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VELLORE INSTITUTE OF TECHNOLOGY BHOPAL

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.

Our vision is simple yet impactful: to create a seamless system that ensures leftover food is not wasted but instead redistributed efficiently to those who need it most. With Salesforce as our backbone, FoodConnect will streamline food collection, optimize volunteer coordination, and ensure timely delivery to designated drop-off points. Through real-time tracking, intelligent task allocation, and insightful reporting, FoodConnect will foster transparency and accountability across the entire process. Volunteers will find it easier to engage, donors will have confidence in the system, and recipients will benefit from reliable access to food. This project isn't just about logistics—it's about building a culture of sharing, reducing environmental impact, and creating a replicable model for other communities. By bridging the gap between surplus and scarcity, FoodConnect aspires to make a meaningful difference, one meal at a time.

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 non-profits,



shelters, and underserved communities, ensuring timely access to nutritious meals.

- C. **Streamline Operations:** Simplify and enhance volunteer coordination, task management, and communication to create a seamless experience for all stakeholders.
- D. **Promote Transparency and Accountability:** Leverage technology to provide clear tracking, reporting, and insights into food collection, distribution, and impact.

Specific Outcomes:

a. A Comprehensive Web Application:

- Manage venues and drop-off points efficiently.
- Enable real-time task assignment and tracking for volunteers.
- Provide robust reporting and analytics dashboards to measure performance and impact.

b. Intelligent Automation:

- Automate the matching of food donations based on location, food type, and urgency to optimize logistics and reduce delays.

c. Enhanced Communication and Collaboration:

- Foster real-time updates and coordination among donors, volunteers, and recipients through integrated communication tools.

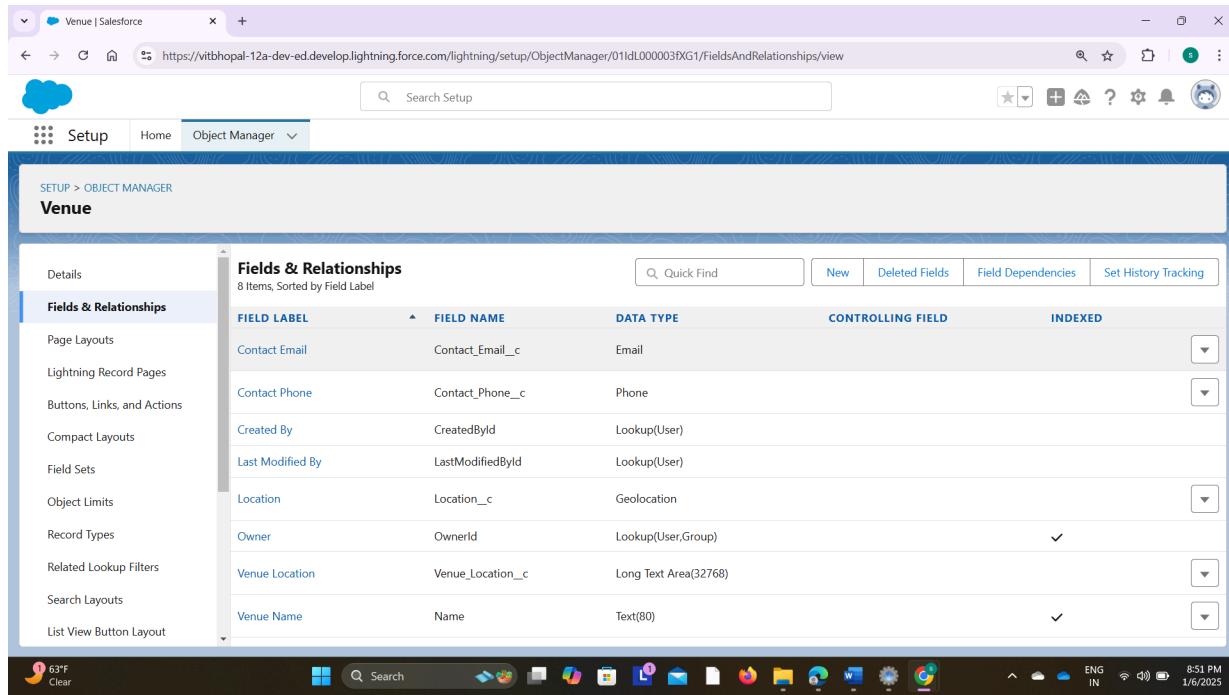
d. Data-Driven Insights:

- Generate actionable insights to continuously improve operations, measure impact, and refine strategies for food redistribution.

3. Salesforce Key Features and Concepts Utilized

FoodConnect leverages the power of Salesforce to create an efficient, user-friendly platform that streamlines food redistribution and volunteer management. Here's how we've utilized Salesforce features to bring this initiative to life.

- 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. On the left, a sidebar lists various configuration options like Details, Fields & Relationships, Page Layouts, and Record Types. The main area is titled 'Fields & Relationships' and displays eight items, sorted by Field Label. The table includes columns for FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED.

| FIELD LABEL | FIELD NAME | DATA TYPE | CONTROLLING FIELD | INDEXED |
|------------------|-------------------|-----------------------|-------------------|---------|
| Contact Email | Contact_Email__c | Email | | |
| Contact Phone | Contact_Phone__c | Phone | | |
| Created By | CreatedBy | Lookup(User) | | |
| Last Modified By | LastModifiedBy | 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) | | ✓ |

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



Drop-Off Point | Salesforce

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01ld000003fxMT/FieldsAndRelationships/view

Setup Home Object Manager

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

Fields & Relationships
9 Items, 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 | | |

https://vitbhopal-12a-dev-ed.lightning.force.com/one/one.app#/setup/ObjectMan...

