TO SUPPLY LEFTOVER FOOD TO POOR

A PROJECT REPORT

Submitted by

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IN

COMPUTER SCIENCE AND ENGINEERING

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NOV/DEC 2025

ABSTRACT

The Leftover Food Distribution System is a Salesforce-based cloud application developed to collect and distribute excess food from restaurants, households, and events to the poor and needy. This system automates the entire process — from donor registration to food pickup, volunteer assignment, and delivery confirmation — using Salesforce tools like Flows, Apex Triggers, Reports, and Dashboards.

The primary objective is to minimize food wastage while addressing hunger in society through a structured and transparent platform. Donors can easily log food availability, and volunteers are notified and guided for collection and delivery tasks in real time.

Key tools used include:

- Salesforce CRM Platform
- Flows and Automation
- Apex Triggers and Email Alerts
- Reports and Dashboards

This project promotes social welfare by enabling efficient coordination, improving traceability, and ensuring timely food delivery, ultimately contributing to a hunger-free society.

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CHAPTER 1 – INTRODUCTION

1.1 Overview

The Leftover Food Distribution System is developed to reduce food wastage and fight hunger by redistributing excess edible food to needy people. It provides a digital platform where food donors (restaurants, households, event organizers) can notify the availability of surplus food, and NGOs or volunteers can collect and deliver it to the underprivileged.

The system aims to bridge the gap between food donors and beneficiaries using modern tools like mobile apps or web portals to ensure timely and safe distribution.

1.2 Objectives

- To reduce food waste by collecting surplus food from reliable sources.
- To provide an efficient system to connect donors with NGOs/volunteers.
- To ensure timely distribution of food to the needy in safe and hygienic condition.
- To promote social responsibility through community involvement and awareness.

1.3 Scope

The project covers:

- Real-time food donation alerts and pickups
- Donor and volunteer registration and tracking
- Food quality and safety confirmation
- Feedback collection from both donors and recipients

CHAPTER 2 – PROJECT IDEATION (Phase 1)

2.1 Problem Identification

Large amounts of edible food are wasted daily by restaurants, events, and households, while many people still go to bed hungry. There is no efficient system to collect and redistribute leftover food in a timely and safe manner to those in need.

2.2 Idea Description

The idea aims to develop a digital platform (web or mobile-based) to connect food donors (restaurants, homes, events) with NGOs or volunteers who can pick up and distribute the leftover food to poor and homeless individuals. The system ensures food is not wasted and reaches the right people safely.

2.3 Feasibility

The platform can be built using existing low-cost technologies and cloud-based tools. It requires minimal infrastructure and can be scaled easily across regions with community involvement. GPS, real-time notifications, and simple UI can make the system accessible to all users.

2.4 Innovation

- Real-time alerts to volunteers when food is available nearby.
- Food freshness and quality timestamp tracking.
- Donor and distribution feedback system for transparency.

CHAPTER 3 – REQUIREMENT ANALYSIS (Phase 2)

3.1 Functional Requirements

- Allow food donors to register and post details of leftover food.

- Enable NGOs/volunteers to view, accept, and collect available food items.

- Track pickup and delivery status in real-time.

- Maintain records of food donations, pickups, and beneficiaries.

- Generate reports on food saved and people served.

3.2 Non-Functional Requirements

- Ensure data privacy and secure access for donors and volunteers.

- Simple and intuitive user interface for ease of use.

- Mobile compatibility for real-time usage.

- Scalable backend to support increasing users and locations.

3.3 User Roles

- Admin: Manages the overall system, user access, and monitors food requests and deliveries.

- Donor: Registers food availability (restaurants, homes, events).

- Volunteer/NGO: Accepts food requests and delivers them to the needy.

- Beneficiary (optional): Can request food or provide feedback (via NGO).

3.4 Data Flow & ER Diagram

- Objects:

  Donor → Food Listing → Pickup Request → Delivery → Feedback

- Relationships:

  - Donor - Food Listing: One-to-many (a donor can post multiple food listings).

CHAPTER 4 – PROJECT DESIGN (Phase 3)

4.1 Schema Builder

Visualizes relationships between key objects like Donor, Food Listing, Pickup Request, Delivery, and Feedback. Shows how data flows from donors to beneficiaries.

4.2 Process Flow

1. Donor registers leftover food.

2. Volunteer/NGO accepts the pickup request.

3. Food is picked up and delivered to the needy.

4. Confirmation and feedback are recorded.

5. Reports generated for tracking donations and impact.

4.3 UI/UX Design

Clean and intuitive interface using Salesforce custom tabs for Donors, Volunteers, and Admin. Easy forms for food entry, tracking, and status updates.

CHAPTER 5 – PROJECT DEVELOPMENT (Phase 4)

5.1 Implementation Details

Object Created: Customer Detail, Appointment, Service Records, Billing & Feedback.

Fields:

- Food Type, Quantity, Expiry Time (in Food Listing)
- Status, Assigned Volunteer (in Pickup Request)

- Delivery Time, Location (in Delivery)
- Rating, Comments (in Feedback)

5.2 Trigger

```
trigger DropOffTrigger on Drop_Off_point__c (before insert) {
for(Drop_Off_point__c Drop : Trigger.new){
Drop.Distance_c = Drop.distance_calculation_c;
}
}
```

5.4 Flows

- **Flow 1:** Updates pickup status to "Delivered" when delivery is confirmed.
- **Flow 2:** Sends alert to volunteer when new food is listed by a donor.

5.5 Reports & Dashboards

- **Report:** "Food Donation Report" grouped by Food Type and Delivery Status.
- **Dashboard:** "Donation Impact Dashboard" showing number of donations, volunteers involved, and beneficiaries served weekly.

CHAPTER 6 – PROJECT DOCUMENTATION (Phase 5)

6.1 Execution Steps

- Created custom objects: Donor, Food Listing, Pickup Request, Delivery, Feedback.

- Set up relationships and custom fields.

- Built and tested automation flows.

- Designed reports and dashboards to monitor donations and delivery efficiency.

6.2 GitHub & SmartInternz Links

- **GitHub Repository:** jeyadurga-2904/To-Supply-Leftover-Food-to-Poor
- **SmartInternz Workspace:** https://nme.smartinternz.com/Student/guided_project_workspace/3739

6.3 Challenges & Solutions

Challenge	Solution
• "Submit" button not visible in Flow	→Adjusted screen size & saved
• Error while updating delivery status	→Fixed picklist values and field
• Missing custom fields in object	→Verified API names and re-added |

CHAPTER 7 – PROJECT DEMONSTRATION & RESULTS

7.1 Demo Flow

When donor adds food details, a volunteer is notified via email. Upon delivery, status is updated and feedback is collected.

7.2 Outputs

- Delivery status auto-updated.

- Notification sent to volunteers and admin.

CHAPTER 8 – CONCLUSION & FUTURE ENHANCEMENT

8.1 Conclusion

The project successfully provides a structured way to collect and distribute leftover food using Salesforce automation tools. It ensures transparency, quick delivery, and real-time updates.

