sources
- Asset Actions

## Selected Items

- Home
- Venues
- Tasks
- Drop-Off points
- Execution Details
- Volunteers
- Reports
- Dashboards







### New Apex Trigger ✕

Name:

sObject:  ▼

Code Coverage: None API Version: 64 Go To

```
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 }
10
11 |
```

General Information

First Name	<input type="text" value="Iksha Foundation"/>	Role	<None Specified>
Last Name	<input type="text" value="Iksha_Foundation"/>	User License	Salesforce Platform
Alias	<input type="text" value="iksh"/>	Profile	NGOs Profile
Email	<input type="text" value="bhargavipaila1023@gmail.co"/>	Active	<input checked="" type="checkbox"/>
Username	<input type="text" value="ikshafoundation@sb.com"/>	Marketing User	<input type="checkbox"/>
Nickname	<input type="text" value="User1711437164226559933"/>	Offline User	<input type="checkbox"/>
Title	<input type="text"/>	Knowledge User	<input type="checkbox"/>
Company	<input type="text"/>	Flow User	<input type="checkbox"/>
Department	<input type="text"/>	Service Cloud User	<input type="checkbox"/>
Division	<input type="text"/>	Site.com Contributor User	<input type="checkbox"/>

Now

Action	Label ↑	Group Name	Created By	Created Date
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Iksha</a>	<a href="#">Iksha</a>	<a href="#">Bhargavi_Paila</a>	26/03/2024, 2:27 pm
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">NSS</a>	<a href="#">NSS</a>	<a href="#">Bhargavi_Paila</a>	26/03/2024, 2:27 pm
<a href="#">Edit</a>   <a href="#">Del</a>	<a href="#">Street Cause</a>	<a href="#">Street_Cause</a>	<a href="#">Bhargavi_Paila</a>	26/03/2024, 2:26 pm

Outline

Filters 2

Groups

GROUP ROWS

Add group...

Volunteer Name

GROUP COLUMNS

Add group...

Columns

Add column...

Venue Name

Drop-Off point Name

# Distance

Previewing a limited number of records. Run the report to see everything.

Volunteer Name	Venue Name	Drop-Off point Name	Distance
- (4)	La Royale Banquet Hall.	Shapur	5,1161
	La Royale Banquet Hall.	Jeedimetla	6,902.9995
	Paradise Garden Function Hall	Suraram Village	28.2332
	Ujwala Grand	-	-
Subtotal			6,936.3488
Total (4)			6,936.3488

REPORT

Volunteer Task

Volunteers with Execution Details and Tasks

Add Chart

Save & Run

Save

Close

Run

Fields

Outline

Filters

Previewing a limited number of records. Run the report to see everything.

Update Preview Automatically

GROUP ROWS

Add groups...

Volunteer ID

GROUP COLUMNS

Add groups...

Columns

Add column...

Volunteer: Volunteer Name

Task: Task Name

Execution Detail: Execution Detail Name

Volunteer: Owner Name

Task: Date

Task: Rating

Volunteer ID	Volunteer: Volunteer Name	Task: Task Name	Execution Detail: Execution Detail Name	Volunteer: Owner Name	Task: Date	Task: Rating
2 (1)	Cheran	Task 2	Execution 2	Rooha Foundation /Rooha_Foundation	28/03/2024	3
Subtotal						
4 (1)	Shwika	Task 1	Execution 1	Rooha Foundation /Rooha_Foundation	28/03/2024	4
Subtotal						
Total (2)						

Report

venue and Drop Off point

☐ Use chart settings from report

Display As

Groups

Add group...

Columns

Preview

venue and Drop Off point

Venue Name	Drop-Off point Name	Distance
La Royale Banquet Hall.	Shapur	5.1161
La Royale Banquet Hall.	Jeedimetla	6.9030κ
Paradise Garden Function Hall	Suraram Village	28.2332
Ujwala Grand	-	-

View Report (venue and Drop Off point)

Report

Volunteer Task

☐ Use chart settings from report

Display As

X-Axis

Volunteer ID

Y-Axis



FoodConnect

Home Venues Tasks Volunteers Drop-Off Points Execution Details Reports Dashboards

Dashboard

Task Execution Details

Last refreshed 16 days ago. Refresh this dashboard to see the latest data.

As of Sep 1, 2025, 11:24 PM Viewing as admin

venue and Drop Off point

To view this table, refresh the dashboard.

View Report


As of Sep 1, 2025, 11:24 PM

Volunteer Task


View Report (Volunteer Task)

As of Sep 1, 2025, 11:24 PM

shutterstock.com - 2343495535




Search...



