

FoodConnect

To Supply Leftover Food To Poor

BY

Yaddanapudi Bindu Varsha

binduvarsha2004@gmail.com

ABSTRACT

Objective:

The **FoodConnect** system streamlines the collection, management, and distribution of surplus food to underserved communities. Using advanced technologies, FoodConnect efficiently matches food donations with areas of need, ensuring timely delivery and reducing food waste. Automated communication keeps stakeholders informed, while analytics provide actionable insights for continuous improvement. This initiative enhances food security, minimizes waste, and fosters community well-being.

Key Technologies

1. **Salesforce Nonprofit Cloud:**

A central platform to manage donor relationships, track food inventory, coordinate volunteers, and generate impact reports.

2. **Artificial Intelligence & Machine Learning:**

AI and ML algorithms predict demand and supply patterns, optimize delivery schedules, and prioritize areas of greatest need.

3. **Predictive Analytics:**

Leveraging data analytics to forecast food demand in underserved areas and optimize resource allocation.

4. **Internet of Things (IoT):**

IoT-enabled sensors on storage units and transportation vehicles monitor food quality, temperature, and logistics in real-time.

Implementation Phases

1. **Foundation Setup:**

- Configure Salesforce Nonprofit Cloud to manage donors, beneficiaries, and inventory.
- Set up user roles for administrators, volunteers, and donors.

2. **AI-Driven Matching and Scheduling:**

- Integrate ML models to match surplus food donations with specific communities based on proximity, need, and food type.
- Optimize scheduling for food collection and delivery.

3. **Predictive Insights:**

- Use analytics to anticipate demand in high-need areas.

- Forecast donation trends and ensure sufficient resources.
- 4. **IoT Integration:**
 - Monitor food storage and transport conditions using IoT devices.
 - Ensure real-time tracking of deliveries to prevent spoilage.
- 5. **Automated Communication:**
 - Notify donors and volunteers about schedules and updates.
 - Provide beneficiaries with alerts for food distribution events.

Potential Challenges

1. **Data Integration:**

Integrating data from various sources and systems seamlessly.
2. **Change Management:**

Encouraging adoption of the system among stakeholders.
3. **Scalability:**

Ensuring the system can scale as operations grow.
4. **Security and Privacy:**

Safeguarding sensitive donor and beneficiary data.

Measurable Outcomes

1. **Efficiency Metrics:**
 - Reduction in food waste.
 - Improved matching of donations to community needs.
2. **Customer Satisfaction:**
 - Increased engagement from donors and volunteers.
 - Positive feedback from beneficiaries.
3. **Operational Excellence:**
 - Faster response times for food distribution.
 - Improved resource utilization.

Functional Requirements

1. **Work Order Management:**

Track and manage food donations and requests.
2. **Scheduling and Dispatching:**

Coordinate collection and delivery schedules.
3. **Resource Management:**

Monitor inventory, volunteers, and transportation.

4. **Mobile Access:**
Provide field workers with access to FoodConnect on mobile devices.
5. **Stakeholder Communication:**
Enable automated updates for donors, volunteers, and beneficiaries.
6. **Analytics and Reporting:**
Provide insights into operations, food usage, and areas of improvement.
7. **Integration:**
Sync with external platforms for payment, logistics, and donor management.
8. **User Management and Security:**
Ensure secure access for various roles within FoodConnect.
9. **Maintenance and Support:**
Offer ongoing technical support and updates to ensure system reliability.

Index

S.No	Task
1	Salesforce developer account creation
2	Object <ul style="list-style-type: none">• Create Venue Object• Create Drop-Off Point Object• Create Task Object• Create Volunteer Object• Create Execution Details Object
3	Tabs: <ul style="list-style-type: none">• Creating a Custom Tab• Creating Remaining Tabs
4	Create a Lightning App
5	Fields
6	Flows
7	Trigger
8	Users
9	Reports

Creating Developer Account

Creating a developer org in salesforce.