8.2 Limitations

- Requires internet access and Salesforce platform.

- Dependent on availability of volunteers for delivery.

8.3 Future Enhancements

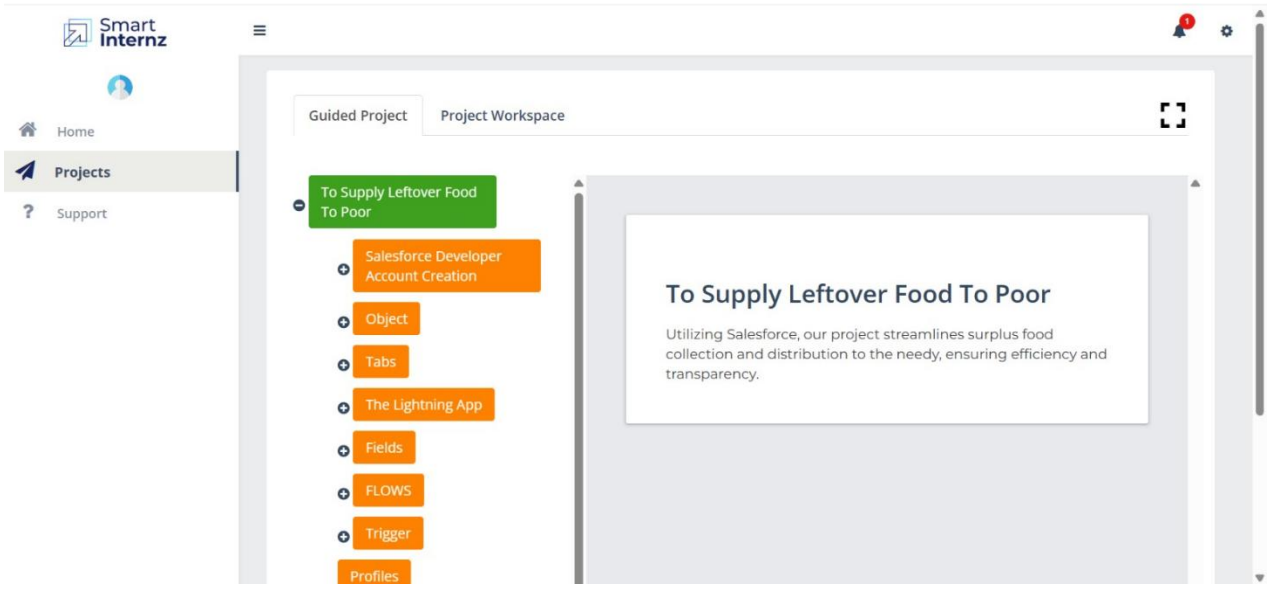
- Add donor and volunteer login portal.

- Integrate with local NGOs.

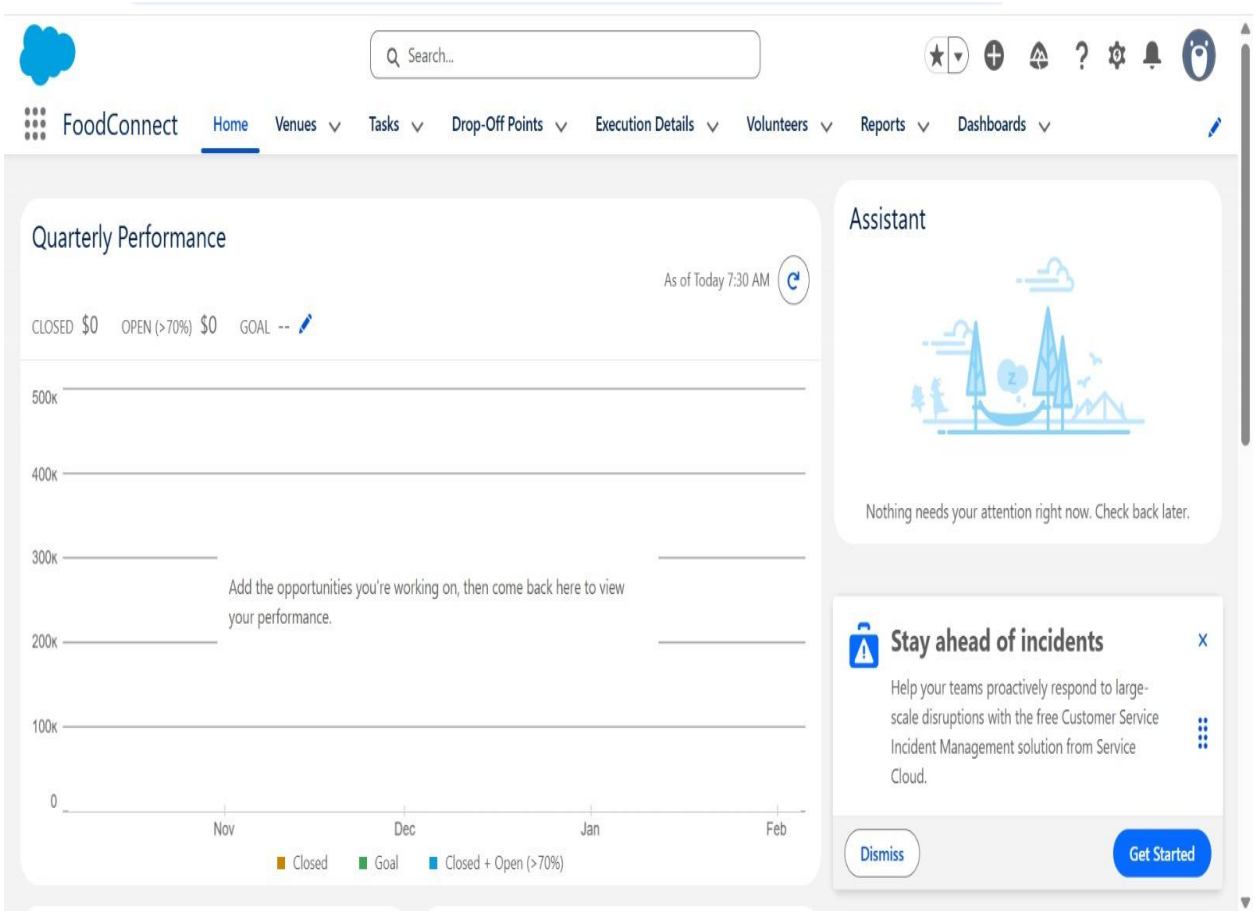
- Launch mobile app version for quick updates and tracking.