FoodConnect

Home Venues Tasks Drop-Off points Execution Details Volunteers Reports Dashboards

Dashboard

**Task Execution Details**

As of 29-Mar-2024, 9:55 am Viewing as Palla Bhargavi

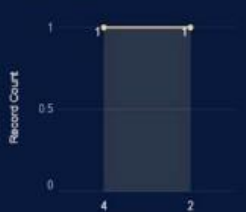
Open Refresh Subscribe

venue and Drop Off point


Venue Name	Drop-Off point	Dis...
La Royale Banquet Hall	Shapur	5,116
La Royale Banquet Hall	Jeehimetta	6,903
Paradise Garden Function Hall	Suraram Village	28,23
Ujwala Grand	-	-

View Report (venue and Drop Off point)

Volunteer Task



View Report (Volunteer Task)



**Venue Form**


Venue Name

Email

Phone

Venue Location

Next

Dashboard

**Task Execution Details**

As of 29-Mar-2024, 9:55 am Viewing as Palla Bhargavi

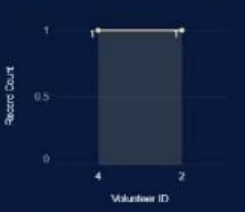
Open Refresh Subscribe

venue and Drop Off point


Venue Name	Drop-Off point	Dis...
La Royale Banquet Hall	Shapur	5,116
La Royale Banquet Hall	Jeehimetta	6,903
Paradise Garden Function Hall	Suraram Village	28,23
Ujwala Grand	-	-

View Report (venue and Drop Off point)

Volunteer Task



View Report (Volunteer Task)



**Flow Component: Venue Form**

This is a placeholder. Flows don't run in the canvas.

Add Component(s) Here

Add Component(s) Here



## **FUTURE SCOPE OF THE LEFTOVER FOOD SUPPLY MANAGEMENT SYSTEM:**

The system will evolve beyond its initial donor-to-NGO model by leveraging AI for intelligent, predictive logistics, forecasting food surpluses, and optimizing distribution routes. The ecosystem will expand significantly to include the entire supply chain, from farmers at the source to individual households at consumption. Critically, the platform will integrate with corporate CSR programs by providing verifiable impact data, and with municipal bodies to inform waste management policies. This transforms it from a simple rescue app into a vital piece of civic infrastructure, building a truly sustainable and circular economy for the community.

## **ADVANTAGES AND DISADVANTAGES**

### **ADVANTAGES:**

- **SOCIAL IMPACT:** Directly addresses hunger and malnutrition by redirecting surplus food to those in need.
- **ENVIRONMENTAL BENEFITS:** Significantly reduces food waste in landfills, which in turn lowers methane gas emissions, a potent greenhouse gas.
- **ECONOMIC BENEFITS:** Donors save money on waste disposal fees. Recipients reduce their food procurement costs.
- **EFFICIENCY AND SCALABILITY:** Automates the matching and logistics process, making it far more efficient and scalable than manual methods.

## **DISADVANTAGES:**

- **FOOD SAFETY AND LIABILITY:** The primary risk. Ensuring the donated food is safe for consumption is a major challenge. A single incident could damage the platform's reputation.
- **LOGISTICAL COMPLEXITY:** Coordinating timely pickups and deliveries for perishable goods is complex and can be costly.
- **TECHNOLOGY ADOPTION:** Both donors and smaller NGOs may be hesitant or lack the resources to adopt a new technology platform.
- **INCONSISTENT SUPPLY:** The availability of surplus food can be unpredictable, making it difficult for recipients to rely on it as a primary source.
- **INITIAL INVESTMENT COST:** Developing, launching, and maintaining the technology platform requires significant initial funding.

## **CONCLUSION**

The Leftover Food Supply Management System presents a powerful, technology-driven solution to the twin problems of food waste and hunger. By creating a transparent and efficient ecosystem, it connects the dots between surplus and scarcity. While challenges related to food safety, logistics, and user adoption exist, they can be mitigated through robust protocols, strategic partnerships, and a user-centric design. The potential social, environmental, and economic benefits overwhelmingly justify the endeavor. This system is not just about managing waste; it is about creating value, fostering community resilience, and ensuring that good food nourishes people, not landfills.

## **APPENDIX**

- Source Code: Provided in Apex Classes and Triggers trigger

DropOffTrigger on Drop\_Off\_point\_\_c (before insert)

```
{  
  
for (Drop_Off_point__c Drop: Trigger.new)  
  
{  
  
Drop.Distance_c = Drop.distance_calculation_c;  
  
}
```