

Supply Left over Food To Poor

1. Project Overview

This project aims to streamline the process of leftover food distribution using salesforce.

- Goal: Efficiently distribute leftover food to reduce food waste and address hunger.
- Impact: Reduce food waste, address hunger, and improve the management of food distribution points, tasks and volunteers.
- Technology: Salesforce tools manage records, workflows, and data visualization, ensuring seamless operations.

2. Objectives

The project defines measurable goals for societal and operational improvement.

Business Goals:

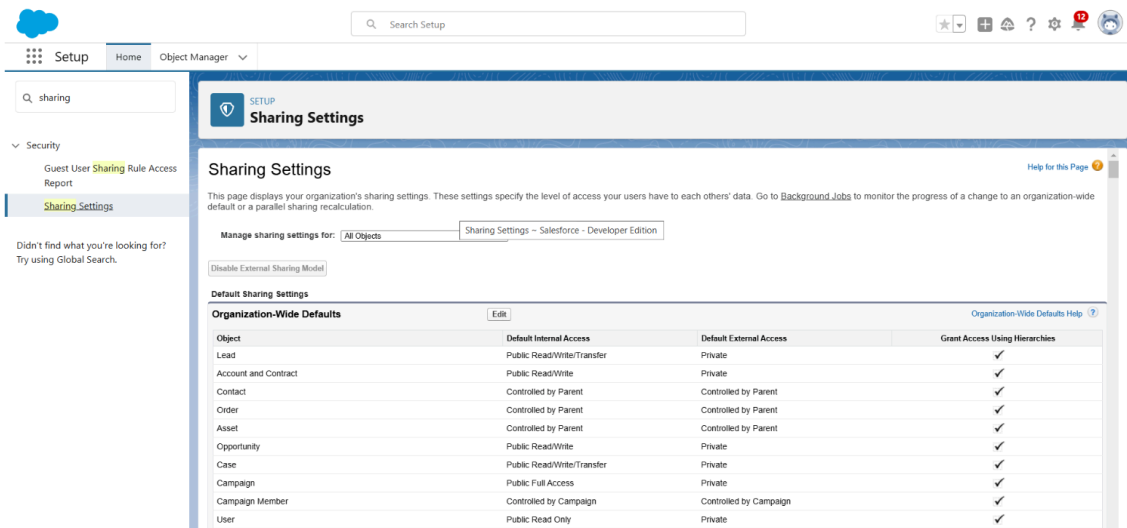
- Address societal issues like food waste and hunger.
- Enhance operations, transparency, and accountability

Deliverables include:

- Custom objects: Drop-off point, Task, Volunteer, and Execution Detail.
- Reports and dashboards for operational insights.
- Automated workflows for efficiency.

3. Salesforce Key Features and Concepts Utilized

- Custom Objects: Store essential data for food distribution management.
- Relationships:
 - Master-Detail: Strict dependencies (e.g., Execution detail Links to Volunteer or Task).
 - Lookup: Flexible associations (e.g., Drop-off point linked to Venue).
- Flows: Automated data entry for venues and other processes.
- Dashboards: Visualize drop-off points, task completion rates, and volunteer participation.
- Sharing Rules: These control who can view or edit records. Your project uses criteria-based sharing (e.g., by distance).