1. Go to <https://developer.salesforce.com/signup>
2. On the sign up form, enter the following details :

Build enterprise-quality apps fast to bring your ideas to life

- Build apps fast with drag and drop tools
- Customize your data model with clicks
- Go further with Apex code
- Integrate with anything using powerful APIs
- Stay protected with enterprise-grade security
- Customize UI with clicks or any leading-edge web framework

Sign up for your Salesforce Developer Edition
A full-featured copy of the Platform, for free

Complete the form to start your free trial. Our team will be in touch to help you make the most of your trial.

First Name* Last Name*

Email*

Role*

Company*

1. First name & Last name : Yaddanapudi Bindu Varsha
2. Email : binduvarsha2004@gmail.com
3. Role : Developer
4. Company : VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY
5. County : India
6. Postal Code : 522616
7. Username : binduvarsha@vvit.net

Create Venue Object

To create an object:

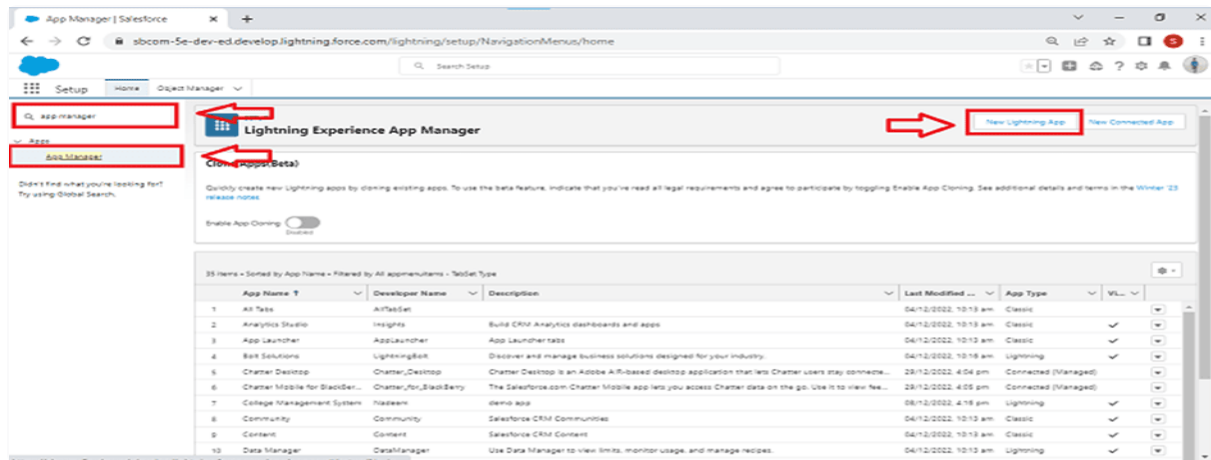
1. From the setup page >> Click on Object Manager >> Click on Create >>Click on Custom Object.
1. Enter the label name >> Venue
2. Plural label name >> Venues
3. Enter Record Name Label and Format
 - Record Name >> Venue Name
 - Data Type >> Text
2. Click on Allow reports and Track Field History,Allow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

To create a Tab:(Venue)

-
- The screenshot shows the Salesforce Lightning Setup interface. The top navigation bar includes the 'Setup' menu, a search bar, and the 'Custom Tabs' section. A table lists existing custom tabs with columns for Action, Label, Tab Style, and Description. Red boxes and arrows highlight the 'Setup' menu, the search bar, the 'Custom Tabs' section, and the 'New' button.
- | Action | Label | Tab Style | Description |
|--------------|---------------|--------------|--|
| Go to Detail | Accounts | Desk | created to setup with student activity (junction object) |
| Go to Detail | Accounts | Desktop | |
| Go to Detail | Accounts | Classroom | |
| Go to Detail | Accounts | Journal | This tab is related to Hotel Reservation App |
| Go to Detail | Accounts | Appstore | |
| Go to Detail | Accounts | Phone | This tab is related to College Management System |
| Go to Detail | Order Details | Comments | |
| Go to Detail | Orders | Desk | |
| Go to Detail | Orders | Computer | |
| Go to Detail | Orders | Desk | |
| Go to Detail | Orders | Highway Sign | This tab is related to Hotel Reservation App |
| Go to Detail | Orders | Highway Sign | This tab is related to Hotel Reservation App |
| Go to Detail | Orders | Appstore | This tab is related to College Management System |
| Go to Detail | Orders | Appstore | |