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

Task | Salesforce

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01ld000003fxO5/FieldsAndRelationships/view

Setup Home Object Manager

Search Setup

SETUP > OBJECT MANAGER

Task

Details

Fields & Relationships

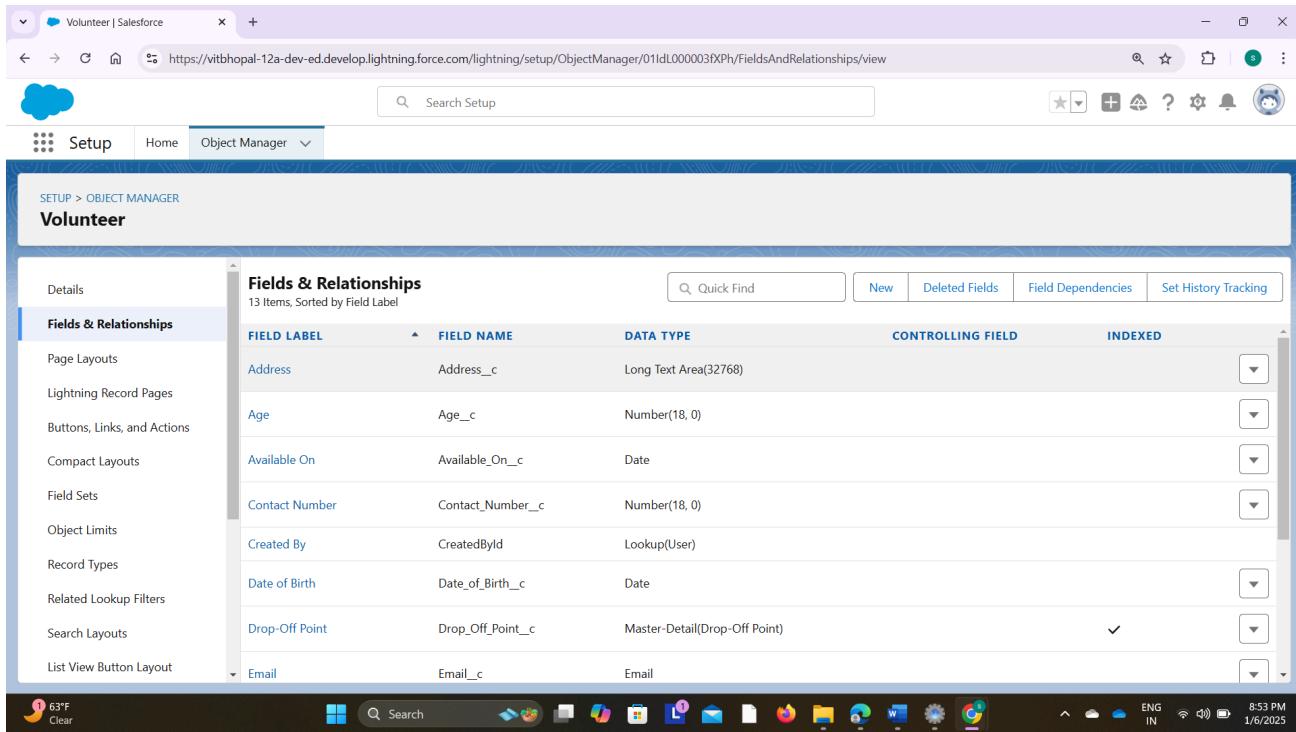
Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Search Layouts
List View Button Layout

Fields & Relationships
15 Items, Sorted by Field Label

| 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(14) | | |

63°F Clear 8:53 PM ENG IN 1/6/2025

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



The screenshot shows the Salesforce Setup interface for the 'Volunteer' object. The left sidebar has a 'Fields & Relationships' section selected. The main area displays a table titled 'Fields & Relationships' with 13 items, sorted by Field Label. The columns are: FIELD LABEL, FIELD NAME, DATA TYPE, CONTROLLING FIELD, and INDEXED. The table includes fields like Address, Age, Available On, Contact Number, Created By, Date of Birth, Drop-Off Point, and Email.

| 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 | CreatedBy | 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 | | |

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



Execution Detail | Salesforce

https://vitbihopal-12a-dev-ed.lightning.force.com/lightning/setup/ObjectManager/01ld000003XRJ/FieldsAndRelationships/view