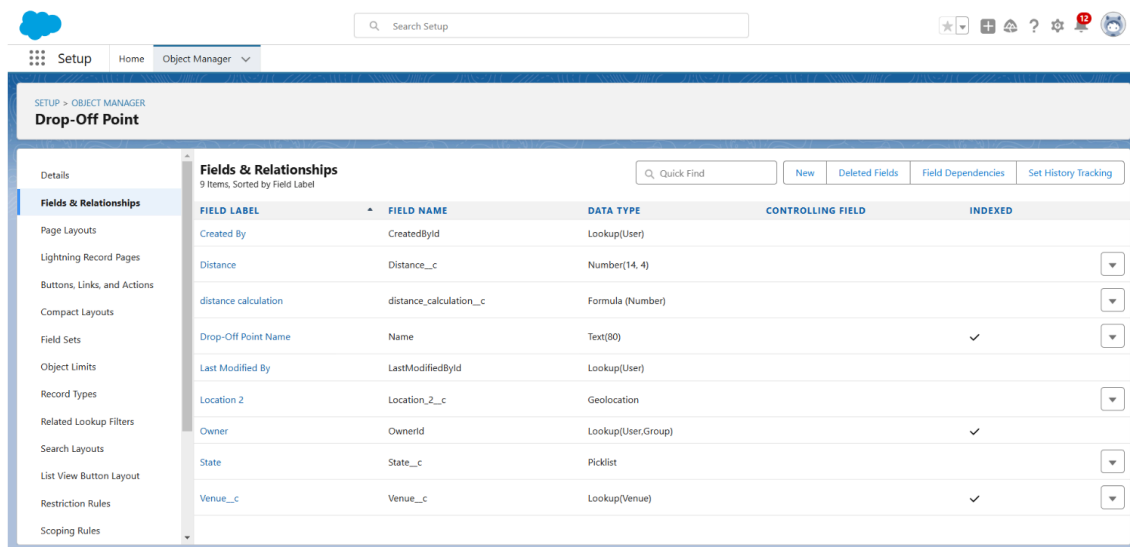
The screenshot shows the Salesforce Setup interface with the 'Sharing Settings' page selected. The left sidebar contains navigation links for Setup, Home, and Object Manager. The main content area displays the 'Sharing Settings' configuration for 'Salesforce - Developer Edition'. It includes a search bar, a 'Manage sharing settings for' dropdown, and a table of 'Organization-Wide Defaults'.

| Object | Default Internal Access | Default External Access | Grant Access Using Hierarchies |
|----------------------|----------------------------|-------------------------|--------------------------------|
| Lead | Public Read/Write/Transfer | Private | ✓ |
| Account and Contract | Public Read/Write | Private | ✓ |
| Contact | Controlled by Parent | Controlled by Parent | ✓ |
| Order | Controlled by Parent | Controlled by Parent | ✓ |
| Asset | Controlled by Parent | Controlled by Parent | ✓ |
| Opportunity | Public Read/Write | Private | ✓ |
| Case | Public Read/Write/Transfer | Private | ✓ |
| Campaign | Public Full Access | Private | ✓ |
| Campaign Member | Controlled by Campaign | Controlled by Campaign | ✓ |
| User | Public Read Only | Private | ✓ |

4. Detailed Steps to Solution Design

a) Object Creation:

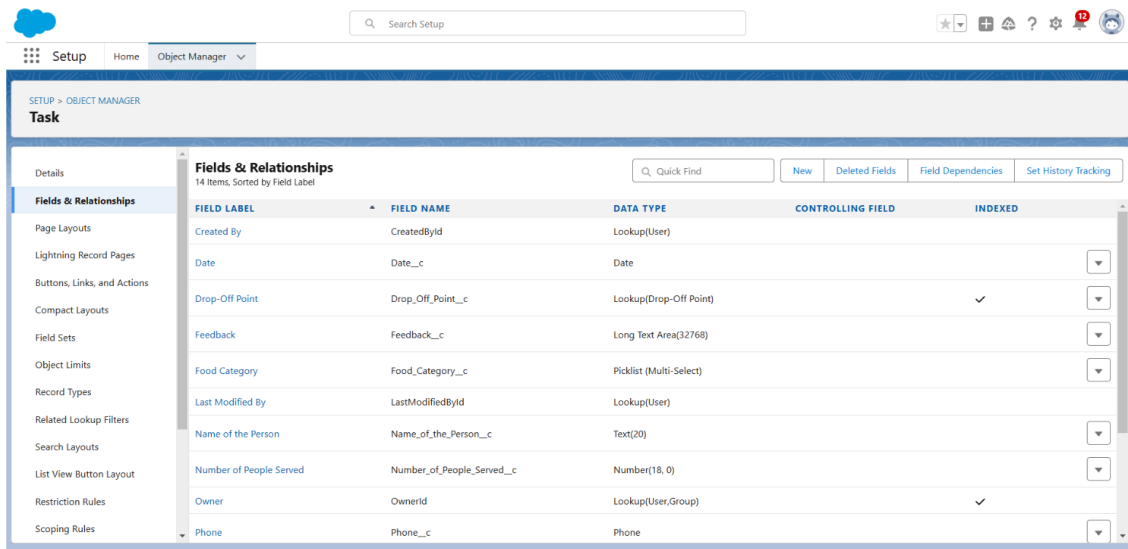
- Drop-Off point:
 - Purpose: Tracks food drop-off locations for effective management.
 - Fields: Name, location details, Distance, Venue (lookup to venue object)