- ### To create a lightning app page:

- By Yaddanapudi Bindu Varsha



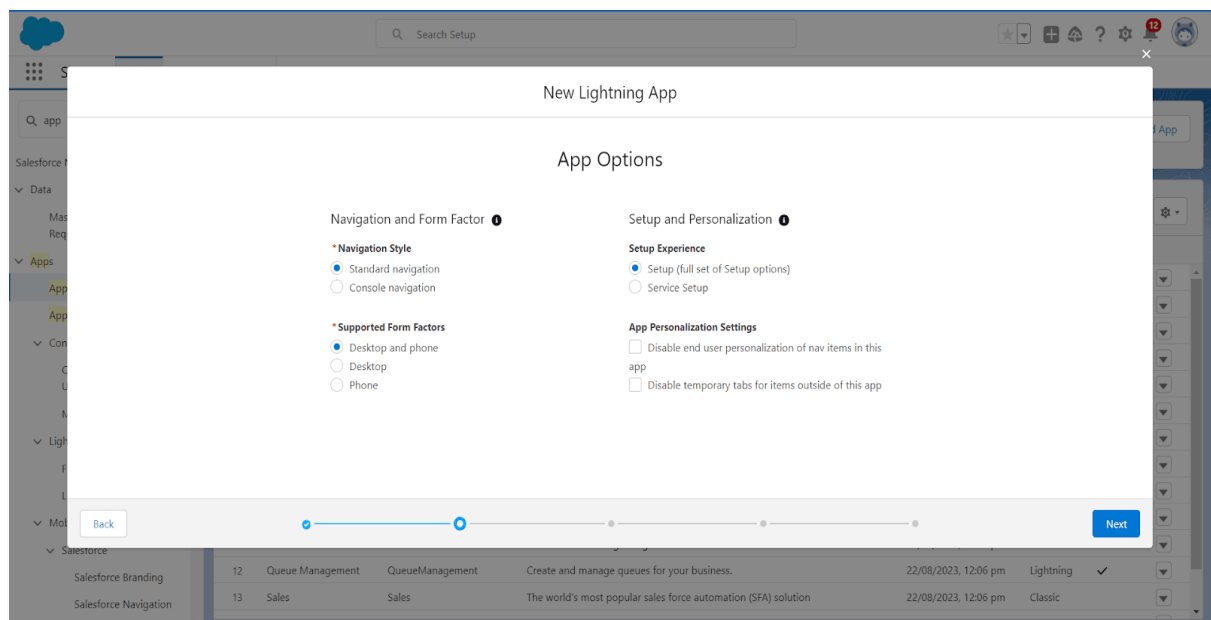
2. Fill the app name in app details and branding as follow