Cloud icon

Search Setup

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

Fields & Relationships

5 Items, Sorted by Field Label

| 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) | | ✓ |

63°F Clear

Search

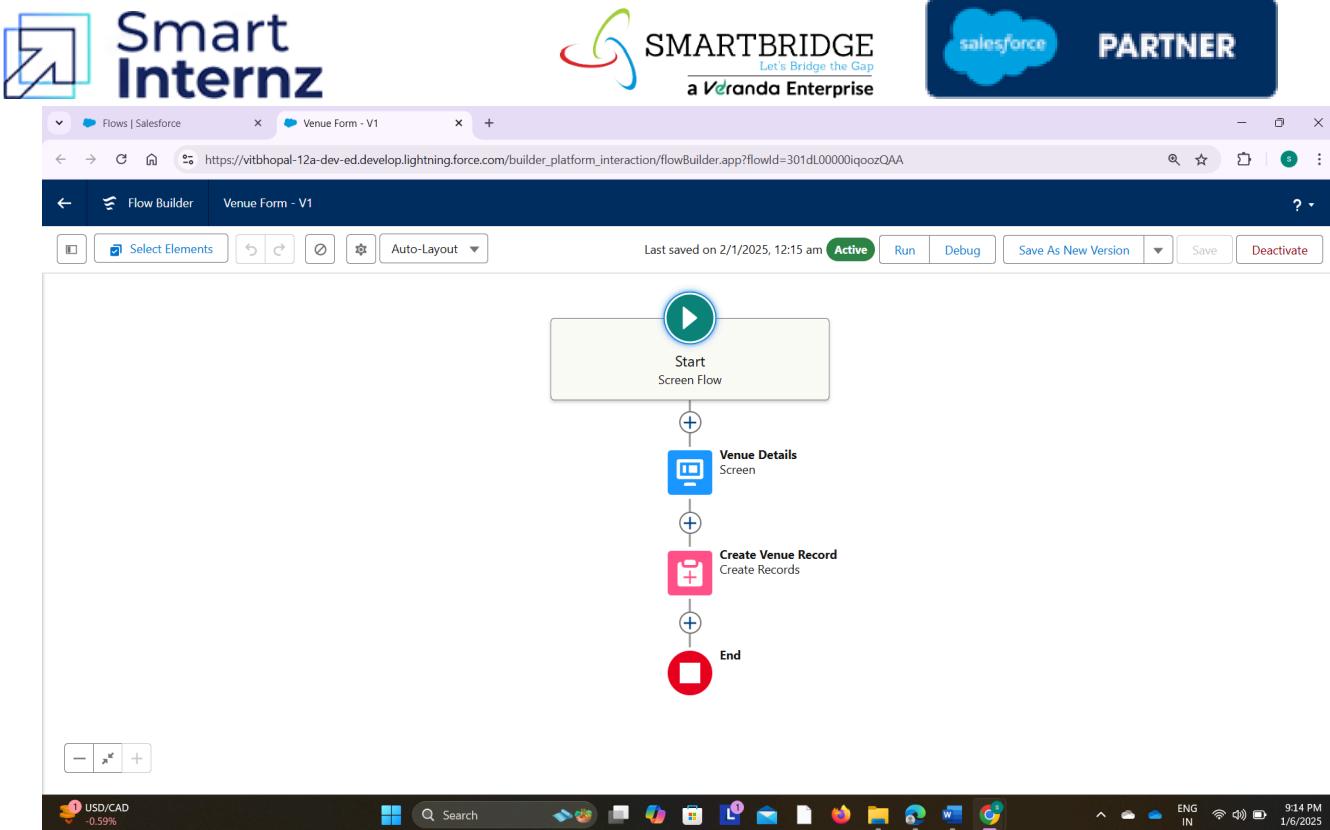
Cloud, File, Home, Mail, Calendar, Task, Notes, App, Help, Logout, ENG IN, 8:54 PM, 1/6/2025

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

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



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

The screenshot shows the Salesforce Setup Apex Triggers page. The left sidebar navigation includes 'Email', 'Custom Code', 'Apex Classes', 'Apex Settings', 'Apex Test Execution', 'Apex Test History', and 'Apex Triggers' (which is selected). The main content area shows the 'Apex Triggers' setup page for the 'DropOffTrigger' trigger. The trigger details are as follows:

| Name | DropOffTrigger | sObject Type | Drop-Off Point |
|------------------|--------------------------------------|------------------|--------------------------------------|
| Code Coverage | 0% (0/2) | Status | Active |
| Created By | Shraddha Tiwari, 27/12/2024, 2:33 pm | Last Modified By | Shraddha Tiwari, 27/12/2024, 3:40 pm |
| Namespace Prefix | | | |

The trigger code is:

```

trigger DropOffTrigger on Drop_Off_point__c (before insert) {
    for(Drop_Off_point__c Drop : Trigger.new){
        Drop.Distance__c = Drop.distance_calculation__c;
    }
}

```

Data Sharing and Security

- Profiles and Roles:** Define user roles with tailored access levels to protect sensitive data while ensuring seamless collaboration.



Recent | Reports | Salesforce

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Report/home?queryScope=mru

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

Reports Recent 3 items

REPORTS Recent

| | Report Name | Description | Folder | Created By | Created On | Subscribed |
|-----------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------|-------------------|---------------------|------------|
| Created by Me | Volunteer Task | | Custom Reports | Shraddha Tiwari | 2/1/2025, 12:55 am | |
| Private Reports | venue and Drop Off point | | Custom Reports | Shraddha Tiwari | 2/1/2025, 12:41 am | |
| Public Reports | Sample Flow Report: Screen Flows | Which flows run, what's the status of each interview, and how long do users take to complete the screens? | Public Reports | Automated Process | 26/12/2024, 9:06 pm | |