The screenshot shows the Salesforce Setup interface with the 'Object Manager' section selected. The 'Drop-Off Point' object is chosen, and the 'Fields & Relationships' tab is active. It displays a table of fields for the object, sorted by Field Label.

| 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) | | ✓ |

- Task:
 - Purpose: Manages and tracks tasks related to food distribution.
 - Fields: Name, date, Rating, Drop-Off point (lookup), Sponsored By (lookup)



Setup > OBJECT MANAGER

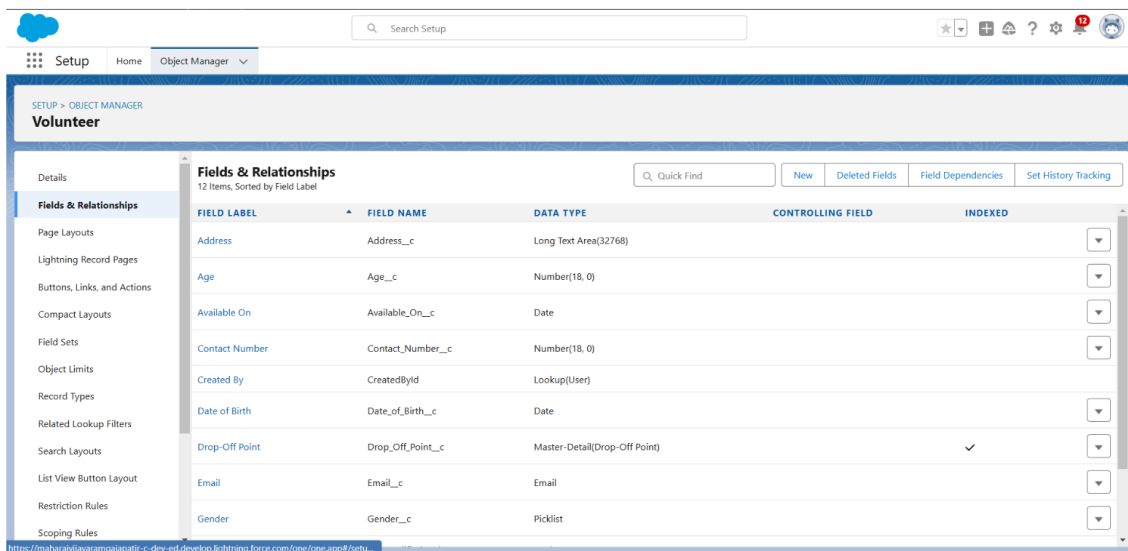
Task

Fields & Relationships
14 Items, Sorted by Field Label

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|-------------------------|----------------------------|-------------------------|-------------------|---------|
| Created By | CreatedById | Lookup(User) | | |
| Date | Date__c | Date | | |
| 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(20) | | |
| Number of People Served | Number_of_People_Served__c | Number(18, 0) | | |
| Owner | OwnerId | Lookup(User,Group) | | ✓ |
| Phone | Phone__c | Phone | | |

- Volunteer:

- Purpose: Tracks Individuals involved in food distribution.
- Fields: Name, Contact Email, Contact Phone, Assigned tasks (related List)



Setup > OBJECT MANAGER

Volunteer

Fields & Relationships
12 Items, Sorted by Field Label

| 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 | | |
| Gender | Gender__c | Picklist | | |

- Execution Details:

- Purpose: Captures detailed food distribution activity information.
- Fields: Name, Linked Volunteer (master-detail), Linked Task (master-detail), Additional Details.

The screenshot shows the Salesforce Setup interface. 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 'Execution Detail' and shows the 'Fields & Relationships' section. It displays a table with 6 items, sorted by Field Label. The table has columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The items listed are: Created By (CreatedBy, Lookup(User)), Execution Detail Name (Name, Text(80)), Execution ID (Execution_ID__c, Auto Number), Last Modified By (LastModifiedBy, Lookup(User)), Task (Task__c, Master-Detail(Task)), and Volunteer (Volunteer__c, Master-Detail(Volunteer)).