App Name : FoodConnect

Developer Name : This will auto populated

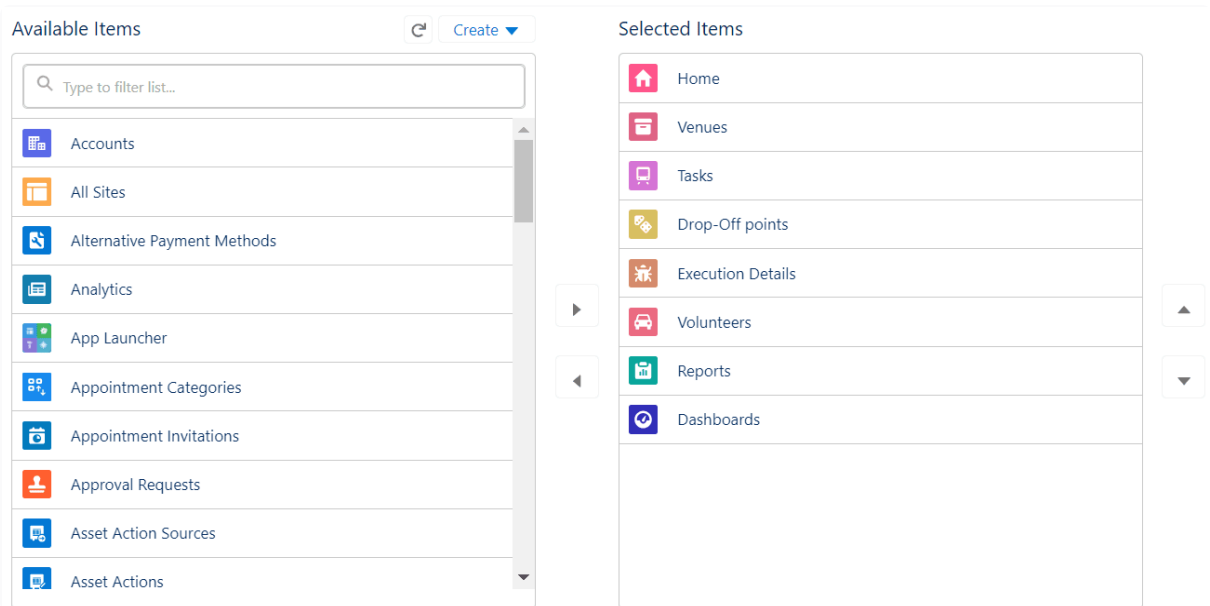
Image : optional (if you want to give any image you can otherwise not mandatory) Primary color hex value : keep this default.

3. Then click Next >> (App option page) Set Navigation Style as Standard Navigation >> Next.



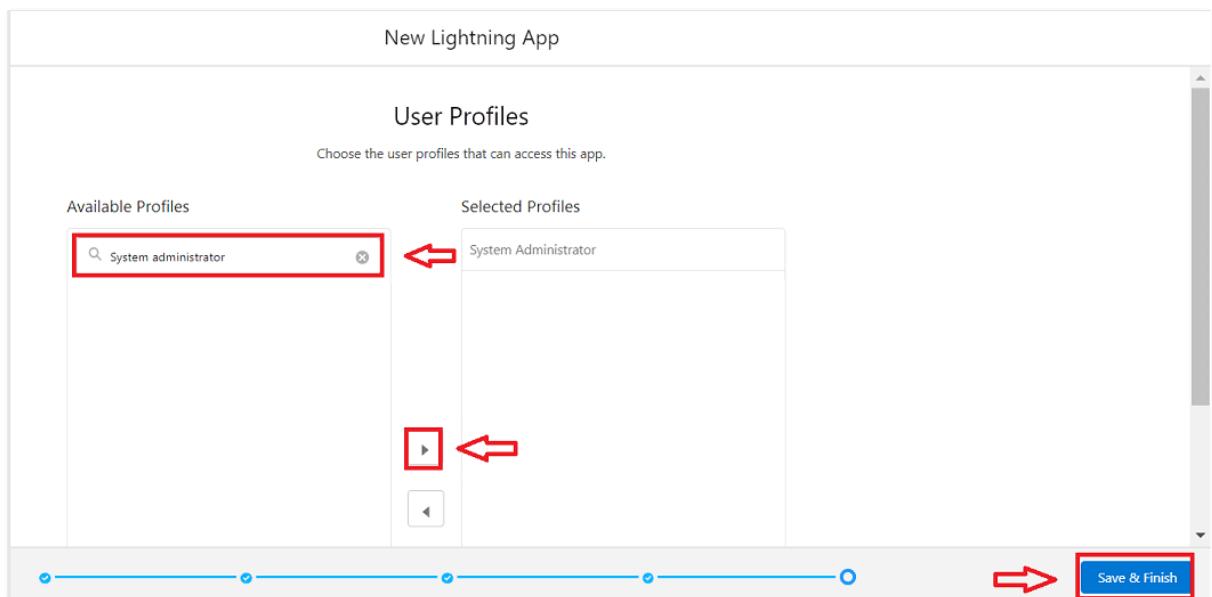
4. (Utility Items) keep it as default >> Next.