FOLDERS All Folders

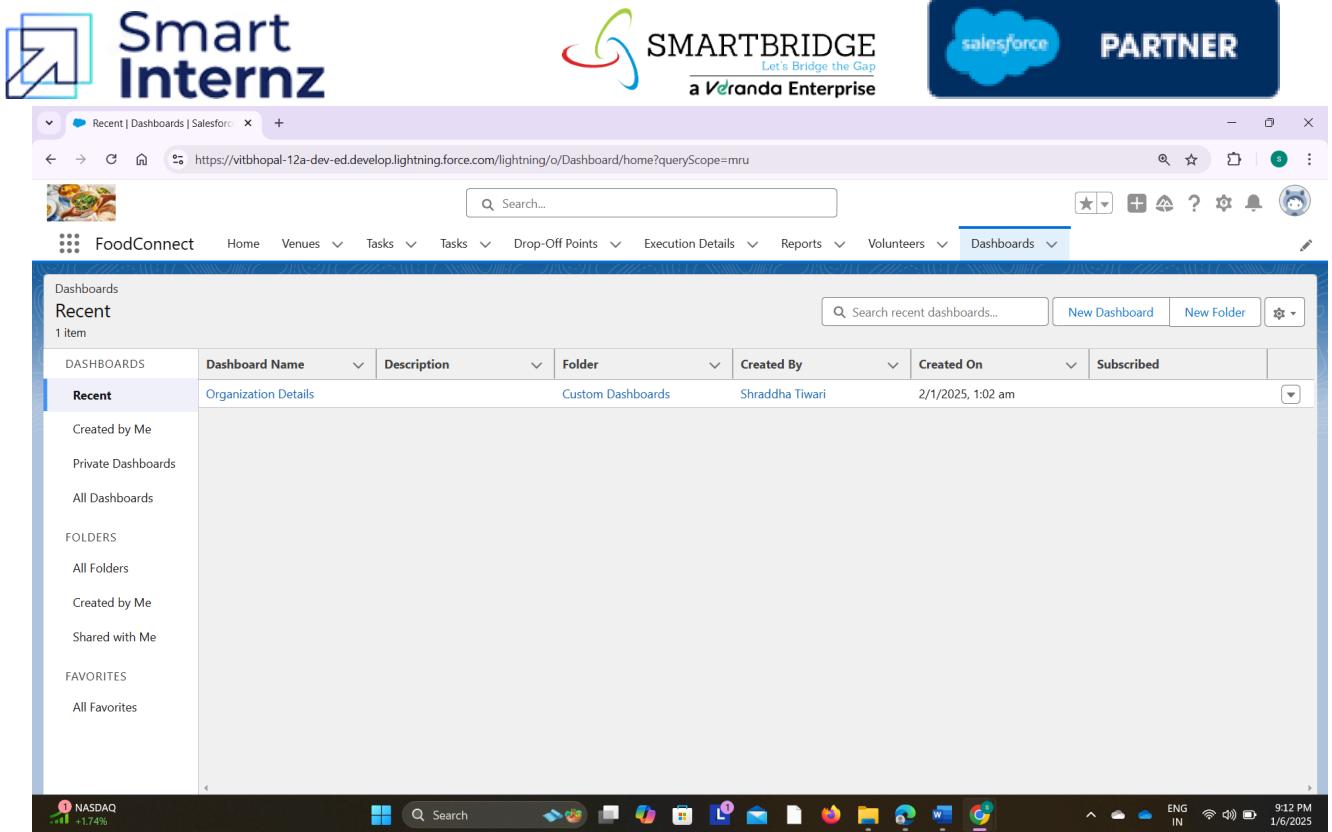
Created by Me Shared with Me

FAVORITES All Favorites

DOW +0.50% Search

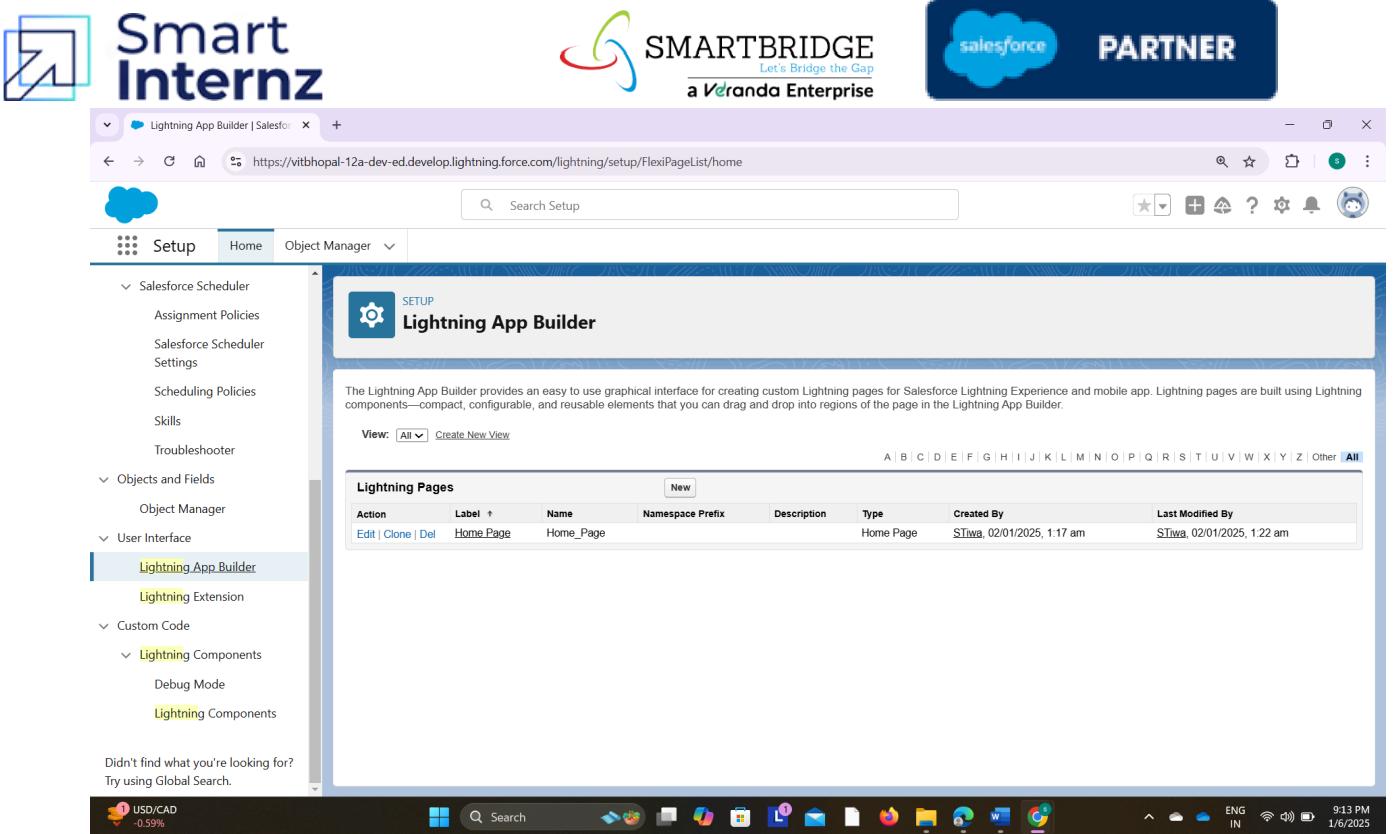
9:12 PM ENG IN 1/6/2025

- **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.



- **Automated Notifications:** Keep stakeholders informed with real-time alerts about task updates, food collection schedules, and delivery statuses.

4. 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 page. At the top, there's a search bar labeled "Search Setup". Below it, a navigation bar includes "Setup", "Home", and "Object Manager". The main area is titled "Object Manager" and shows a table with 11 rows of data. The columns are labeled: LABEL, API NAME, TYPE, DESCRIPTION, LAST MODIFIED, and DEPLOYED. The data includes:

| LABEL | API NAME | TYPE | DESCRIPTION | LAST MODIFIED | DEPLOYED |
|-----------------------------|--------------------------|-----------------|-------------|---------------|----------|
| Account | Account | Standard Object | | | |