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|-----------------------|-----------------|--------------------------|-------------------|---------|
| Created By | CreatedBy | Lookup(User) | | |
| Execution Detail Name | Name | Text(80) | | ✓ |
| Execution ID | Execution_ID__c | Auto Number | | |
| Last Modified By | LastModifiedBy | Lookup(User) | | |
| Task | Task__c | Master-Detail(Task) | | ✓ |
| Volunteer | Volunteer__c | Master-Detail(Volunteer) | | ✓ |

b) Tabs Creation:

A tab is like a user interface that is used to build records for objects and to view the records in the objects.

The screenshot shows the Salesforce Setup interface for creating a new custom object tab. The left sidebar contains a search bar and a navigation menu with options like User Interface, Rename Tabs and Labels, and Tabs. The main content area is titled 'New Custom Object Tab' and shows the 'Step 1: Enter the Details' section. It prompts the user to choose the custom object for this new custom tab. The form includes fields for Object (dropdown), Tab Style (dropdown), (Optional) Choose a Home Page Custom Link to show as a splash page the first time your users click on this tab (dropdown), and a short description (text area). The 'Next' button is visible at the bottom right.

Creating Remaining Tabs:

Create Tabs for all the objects created: Drop-off points, Task, Venue, Volunteer, Execution Details and Dashboards.

| Custom Object Tabs | | | |
|--------------------------------------------|-------------------|-----------|---------------|
| | | New | What Is This? |
| Action | Label | Tab Style | Description |
| Edit Del | Dashboards | Truck | |
| Edit Del | Drop-Off Points | Boat | |
| Edit Del | Execution Details | Red Cross | |
| Edit Del | Tasks | Pencil | |
| Edit Del | Venues | Hands | |
| Edit Del | Volunteers | Heart | |

c)The Lightning Apps:

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

Search Setup

Setup Home Object Manager

Q app manager

Apps

App Manager

External Client Apps

External Client App Manager

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

Lightning Experience App Manager

New Lightning App New Connected App

24 items • Sorted by App Name • Filtered by All appmenuitems - TabSet Type, App Type

| | App Name ↑ | Developer Name | Description | Last Modified Date | App ... | Visi... |
|----|-----------------------|--------------------------|-----------------------------------------------------------------------------------|----------------------|-----------|---------|
| 1 | All Tabs | AllTabSet | | 01/01/2025, 11:03 am | Classic | |
| 2 | Analytics Studio | Insights | Build CRM Analytics dashboards and apps | 01/01/2025, 11:03 am | Classic | ✓ |
| 3 | App Launcher | AppLauncher | App Launcher tabs | 01/01/2025, 11:03 am | Classic | ✓ |
| 4 | Automation | FlowsApp | Automate business processes and repetitive tasks. | 01/01/2025, 11:10 am | Lightning | ✓ |
| 5 | Bolt Solutions | LightningBolt | Discover and manage business solutions designed for your industry. | 01/01/2025, 11:06 am | Lightning | ✓ |
| 6 | Business Rules Engine | ExpressionSetConsole | Create and maintain business rules that perform complex lookups and calculations. | 01/01/2025, 11:03 am | Lightning | ✓ |
| 7 | Community | Community | Salesforce CRM Communities | 01/01/2025, 11:03 am | Classic | ✓ |
| 8 | Content | Content | Salesforce CRM Content | 01/01/2025, 11:03 am | Classic | ✓ |
| 9 | Data Manager | DataManager | Use Data Manager to view limits, monitor usage, and manage recipes. | 01/01/2025, 11:03 am | Lightning | ✓ |
| 10 | Digital Experiences | SalesforceCMS | Manage content and media for all of your sites. | 01/01/2025, 11:03 am | Lightning | ✓ |
| 11 | FoodConnect | FoodConnect | | 03/01/2025, 3:44 pm | Lightning | ✓ |
| 12 | Lightning Usage App | LightningInstrumentation | View Adoption and Usage Metrics for Lightning Experience | 01/01/2025, 11:03 am | Lightning | ✓ |

2. Fill the app name in app details and branding as follow

App Name : FoodConnect

Developer Name : will be auto populated

Image : optional [Primary color hex value : keep this default.]

App Details & Branding

Give your Lightning app a name and description. Upload an image and choose the highlight color for its navigation bar.

App Details

* App Name ⓘ
FoodConnect

* Developer Name ⓘ
FoodConnect

Description ⓘ
Enter a description...

