Project Design Phase
Solution Architecture

Date	27 June 2025
Team ID	NM2025TMID04740
Project Name	To Supply Leftover Food to Poor
Maximum Marks	4 Marks

Solution Architecture:

Objectives of the Architecture

- To **digitalize and streamline** the donation of surplus food using the Salesforce platform.
- To **enhance coordination and communication** among donors, NGOs, and volunteers.
- To **minimize food wastage** and **ensure prompt delivery** of food to underprivileged communities.

Core Components

- **Donor Module:** Captures donor information and details about food availability.
- **NGO Module:** Stores the profiles of participating NGOs and their location-based food requirements.
- **Volunteer Module:** Records volunteer details, roles, and their service availability.
- **Automation Workflow:** Intelligently links donors with nearby NGOs and assigns available volunteers for transportation.
- **Monitoring Dashboard & Reports:** Provides real-time tracking of donations, deliveries, and system performance metrics.

Development Stages

1. **Data Structure Creation:** Develop custom objects for Donor, NGO, and Volunteer with relevant fields.
2. **User Interface Development:** Build user-friendly donor registration and food posting interfaces.
3. **Workflow Implementation:** Configure Salesforce automation to match donors and NGOs, and allocate volunteers automatically.

4. **Testing and Optimization:** Validate the end-to-end workflow — from donation posting to food delivery — ensuring smooth and accurate operation.

Solution Architecture Overview

The designed architecture establishes a **Salesforce-based automated ecosystem** connecting donors, NGOs, and volunteers. When a donor submits leftover food details, the system automatically **identifies a suitable NGO nearby** and **assigns a volunteer** for pickup and distribution.

By leveraging **customized Salesforce objects, flows, and analytical dashboards**, the architecture enables **seamless coordination**, **transparency**, and **faster service execution**. This solution minimizes manual effort, optimizes logistics, and ensures that edible food reaches those in need efficiently. Ultimately, it supports a **sustainable and community-driven initiative** to combat hunger and food waste.

Illustration – Solution Architecture Diagram

Figure 1: Architecture and Data Flow of the Salesforce-Based Food Redistribution System

Flow Summary:

1. **Donor** posts leftover food → Stored in **Donor Module**.
2. System analyzes donor's location → Matches suitable **NGO** in proximity.
3. **Volunteer** automatically assigned for pickup and delivery.
4. **Status updates** reflected in dashboard → Enables real-time tracking and reporting.

Example - Solution Architecture Diagram:

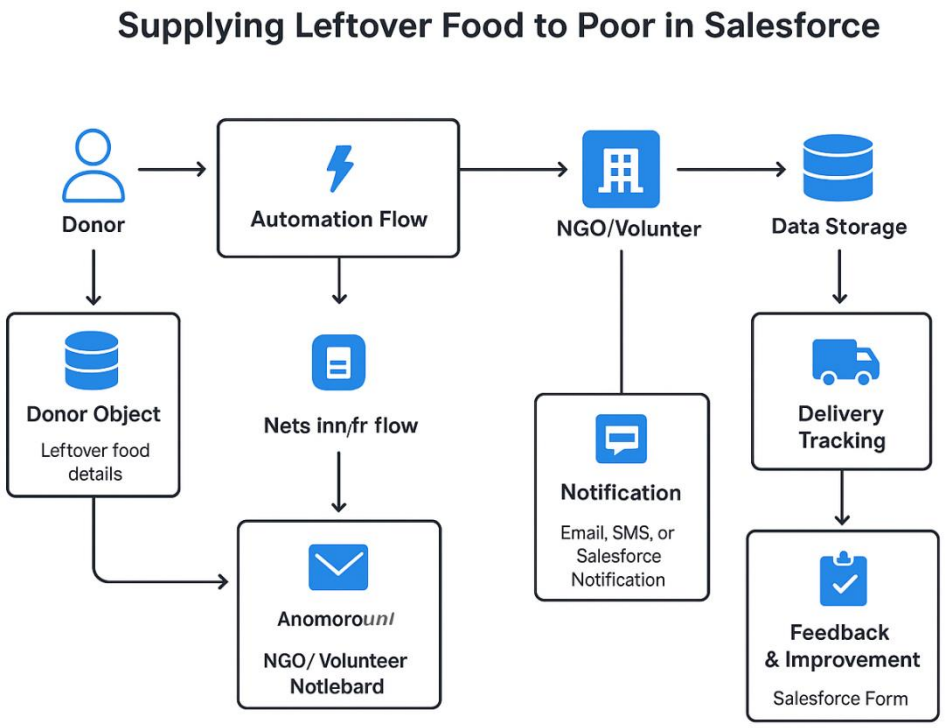

Figure 1: Architecture and data flow of the Salesforce-based leftover food supply system for the poor"