| Activity | Activity | Standard Object | | | |
| Address | Address | 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 | | | |
| Asset | Asset | Standard Object | | | |
| Asset Action | AssetAction | 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.

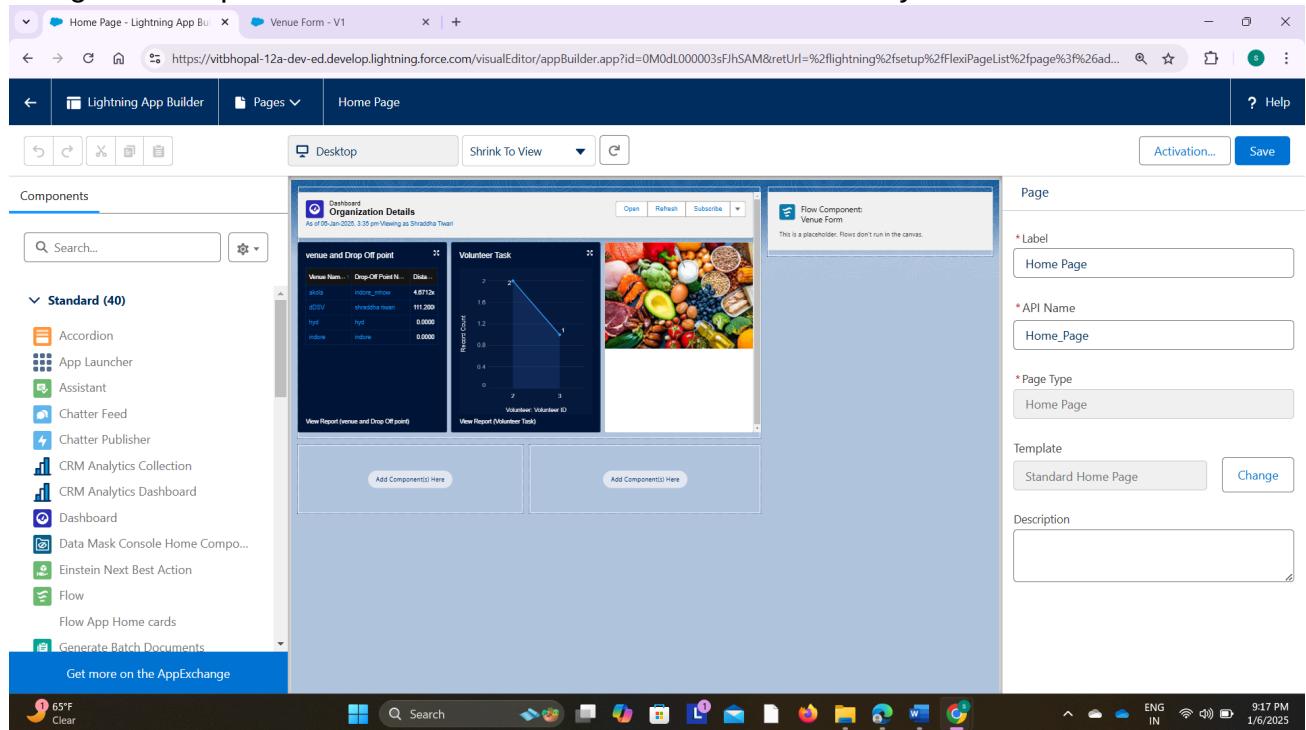
The screenshot shows the Salesforce Custom Tabs page. At the top, there's a search bar labeled "Search Setup". Below it, a navigation bar includes "Setup", "Home", and "Object Manager". The main area is titled "Custom Tabs" and shows a table with data. The columns are labeled: Action, Label, Tab Style, and Description. The data includes:

| Action | Label | Tab Style | Description |
|------------|-------------------|-----------|-------------|
| Edit Del | Drop-Off Points | Diamond | |
| Edit Del | Execution Details | Guitar | |
| Edit Del | Tasks | Headset | |
| Edit Del | Venues | Heart | |
| Edit Del | Volunteers | Jewel | |

Below this, there's a section titled "Web Tabs" which states "No Web Tabs have been defined".