App Branding

Image ⓘ

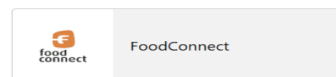

Primary Color Hex Value ⓘ
#0070D2

[Clear](#)

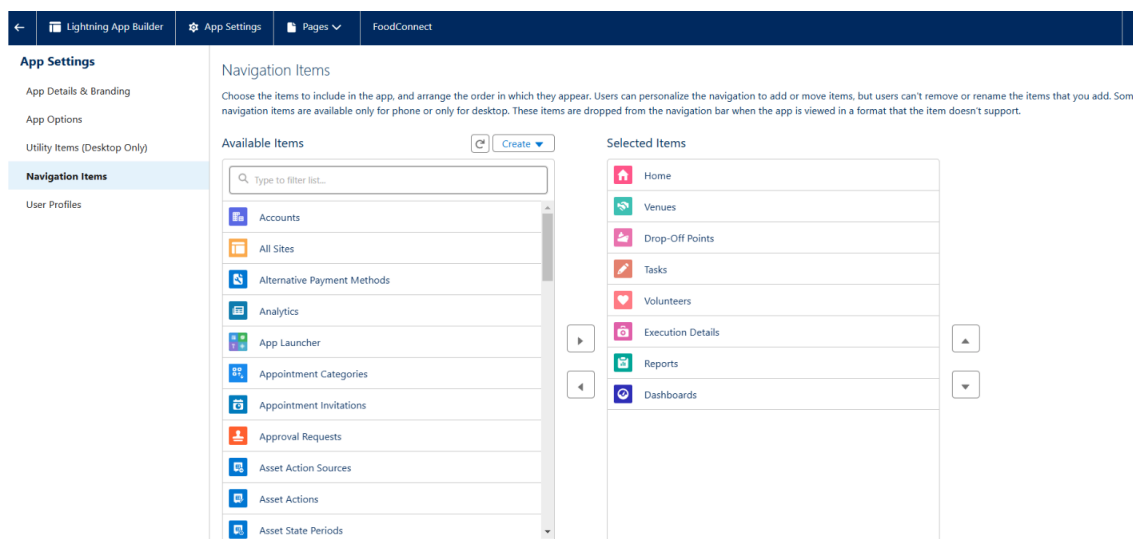
Org Theme Options

☐ Use the app's image and color instead of the org's custom theme

App Launcher Preview



3. 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:



The screenshot shows the Lightning App Builder interface with the 'App Settings' tab selected. The 'Navigation Items' section is active, displaying a list of available items and a list of selected items.

Available Items:

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

Selected Items:

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

d) Fields:

- Create Relationship Fields in Objects
 1. Create Lookup Relationship Field on Volunteer Object
 2. Create Master Detail Relationship Field on Execution Details Object

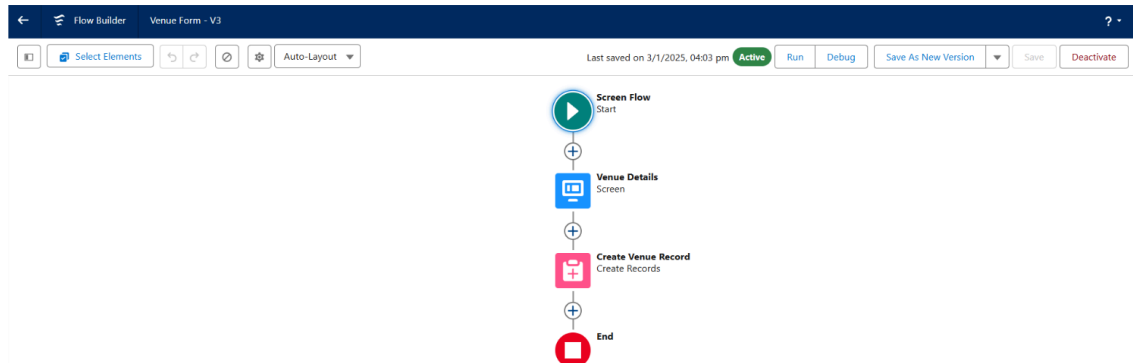
3. Create Lookup Relationship Field on Drop-Off Point Object
4. Create Lookup Relationship Field on Task Object
- Creation of fields for each Object
 1. Creation of fields for the Drop-Off point object
 2. Creation of fields for the Task object
 3. Creation of fields for the Volunteer object
 4. Creation of fields for the Execution Details object

e)Flows:

Automates data entry and processes, like recording venue details.