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:



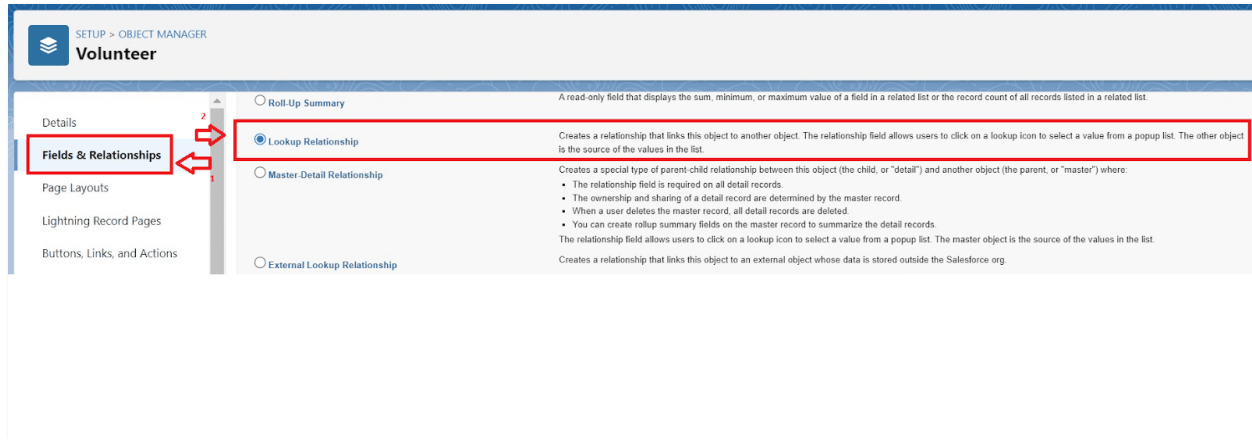
Search profiles (System administrator) in the search bar >> click on the arrow button >> save & finish.

Creation of Relationship fields in objects

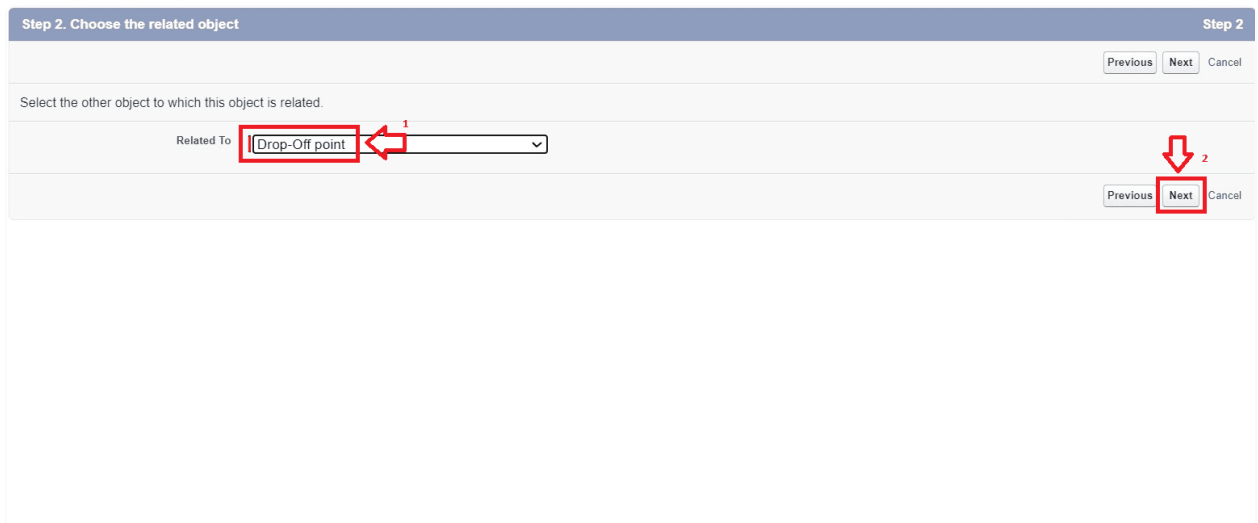
- By Yaddanapudi Bindu Varsha

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.



