FoodConnect

To Supply Leftover Food To Poor

BY

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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.

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- 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.

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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.

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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 :

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.

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Creating a Custom Tab

To create a Tab:(Venue)

1. Go to setup page >> type Tabs in Quick Find bar >> click on tabs >> New (under custom object tab)

1. Select Object(Venue) >> Select the tab style >> Next (Add to profiles page) keep it as default >> Next (Add to Custom App) uncheck the include tab .
2. Make sure that the Append tab to users' existing personal customizations is checked.
3. Click save

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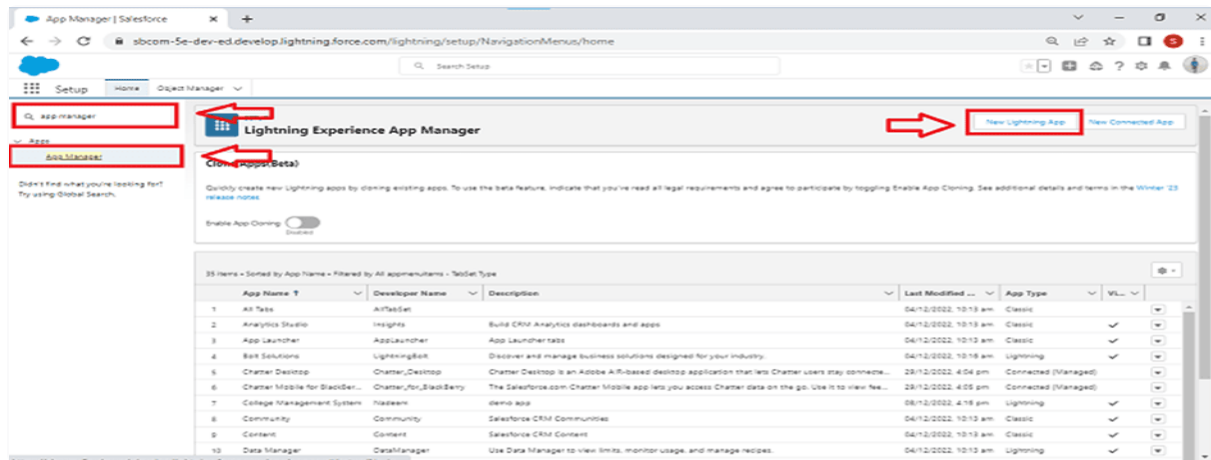
2. Fill the app name in app details and branding as follow

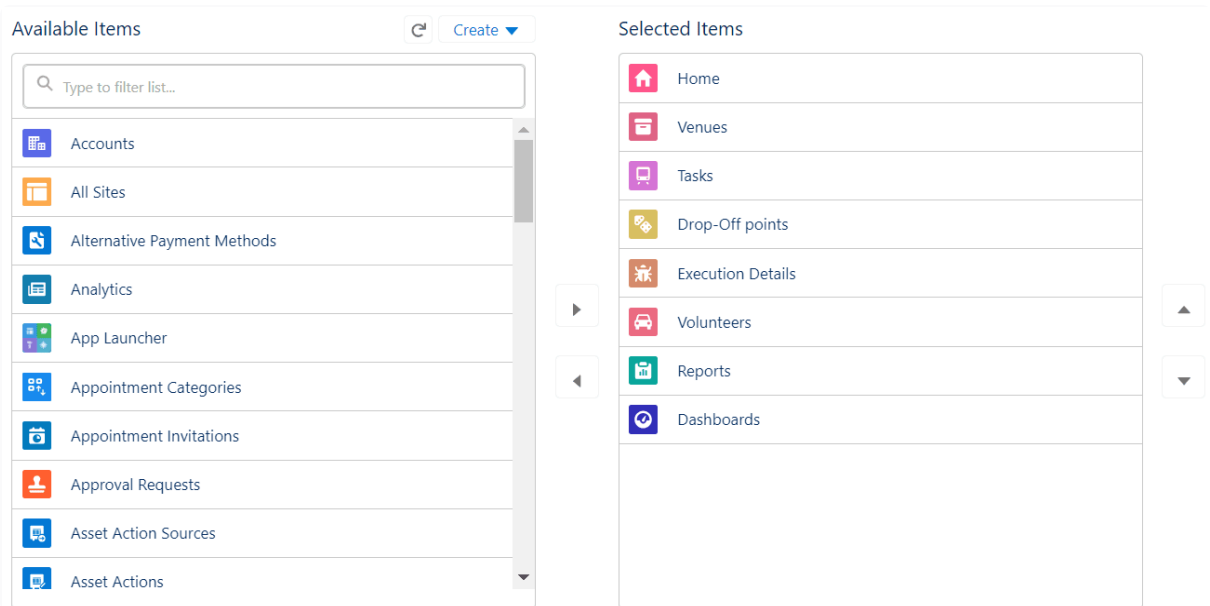App Name : FoodConnect

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.