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.

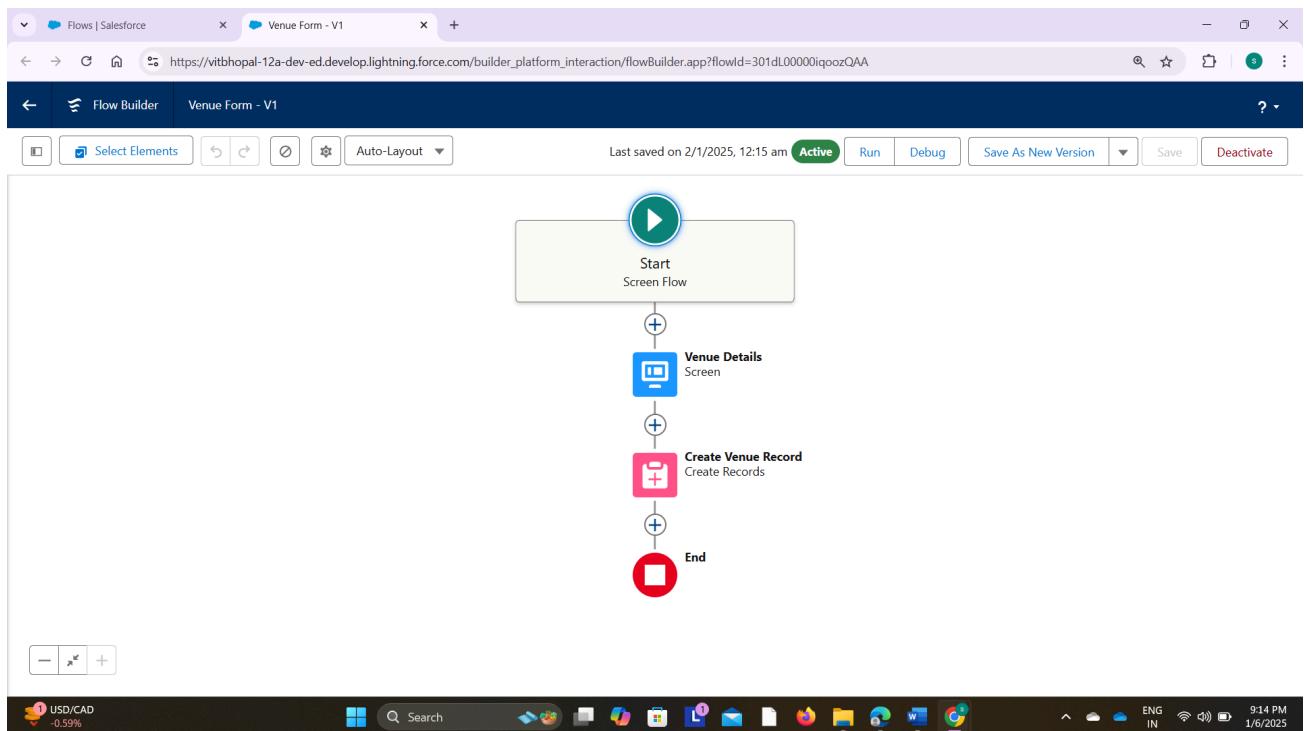
Step 6: Field Configuration

- 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.