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
10. Select Master Detail relationship
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
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.
26. Field Name : Venue
27. Field label : Venue__c
28. Next >> Next >> Save.

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.
30. Now click on "Fields & Relationships" >> New
31. Select Lookup relationship
32. Select the related object "Venue" and click next.

33. Field Name : Sponsored By
34. Field label : Auto generated
35. Next >> Next >> Save.

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.
37. Now click on "Fields & Relationships" >> New
38. Select Lookup relationship
39. Select the related object "Drop-Off point" and click next.
40. Field Name : Drop-Off point
41. Field label : Auto generated
42. Next >> Next >> Save.

Creation of User1

1. Go to setup page >> type users in Quick Find bar >> click on users>> New user.
2. In General Information give details as: (Note : create users as per your wish NGO's)

First Name : Iksha Foundation

Last Name : Iksha_Foundation

Alias : iiksh

Email : Give Your Email

Username : ikshafoundation@sb.com (give the username different)

Nickname : Auto Populated

User License : Salesforce Platform

Profile : NGOs Profile

Active : Check

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

3. Click on Save

Adding venue and Drop Off point Report to the Dashboard

1. Go to the app(FoodConnect) >> 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
4. Name : Organization Details
5. Click on Widget and select Chart or Table
6. In Select Report : Select venue and Drop Off point Report.
7. Then click on select
8. In Add Component:

Display As : Select Lightning Table

Component Theme : Select Dark (Optional)

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)

1. Now click on save.

Creation of Home Page

1. Go to setup >> type Lightning App Builder in quick find box >> Click on the Lightning App Builder and Select the New.
2. Select Home Page and give Label as HOME Page.
3. Select Standard Home Page.
4. Near Components search for Flow and Drag and Drop in Right Side Section..

- By Yaddanapudi Bindu Varsha

5. On the right hand side:

Flow : Venue Flow

6. Near Components search for Dashboard, then Drag and Drop it in first Section.

The screenshot shows a Salesforce dashboard titled 'Task Execution Details' with the subtitle 'As of 28-Mar-2024, 9:55 am Viewing as Paila Bhargavi'. The dashboard contains three main components:

- venue and Drop Off point:** A table with columns 'Venue Name', 'Drop-Off point', and 'Dis...'. The data rows are:

Venue Name	Drop-Off point	Dis...
La Royale Banquet Hall.	Shapur	5.116
La Royale Banquet Hall.	Jeedimetla	6.903
Paradise Garden Function Hall	Suraram Village	28.23
Ujwala Grand	-	-
- Volunteer Task:** A chart showing 'Record Count' on the y-axis (0 to 1) and 'Volunteer ID' on the x-axis (4 to 2). The chart displays a single bar with a value of 1.
- Venue Form:** A form with fields for 'Venue Name', 'Email' (pre-filled with 'you@example.com'), 'Phone', and 'Venue Location'. A 'Next' button is at the bottom right.

7. Click on Save and Activation, then click on App Default, then Add Assignments.

8. Add FoodConnect App and then Save.

9. FoodConnect Home Page would Look Like this.

The screenshot shows the FoodConnect Home Page. The navigation menu includes: Home, Venues, Tasks, Drop-Off points, Execution Details, Volunteers, Reports, and Dashboards. The dashboard is titled 'Task Execution Details' and shows the same components as the previous screenshot: a table for 'venue and Drop Off point', a 'Volunteer Task' chart, and a 'Venue Form' component.

Conclusion

By leveraging the Salesforce platform, the project successfully established a streamlined and transparent system for managing surplus food donations. Through efficient coordination with volunteers and timely delivery to beneficiaries, the project effectively addressed food insecurity while maximizing the utilization of available resources.

- By Yaddanapudi Bindu Varsha