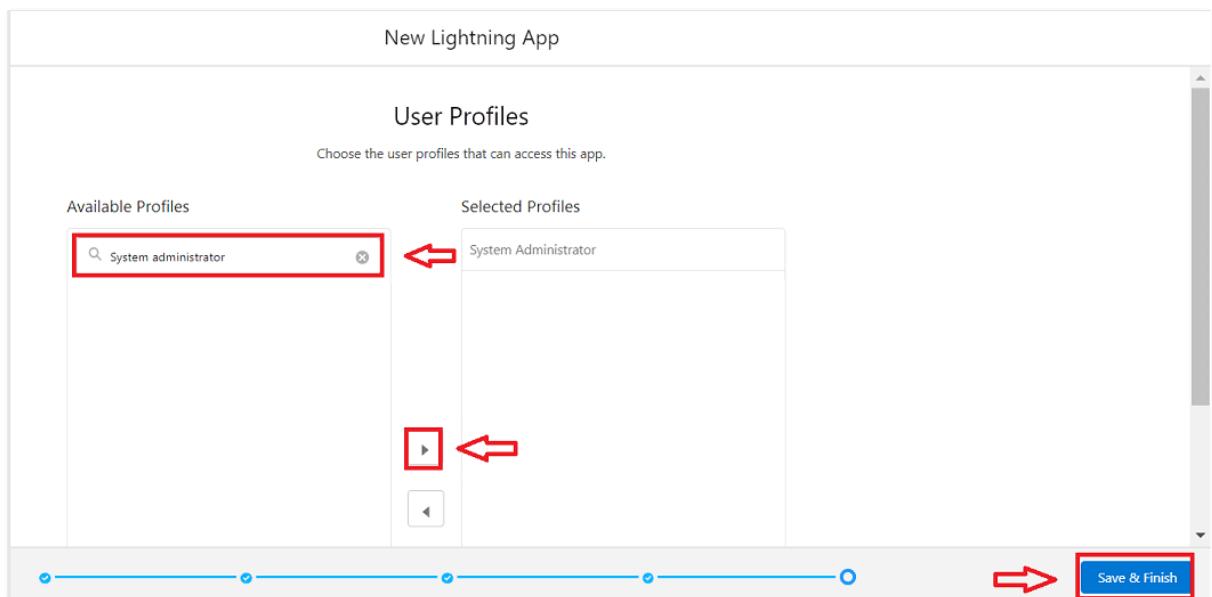3.Then click Next >> (App option page)Set Navigation Style as Standard Navigation >> Next.
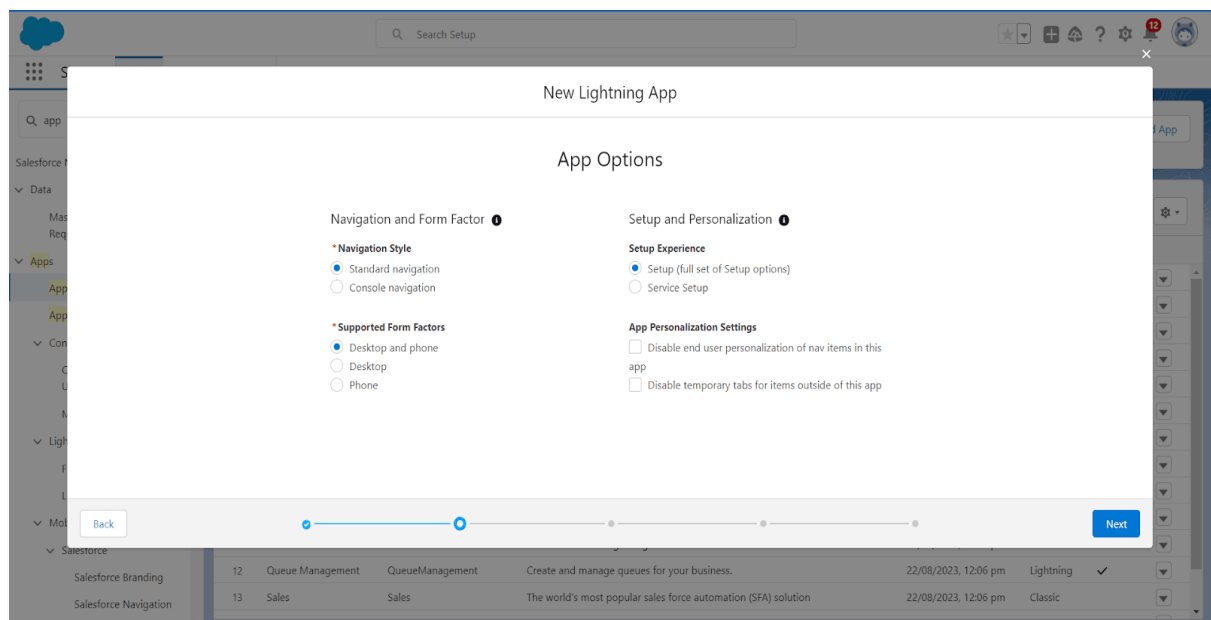
4. (Utility Items) keep it as default >> Next.