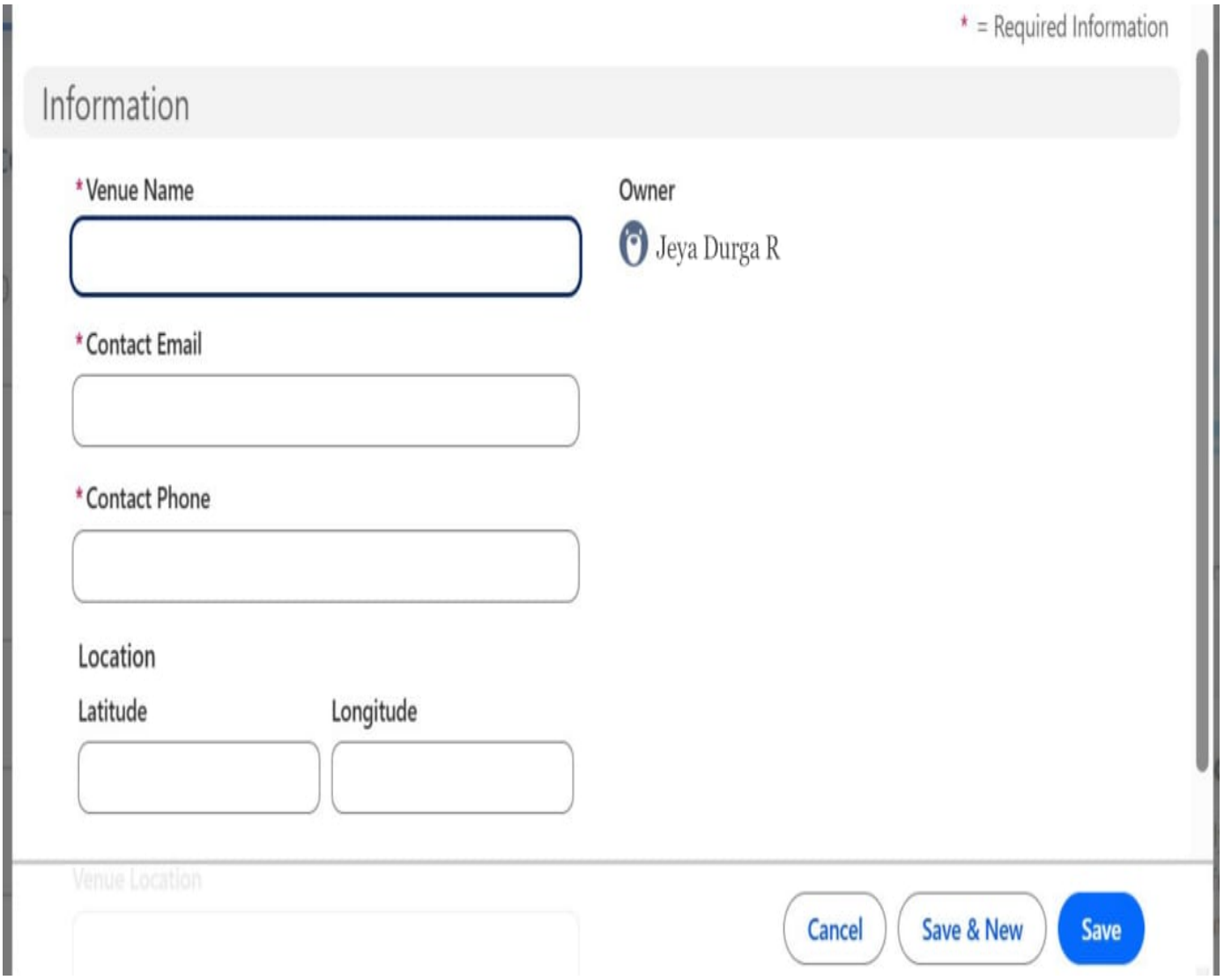
APPENDIX – SCREENSHOTS

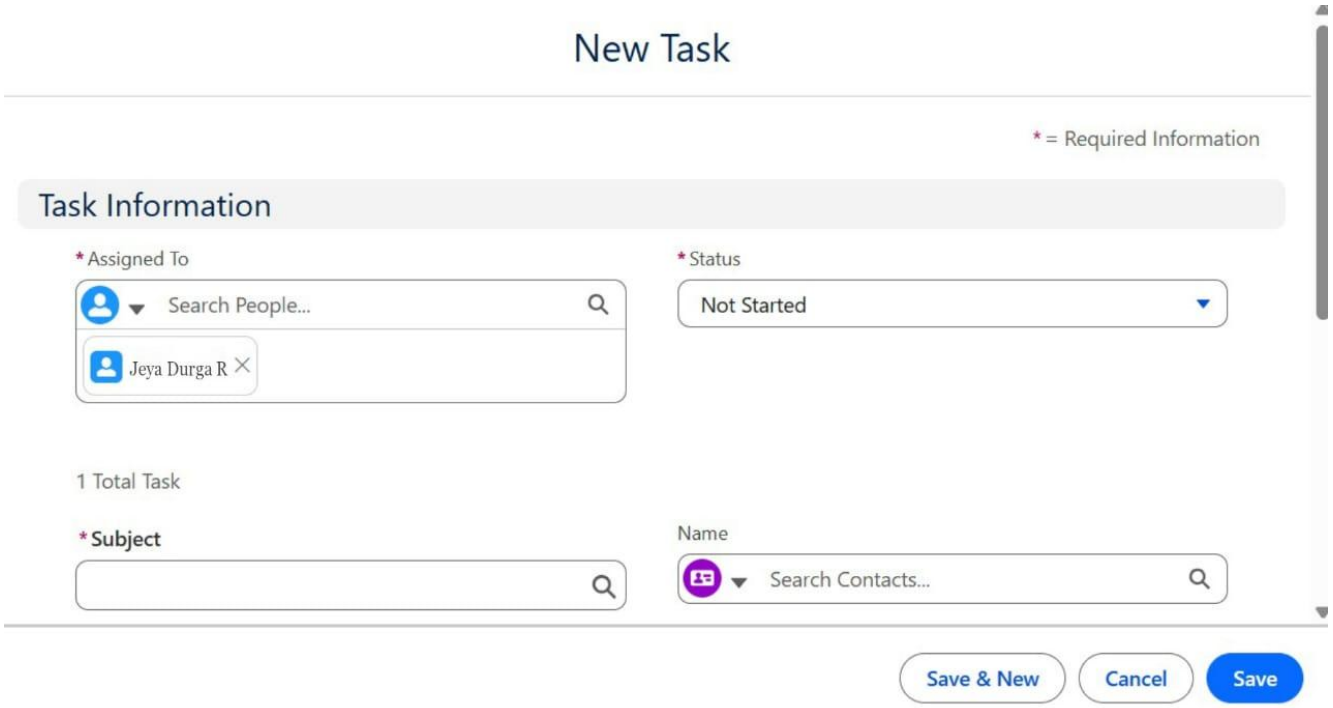
To Supply Leftover Food to Poor



Foodconnect App home




* = Required Information
Information
*Venue Name
Owner
Jeya Durga R
*Contact Email
*Contact Phone
Location
Latitude
Longitude
Venue Location
Cancel
Save & New
Save