○

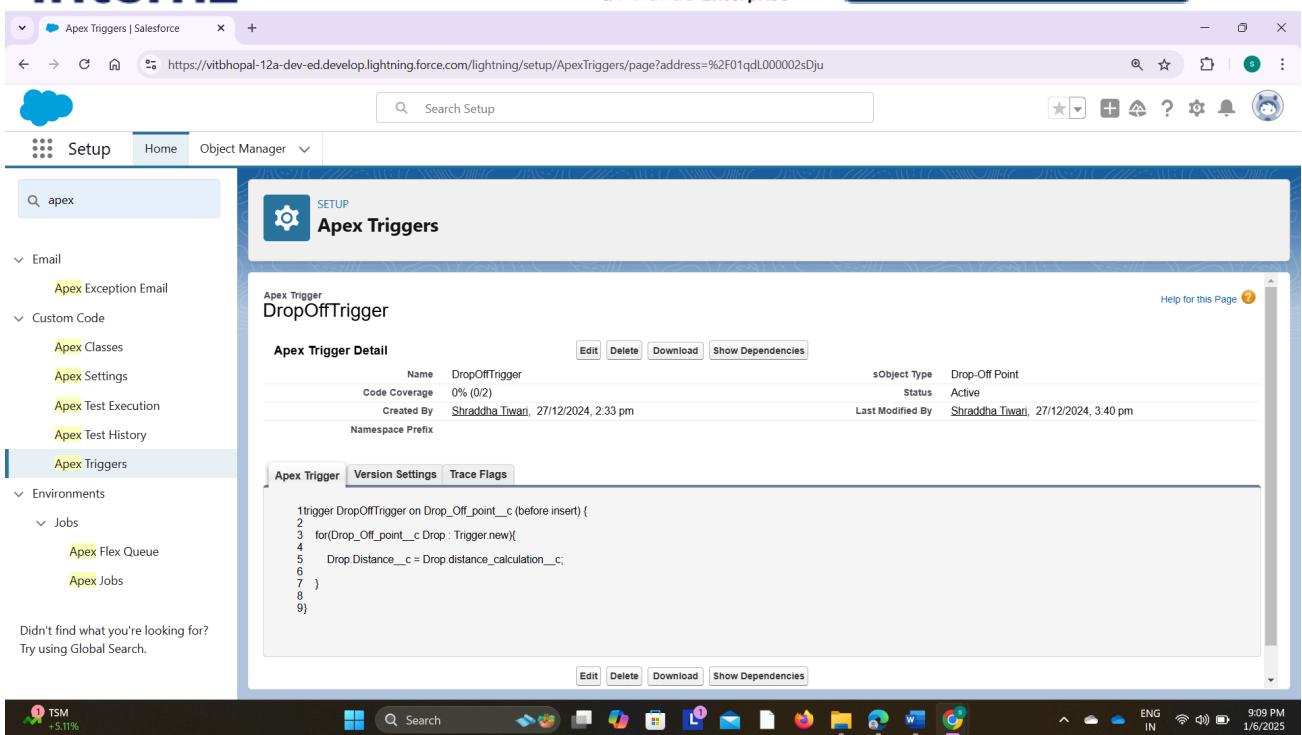
Step 7: Flow Design

- 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.



The screenshot shows the Salesforce Setup Apex Triggers page. The left sidebar has a search bar and navigation links for Email, Custom Code, Environments, and Apex Triggers. The main area displays the Apex Trigger Detail for 'DropOffTrigger'. The trigger code is:

```

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

```

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.

5. Testing and Validation

To ensure the FoodConnect solution functions seamlessly and meets all project requirements, a thorough testing and validation process was implemented. This approach focused on verifying both the technical and user-facing aspects of the system.

1. Unit Testing

- **Objective:** Validate the functionality of individual components, such as Apex triggers, workflows, and custom objects.
- **Actions:**



- Tested forms for venues, tasks, and drop-off points to ensure accurate data capture and validation.
- Verified data storage and retrieval processes for volunteers, ensuring that all records were consistent and error-free.
- Confirmed the proper execution of automated calculations, such as distance-based task assignments.

2. User Interface Testing

- **Objective:** Ensure the system is intuitive and user-friendly for all stakeholders, including donors, volunteers, and administrators.
- **Actions:**
 - Conducted extensive testing across all pages to confirm responsive design and seamless navigation.
 - Verified that reports and dashboards displayed accurate and up-to-date data in an easily interpretable format.
 - Ensured compatibility across various devices, with a focus on mobile accessibility for field agents.

The screenshot shows a web browser window with the following details:

- Title Bar:** Recently Viewed | Volunteers | Venue Form - V1
- Address Bar:** https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Volunteer_c/list?filterName=_Recent
- Header:** FoodConnect (with a grid icon), Home, Venues, Tasks, Drop-Off Points, Execution Details, Reports, Volunteers (selected), Dashboards.
- Content Area:**
 - Volunteers:** Recently Viewed (dropdown menu open)
 - Table:** Shows a list of volunteers with columns: #, Volunteer Name, and Actions (Edit, Delete). The data is:

| # | Volunteer Name | Actions |
|---|----------------|----------------|
| 1 | Shraddha | [Edit, Delete] |
| 2 | diya | [Edit, Delete] |
| 3 | egdfdegd | [Edit, Delete] |
- Bottom Bar:** Shows the URL https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Volunteer_c/home, a taskbar with various application icons, and a system tray with battery level (65°F), language (ENG IN), and date/time (9:21 PM 1/6/2025).



Recent | Reports | Salesforce Venue Form - V1

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Report/home?queryScope=mru

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

Reports Recent 3 items

| Report Name | Description | Folder | Created By | Created On | Subscribed |
|----------------------------------|-----------------------------------------------------------------------------------------------------------|----------------|-------------------|---------------------|------------|
| Sample Flow Report: Screen Flows | Which flows run, what's the status of each interview, and how long do users take to complete the screens? | Public Reports | Automated Process | 26/12/2024, 9:06 pm | [dropdown] |
| Volunteer Task | | Custom Reports | Shraddha Tiwari | 2/1/2025, 12:55 am | [dropdown] |
| venue and Drop Off point | | Custom Reports | Shraddha Tiwari | 2/1/2025, 12:41 am | [dropdown] |

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Report/home

65°F Clear Search

9:21 PM 1/6/2025

Recently Viewed | Execution Detail

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Execution_Detail_c/list?filterName=_Recent

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

Execution Details Recently Viewed [dropdown] +

3 items • Updated a few seconds ago

| | Execution Detail Name |
|---|-----------------------|
| 1 | akola |
| 2 | hyd |
| 3 | indore |

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Execution_Detail_c/h...

65°F Clear Search

9:21 PM 1/6/2025



Recently Viewed | Drop-Off Points x Venue Form - V1 x +

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Drop_Off_Point_c/list?filterName=_Recent

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

Drop-Off Points Recently Viewed

4 items • Updated a few seconds ago

| | Drop-Off Point Name |
|---|---------------------|
| 1 | indore_mhow |
| 2 | hyd |
| 3 | indore |
| 4 | shraddha tiwari |

Search this list...

Recently Viewed | Tasks | Sales x Venue Form - V1 x +

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Task_c/list?filterName=_Recent

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

Tasks Recently Viewed

3 items • Updated a few seconds ago

| | Task Name |
|---|-----------|
| 1 | akola |
| 2 | hyd |
| 3 | hello |

Search this list...