Flow: Venue Flow

- a. Purpose: To manage and capture detailed information related to food drop-off points.
- b. Components:
 1. Text Component: For entering the venue name.
 2. Email Component: For entering the contact email of the venue.
 3. Phone Component: For entering the contact phone number of the venue.
 4. Text Component: For entering the venue location.
 5. Number Components: For entering latitude and longitude values of the venue



f)Creating trigger:

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

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 : DropOffTrigger

6. sObject: Drop-Off Point

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;
    }
}
```

g)Report Types and Dashboards

1. Custom Report Types :

Create report types for venue with Drop-off with Volunteer and Volunteers with Execution Details and Tasks.

2. Reports :

Generate and configure reports using the custom report types to track and analyse relevant data.

3. Dashboards :

Configure dashboards to visualise data from reports and other components,providing insights into the overall distribution process.

a. Name: Task Execution Details

b. Components:

Lightning Table: Displays detailed information about venues and drop-off points, facilitating a comprehensive view of the data.

Adding Venue and Drop Off Point Report to The Dashboard

Report

venue and Drop Off point

☐ Use chart settings from report

Display As

Groups

Add group...

Columns

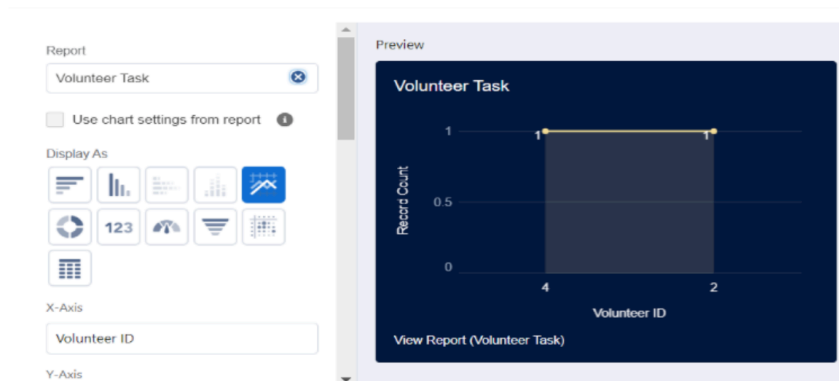
Preview

venue and Drop Off point

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

View Report (venue and Drop Off point)

Adding Volunteer Task Graph to the Dashboard



5. Testing and Validation

Ensures that the system works as intended:

- Unit Testing: Ensures all components (Apex triggers, workflows) operate correctly.
- User Interface Testing: Verifies user interface usability and correctness.

The screenshot shows the Salesforce IDE with an Apex trigger named 'DropOffTrigger.apxt'. The code is as follows:

```

1 trigger DropOffTrigger on Drop_Off_Point__c (before insert)
2 {
3     for(Drop_Off_point__c Drop : Trigger.new)
4     {
5
6         Drop.Distance__c = Drop.distance_calculation__c;
7
8     }
9 }

```

The interface includes a menu bar (File, Edit, Debug, Test, Workspace, Help), a toolbar with 'Code Coverage: None' and 'API Version: 62', and a bottom pane with tabs for 'Logs', 'Tests', 'Checkpoints', 'Query Editor', 'View State', 'Progress', and 'Problems'. The 'Logs' tab is active, showing a table with columns: User, Application, Operation, Time, Status, Read, and Size.

6. Key Scenarios Addressed by Salesforce in the Implementation Project

This is a use-case analysis showing how the project addresses real-world.

Challenges:

- Food Distribution Coordinator: Tracks food drop-off points and related tasks.

- Volunteer Management: Links tasks to volunteers for accountability.
- Data Visibility: Dashboards and reports improve decision-making and transparency.

7. Conclusion

The salesforce Food Connect App successfully enhances food distribution efficiency by leveraging Salesforce's capabilities. It improves coordination and transparency in food donation efforts, addressing food insecurity and maximizing resource utilization.

A brief summary of what the project achieved:

- Outcome: A functional Salesforce application that enhances food distribution efficiency.
- Impact: Improved coordination and transparency in food donation efforts.