New Task
* = Required Information
Task Information
* Assigned To
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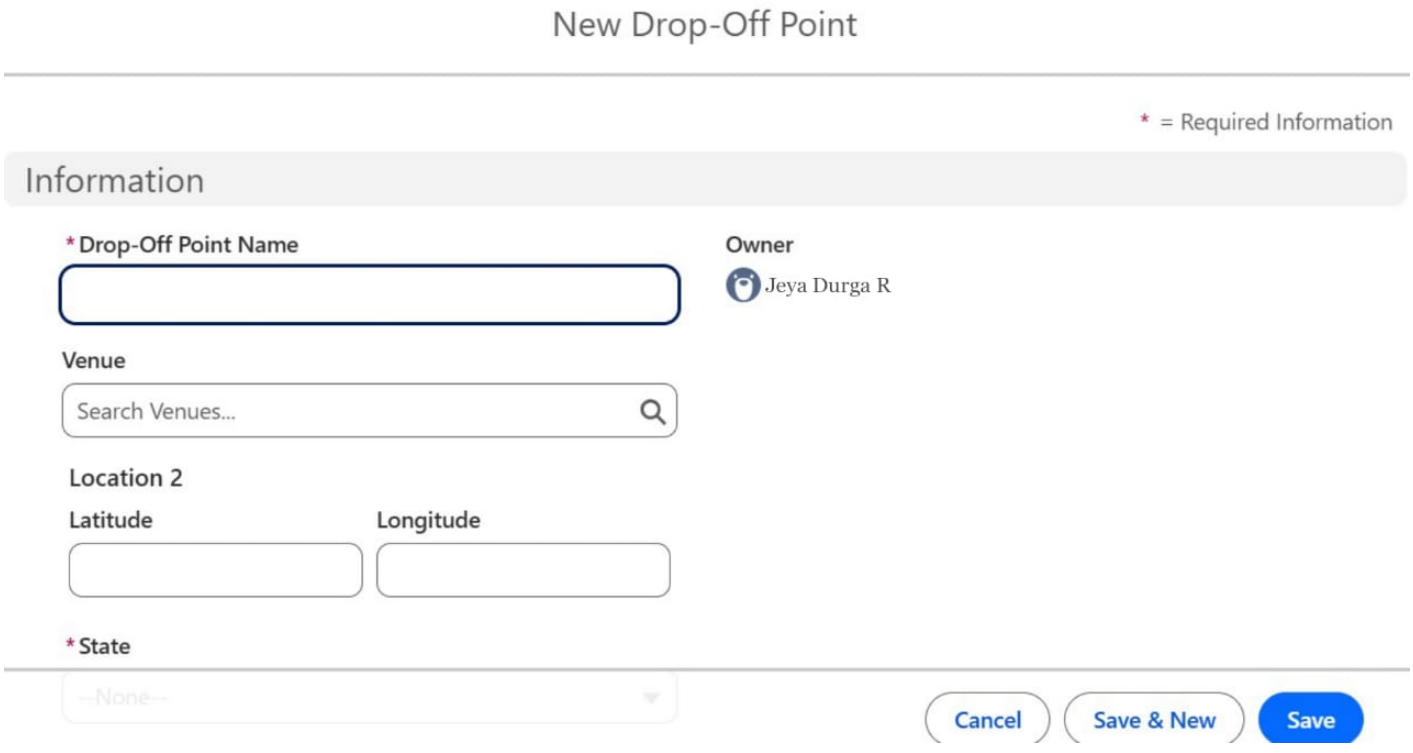
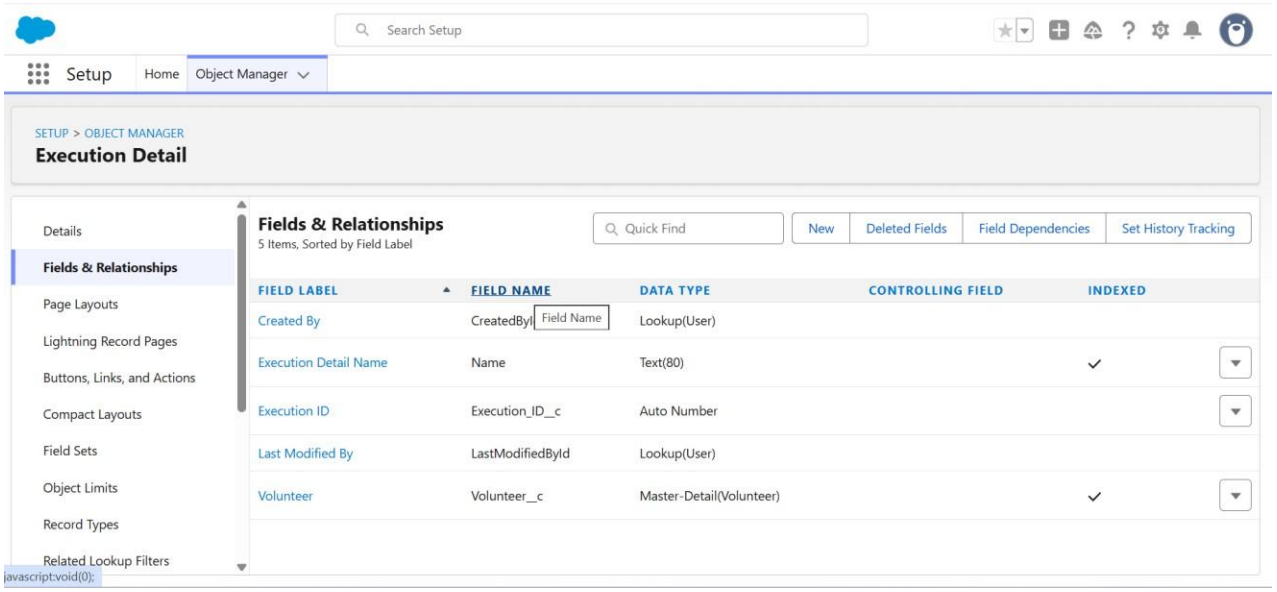