Smart Internz



SMARTBRIDGE
Let's Bridge the Gap
a Veranda Enterprise



Recently Viewed | Venues | Sales | Venue Form - V1

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Venue_c/list?filterName=_Recent

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

Venues Recently Viewed

5 items • Updated a few seconds ago

| | Venue Name |
|---|-----------------|
| 1 | a00dL00000Z89PS |
| 2 | akola |
| 3 | hyd |
| 4 | indore |
| 5 | dDSV |

New Import Change Owner Assign Label

Search this list... Search Filter Edit Delete

https://vitbhopal-12a-dev-ed.lightning.force.com/lightning/o/Venue_c/home

65°F Clear

Search

9:21 PM 1/6/2025

6.

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.

1. 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.

2. 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.

3. 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.

4. 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.

5. 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.

6. Data Integrity and Reporting

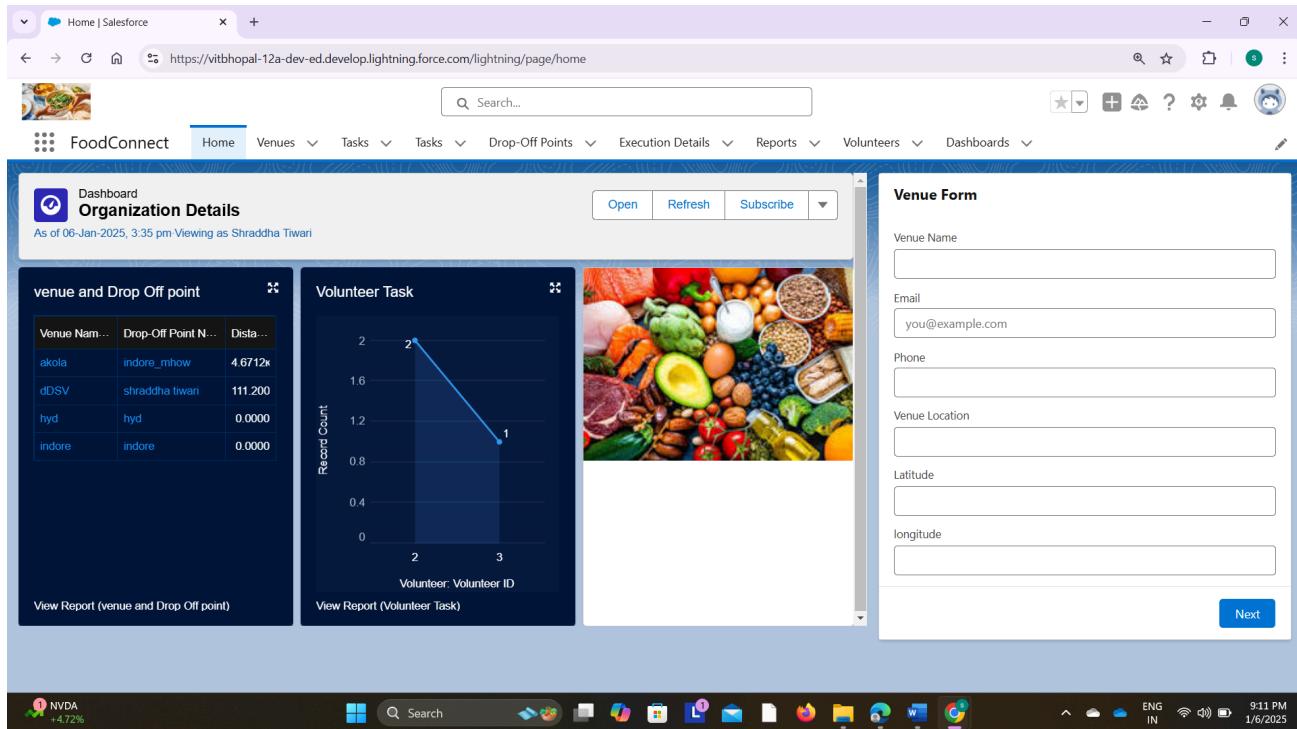
- Scenario: Stakeholders need to analyze the impact of food distribution efforts and identify areas for improvement.
- Salesforce Solution: Custom report types and dashboards provide actionable insights into task completion rates, volunteer participation, and food distribution metrics, ensuring data-driven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

7. 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.

8. 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.



The screenshot shows the FoodConnect application running on a Salesforce platform. The top navigation bar includes links for Home, Venues, Tasks, Drop-Off Points, Execution Details, Reports, Volunteers, and Dashboards. The main content area displays three panels: 'Organization Details' (listing venues and drop-off points), 'Volunteer Task' (a chart showing record counts for volunteers 1 and 2), and a 'Venue Form' (a form for entering venue details like name, email, phone, location, latitude, and longitude). The bottom status bar shows system icons and the date/time (9:11 PM, 1/6/2025).

| Venue Name | Drop-Off Point Name | Distance |
|------------|---------------------|----------|
| akola | indore_mhow | 4.6712k |
| dDSV | shraddha_tiwari | 111.200 |
| hyd | hyd | 0.0000 |
| indore | indore | 0.0000 |

7. 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.

The screenshot shows a Salesforce Lightning App interface with the following components:

- Organization Details:** A card displaying "As of 06-Jan-2025, 3:35 pm Viewing as Shraddha Tiwari". It includes a table for "venue and Drop Off point" and a chart titled "Volunteer Task".
- Volunteer Task:** A line chart showing the relationship between "Volunteer ID" (X-axis, values 2 and 3) and "Record Count" (Y-axis, values 0, 0.8, 1.6, 2). The chart shows two points: (2, 1.8) and (3, 0.9).
- Venue Form:** A form for entering venue information. Fields include: "Venue Name" (text input), "Email" (text input with value "you@example.com"), "Phone" (text input), "Venue Location" (text input), "Latitude" (text input), and "longitude" (text input). A "Next" button is at the bottom right.