

Project Design Phase

Solution Architecture

Date	06 NOVEMBER 2025
Team ID	NM2025TMID06146
Project Name	To Supply Leftover Food to Poor
Maximum Marks	4 Marks

Solution Architecture:

Overview :

The proposed architecture is built on the Salesforce platform to provide a complete solution for managing leftover food donations. It connects donors, NGOs, and volunteers through automated data sharing and real-time tracking. The architecture establishes a centralized system that ensures every food donation is managed efficiently and reaches the needy in time.

Goals of the Architecture:

- Streamline the process of donating leftover food using Salesforce
- Ensure smooth coordination between donors, NGOs, and volunteers
- Reduce food wastage and improve timely delivery

Key Components:

- Donor Object – stores details of food donors and donation entries
- NGO Object – maintains information about registered NGOs
- Volunteer Object – manages volunteer details and availability
- Automation Flow – automatically matches donors with nearby NGOs and assigns volunteers
- Dashboard & Reports – track donations, delivery time, and performance

Security and Access Control:

Salesforce role hierarchies and permission sets ensure data security. Donors can view only their own records, NGOs can see assigned donations, and volunteers can access only pickup and delivery details. Administrators manage reports and dashboards. This setup ensures that each user has limited access based on their role, maintaining privacy and control.

Development Phases:

1. Create donor, NGO, and volunteer records
2. Build the donor registration form and food posting page
3. Implement automation flow for NGO matching and task assignment
4. Test the full process — posting, assignment, and delivery updates

Integration Layer:

The system can be integrated with email and SMS services for notifications. In future versions, integration with Google Maps API can provide live tracking and distance-based NGO matching. A mobile application can also be added for easier donor access and volunteer coordination.

Solution Architecture Description:

The solution architecture is designed to connect donors, NGOs, and volunteers through a Salesforce-based automated system. When donors post leftover food details, the system automatically matches them with nearby NGOs and assigns available volunteers for pickup and delivery. It leverages custom objects, automation flows, and dashboards to ensure smooth coordination and transparency. The architecture simplifies food donation management, reduces manual intervention, and ensures quick food distribution to those in need — ultimately supporting a more efficient and sustainable community service process.

Example - Solution Architecture Diagram:

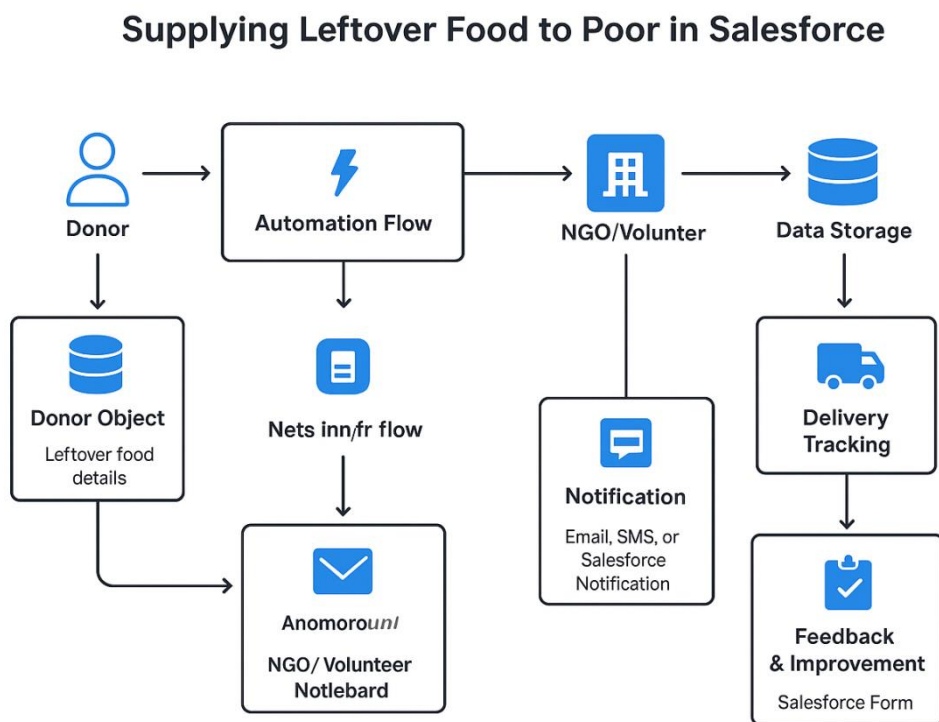


Figure 1: Architecture and data flow of the Salesforce-based leftover food supply system for the poor"