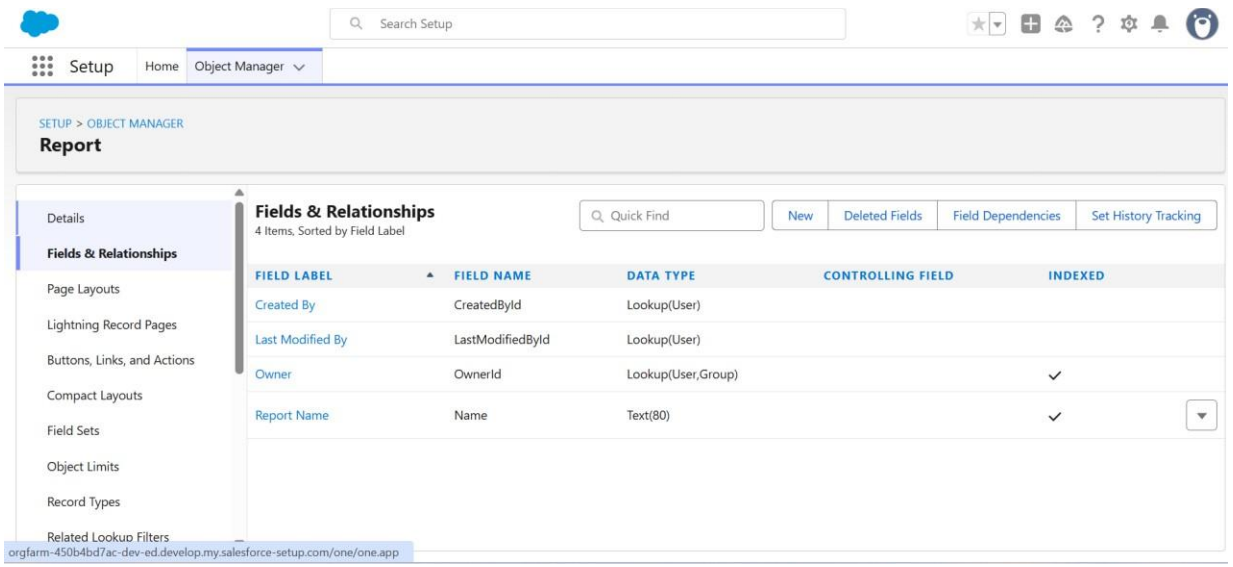
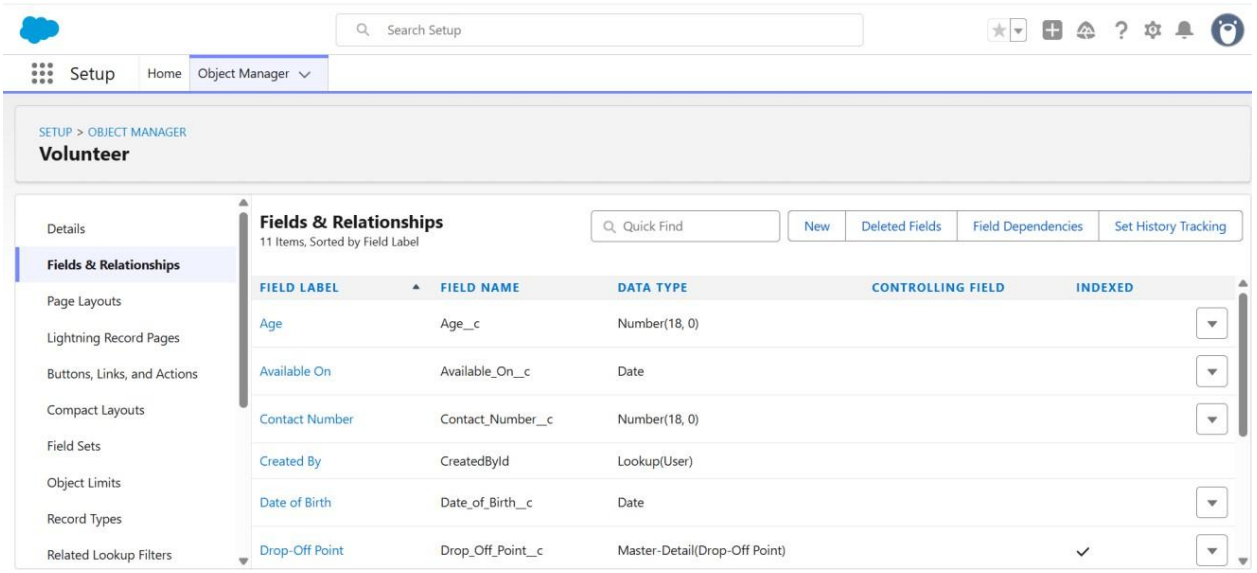
Jeya Durga R
* Status
Not Started
1 Total Task
* Subject
Name
Search Contacts...
Save & New
Cancel
Save