5. To Add Navigation Items:

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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.
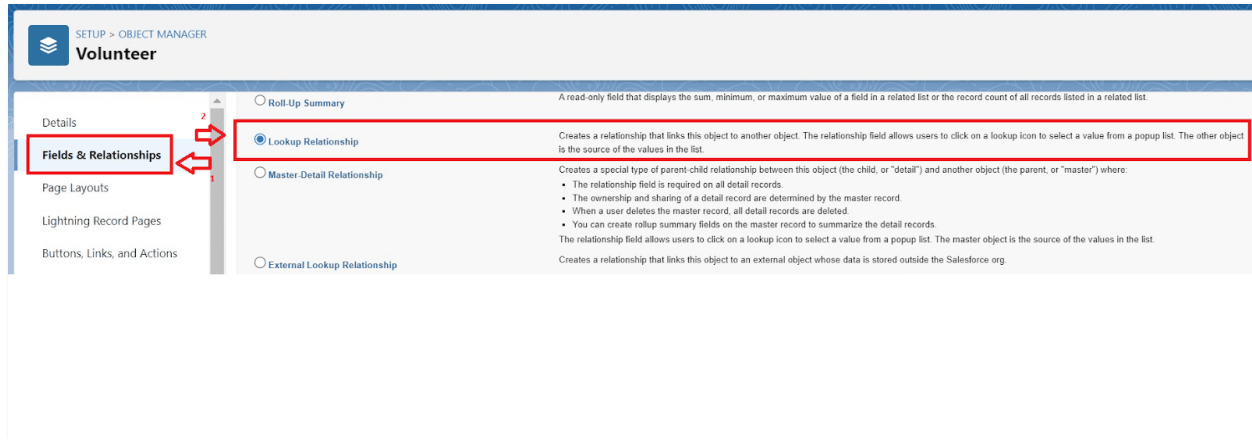
6. To Add User Profiles:

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

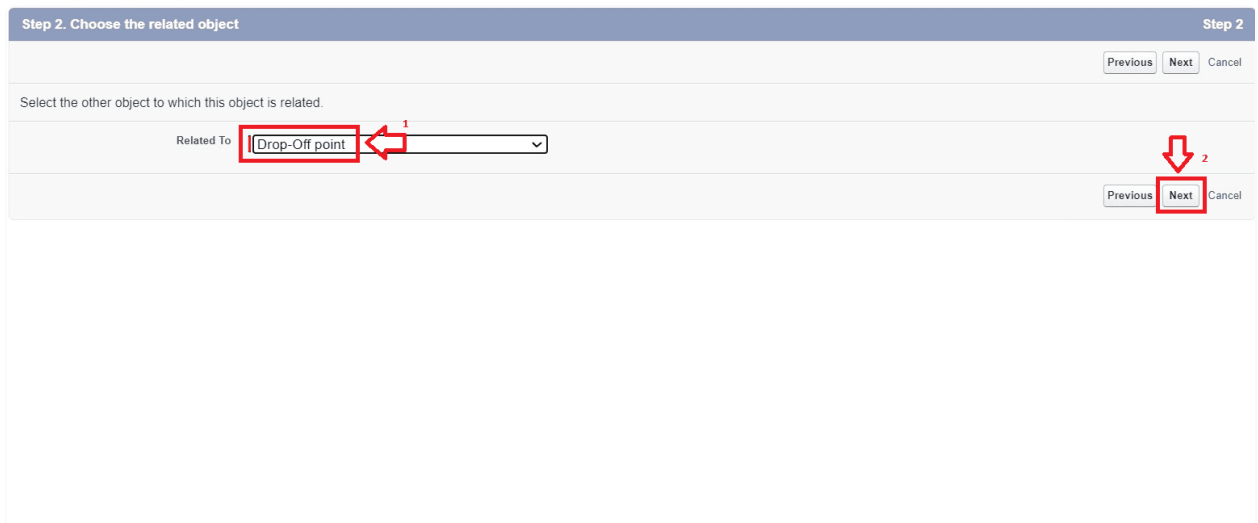# Creation of Relationship fields in objects

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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

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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.

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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

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)

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..

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5. On the right hand side:

> Flow : Venue Flow

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

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.

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.

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