Project Design Phase
Solution Architecture

Date	02 NOVEMBER 2025
Team ID	NM2025TMID01349
Project Name	To Supply Leftover Food to Poor
Maximum Marks	4 Marks

Solution Architecture

The **solution framework** for the project *"To Supply Leftover Food to Poor"* outlines how Salesforce elements are connected to manage and optimize the food donation workflow. The system brings together donors, volunteers, and NGOs on a unified platform that ensures smooth coordination from food collection to final delivery.

It combines the capabilities of **Salesforce Administration and Development** — using automation tools, custom objects, and security configurations — to build a transparent, efficient, and secure environment. Each component plays a key role in ensuring that every food donation is accurately recorded, monitored in real time, and successfully distributed to those in need.

---

1. Overview of System Flow

The system operates through a structured and automated sequence that ensures food moves efficiently from donors to recipients.
The flow can be represented as:
Donor → Salesforce Platform → Volunteer → NGO/Beneficiary

1. The donor logs leftover food details such as type, quantity, location, and expiry information into the system.
2. The Salesforce platform captures this data and, through automation flows, assigns an available volunteer for collection.
3. The volunteer is instantly notified and proceeds to pick up the food from the donor's location.
4. The collected food is then handed over to the designated NGO or direct beneficiary.
5. Automated triggers update the food status at each stage — for example, *Pending*, *Collected*, or *Delivered*.
6. Dynamic reports and dashboards allow administrators to monitor activities and analyze overall distribution efficiency in real time.

2. Components of the Architecture

a) Custom Objects

- **Donor:** Holds essential details about contributors, including their name, contact information, and organization.
- **Food_Item:** Captures information about leftover food such as type, quantity, and expiry details.
- **Volunteer:** Maintains volunteer records and the specific collection or delivery tasks assigned to them.
- **Distribution:** Logs delivery updates, receiver information, and completion status for each food item.

b) Automation Tools

- **Flows:** Streamline operations by automatically allocating volunteers and generating related tasks.
- **Apex Triggers:** Ensure smooth data updates by changing food status and preserving record consistency.

c) Security & Access Control

- **Profiles:** Determine permission levels for different roles like Admin, Donor, Volunteer, and NGO.
- **Sharing Rules:** Protect sensitive data by restricting access based on role and record ownership.

d) Reporting & Analytics

- **Reports:** Generate key insights such as total donations, number of active volunteers, and delivery outcomes.
- **Dashboards:** Offer visual summaries and performance indicators of the donation and distribution process.

e) User Interface (Lightning App)

- **Lightning App:** Provides an organized workspace for accessing key objects, reports, and dashboards with ease.
- **Home Page:** Customized with quick-access links to commonly used features for better user experience.

Inefficient Food Donation Leads to Waste

Donor Inputs Leftover Food

Donors enter surplus food information (type, quantity, location, expiry) into Salesforce

Salesforce Automates Volunteer Assignment

Automation using Flows automatically assigns volunteers

Volunteer Collects and Delivers Food

A volunteer is notified, collects food from donors and delivers it to an NGO or Receiver

Reports and Dashboards
Track Donations

Salesforce provides real-time tracking or donations and deliveries using reports and dashboards

Trigger Updates Food Status

After delivery, Apex Triggers automatically update the status

Reports and Dashboards

Salesforce provides real-time tracking of donations and deliver-