New Drop-Off Point
* = Required Information
Information
* Drop-Off Point Name
Owner
Jeya Durga R
Venue
Search Venues...
Location 2
Latitude
Longitude
* State
--None--
Cancel
Save & New
Save

Fields & Relationship for an object



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Page Layouts
Lightning Record Pages
Buttons, Links, and Actions
Compact Layouts
Field Sets
Object Limits
Record Types
Related Lookup Filters
Fields & Relationships
11 Items, Sorted by Field Label
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL
FIELD NAME
DATA TYPE
CONTROLLING FIELD
INDEXED
Age
Age__c
Number(18, 0)
Available On
Available_On__c
Date
Contact Number
Contact_Number__c
Number(18, 0)
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Lookup(User)
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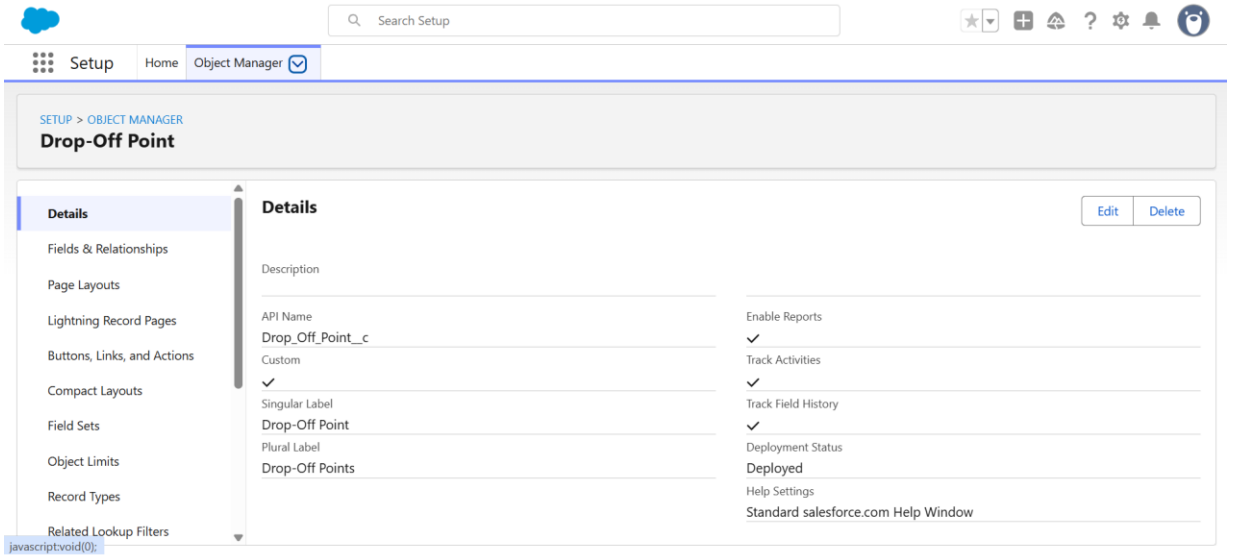
Drop-Off Point
Drop_Off_Point__c
Master-Detail(Drop-Off Point)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Field Sets
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Record Types
Related Lookup Filters
Details
Edit
Delete
Description
API Name
Drop_Off_Point__c
Custom
Singular Label
Drop-Off Point
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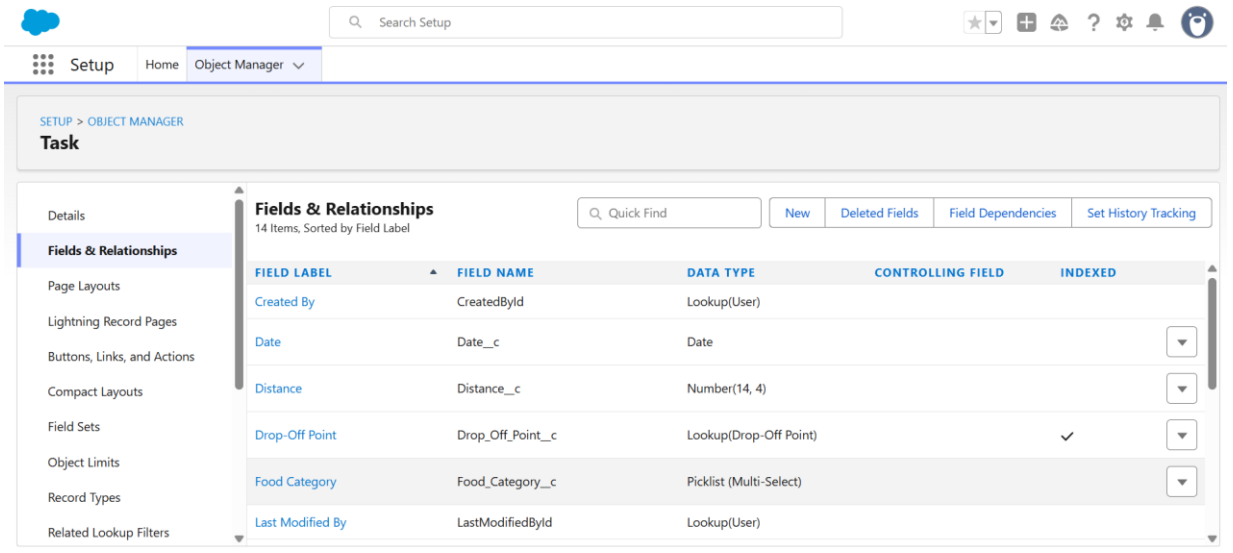
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Object Limits
Record Types
Related Lookup Filters
Fields & Relationships
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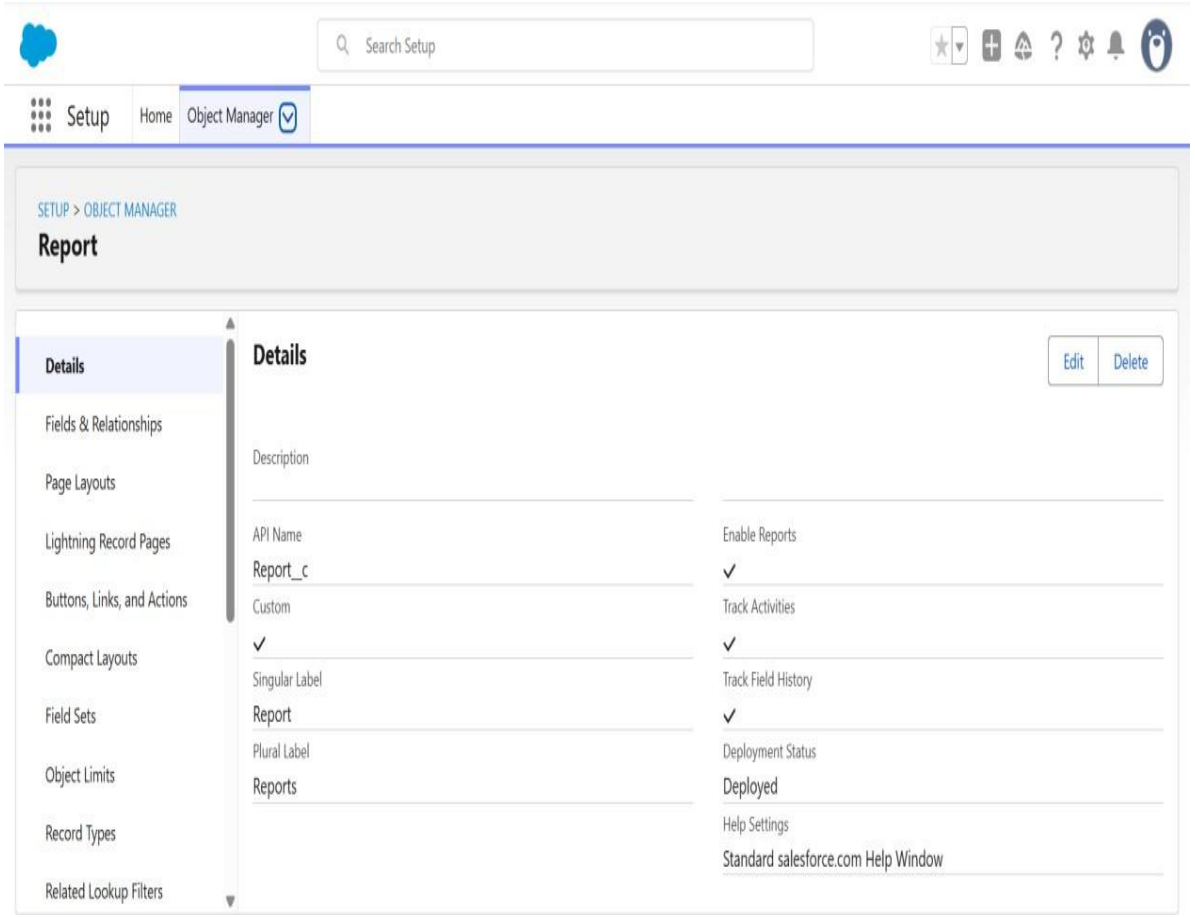
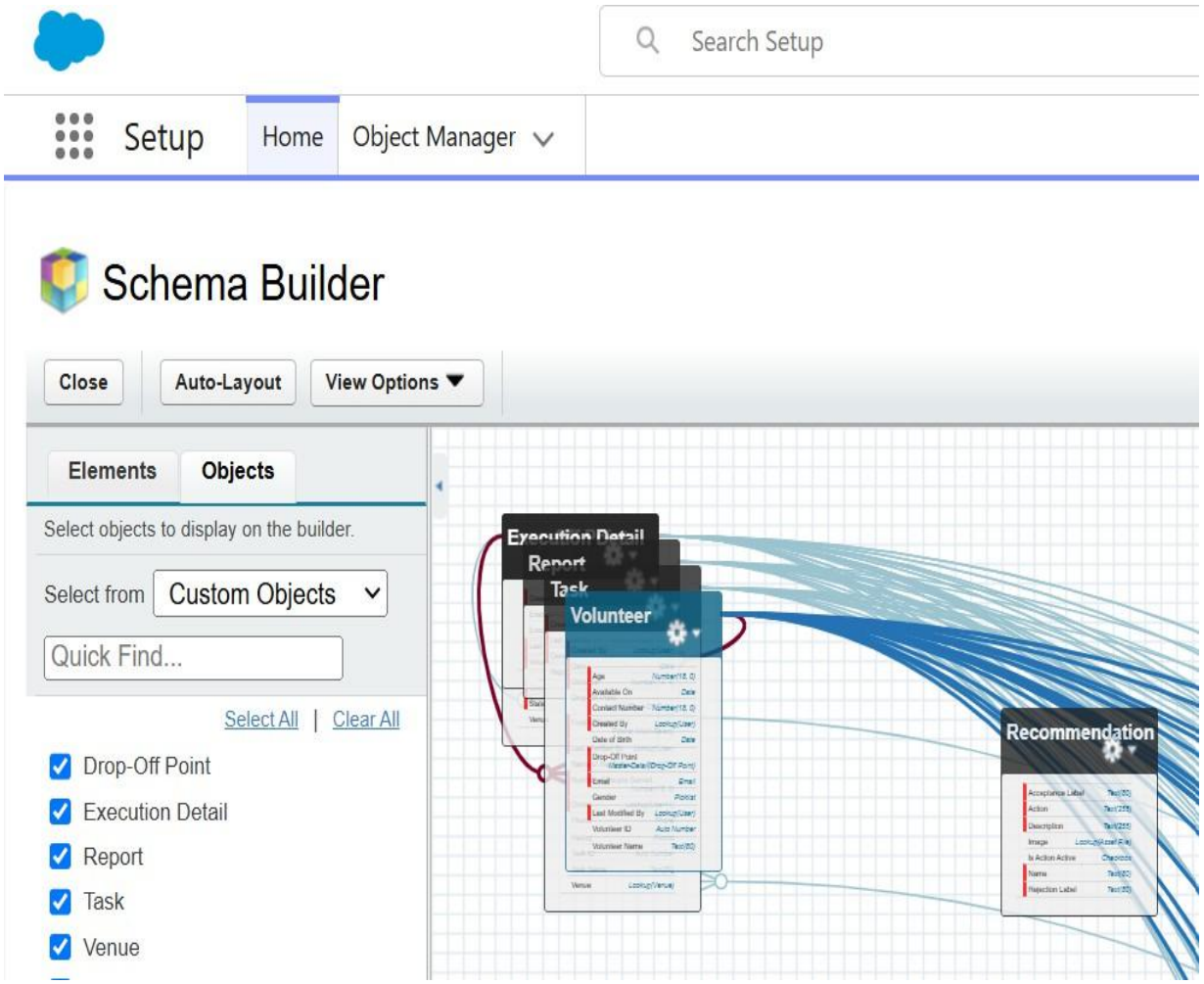
Quick Find
New
Deleted Fields
Field Dependencies
Set History Tracking
FIELD LABEL
FIELD NAME
DATA TYPE
CONTROLLING FIELD
INDEXED
Created By
CreatedById
Lookup(User)
Date
Date__c
Date
Distance
Distance__c
Number(14, 4)
Drop-Off Point
Drop_Off_Point__c
Lookup(Drop-Off Point)
Food Category
Food_Category__c
Picklist (Multi-Select)
Last Modified By
LastModifiedById
Lookup(User)

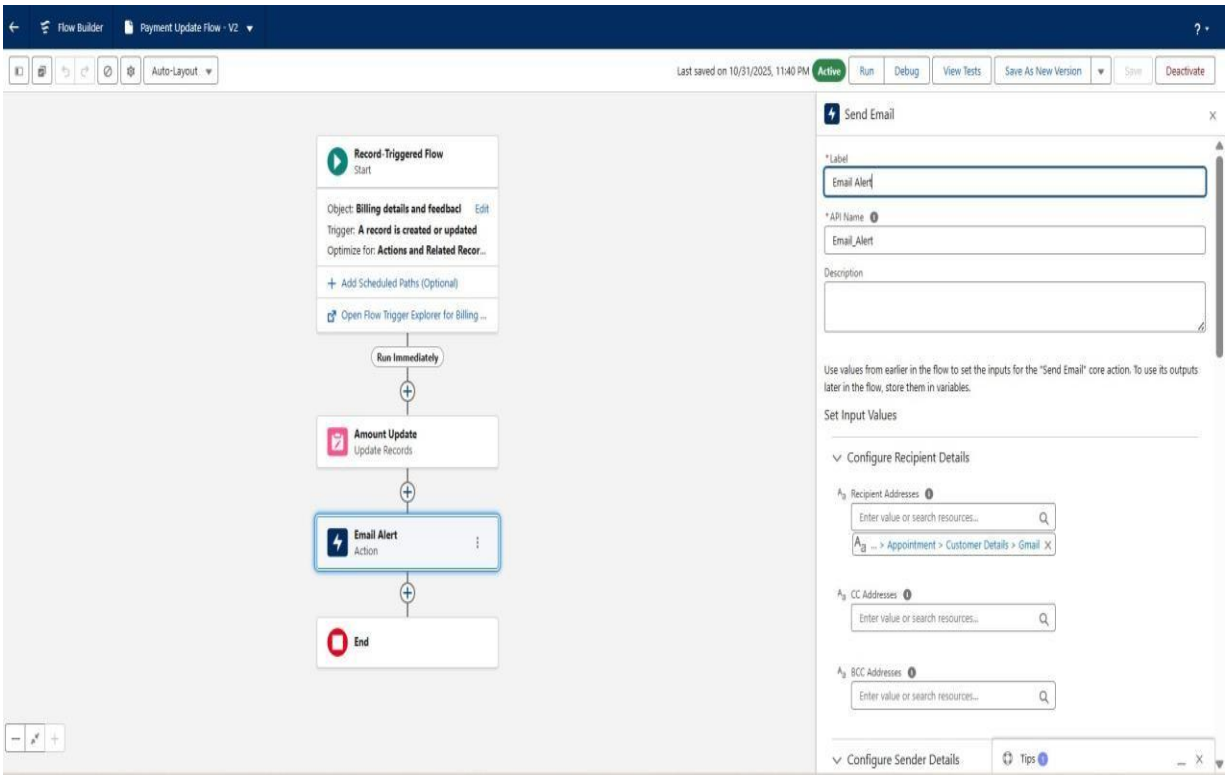
Validation Rule



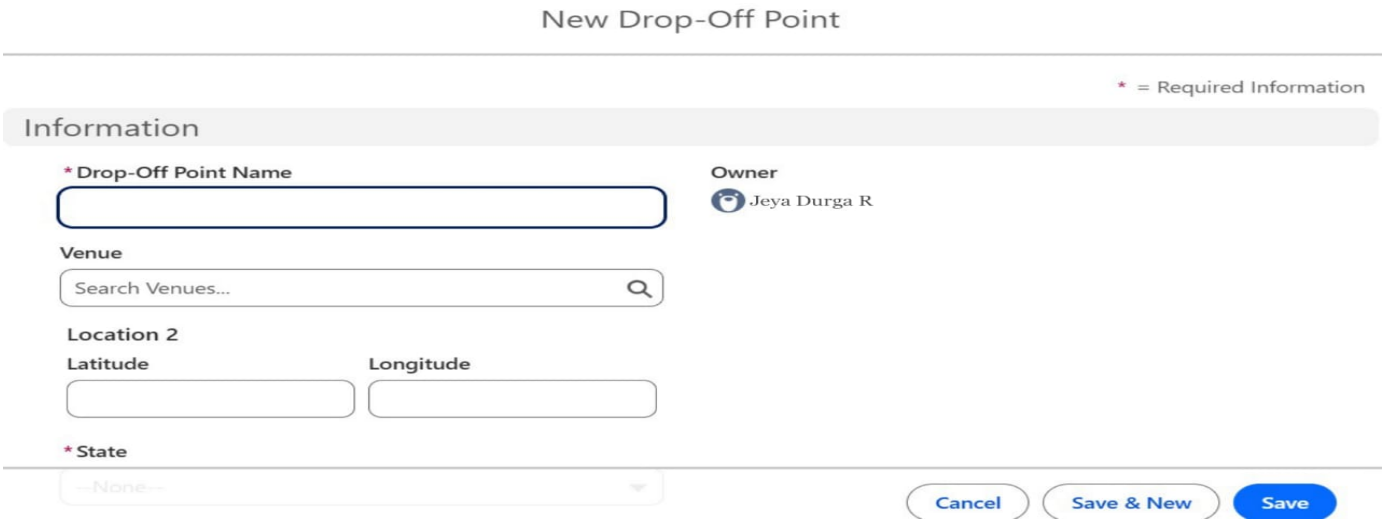
Schema Builder

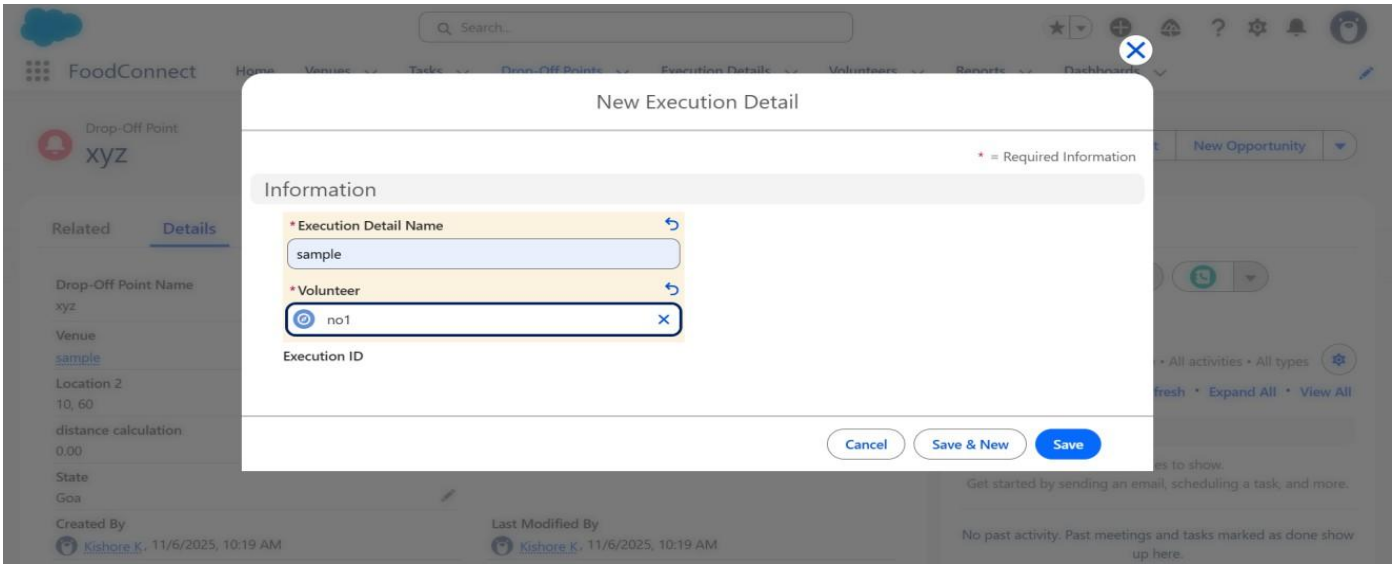


Automation Flow (Flow Builder)

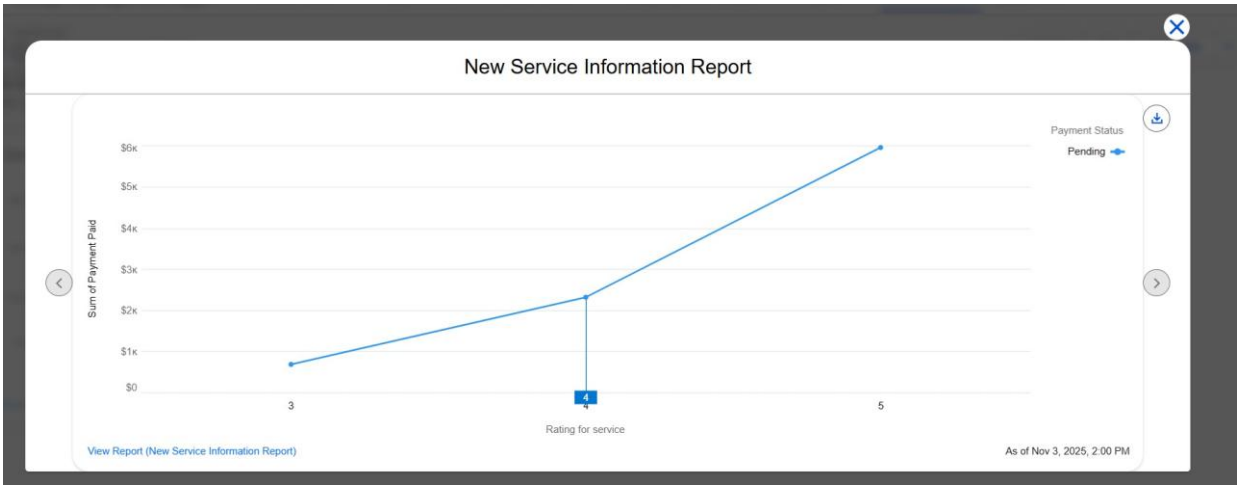


Record Creation (Show working flow)





Final UI & outputs



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3. Salesforce Developer Guide — https://developer.salesforce.com
4. GitHub Repository —jeyadurga-2904/To-Supply-Leftover-Food-to-Poor