Project Design Phase–II

Technology Stack (Architecture & Stack)

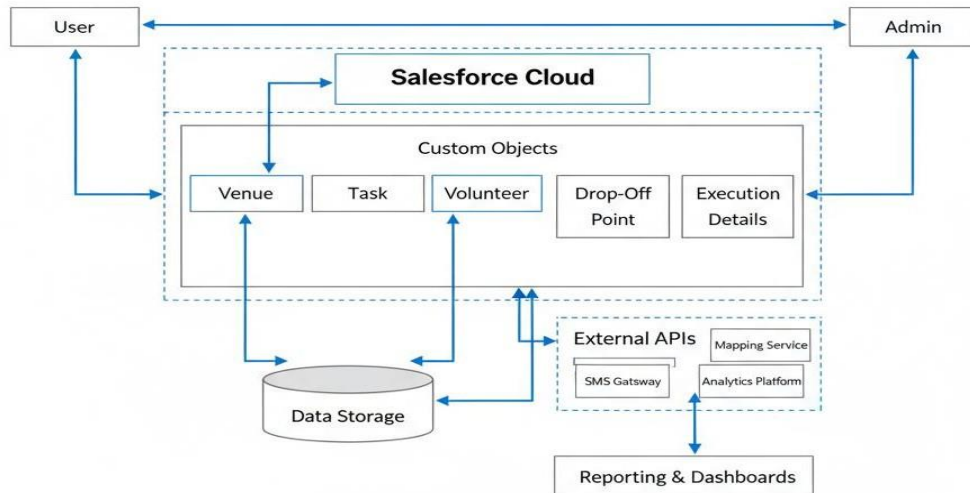|	
Date	2 NOVEMBER 2025
Team ID	NM2025TMID06758
Project Name	To Supply Leftover Food to Poor
Maximum Marks	4 Marks

Technical Architecture:

The deliverable shall include the architectural diagram as shown below and the information as per Table 1 and Table 2.

Example: Food collection and distribution automation using Salesforce platform.

Reference: https://developer.salesforce.com/

Technology Stack Architecture: Surplus Food Management Platform

Guidelines:

- Include all the processes (As an application logic / Technology Block).
- Provide infrastructural demarcation (Local / Cloud).
- Indicate external interfaces (third party APIs etc.).
- Indicate Data Storage components / services.
- Indicate interface to machine learning models (if applicable).
- Ensure all Salesforce cloud components (Objects, Flows, Triggers, Reports, Dashboards) are represented clearly.

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1	User Interface	Users (Admin, Volunteers, NGOs) interact via Salesforce Lightning App.	Salesforce Lightning Experience
2	Application Logic-1	Handles food donation record creation via Flows.	Salesforce Flow Builder
3	Application Logic-2	Automates volunteer-task assignment.	Process Builder / Apex Trigger
4	Application Logic-3	Calculates distance between venues and drop-off points.	Salesforce Formula Field (DISTANCE)
5	Database	Stores venue, volunteer, task, and execution details.	Salesforce Custom Objects
6	Cloud Database	Managed by Salesforce multi-tenant cloud backend.	Salesforce Cloud Data Storage
7	File Storage	Stores attached images or related documents if any.	Salesforce Files / Attachments
8	External API-1 (Optional)	Integration with Google Maps for location verification.	Google Maps API
9	External API-2	Integration with NGO Management systems (optional).	REST API Integration
10	Machine Learning Model	Not applicable in current use case.	-
11	Infrastructure (Server / Cloud)	Hosted and managed fully on Salesforce cloud platform.	Salesforce Cloud (SaaS)

Table-2 : Application Characteristics:

S.No	Characteristics	Description	Technology
1	Open-Source Frameworks	Salesforce is proprietary; external libraries used are minimal.	-
2	Security Implementations	Role-based access control using profiles and sharing settings.	Salesforce Profiles & Permission Sets
3	Scalable Architecture	Horizontally scalable multi-tenant cloud system.	Salesforce Cloud Infrastructure
4	Availability	Highly available through Salesforce distributed architecture.	Load-balanced Salesforce Instances
5	Performance	Optimized via indexed records, automation, and triggers.	Apex Triggers, Flow Optimization
6	Usability	Lightning App provides user-friendly and mobile-accessible UI.	Salesforce Lightning App Builder
7	Maintainability	Low-code automation and modular design for easy maintenance.	Flow Builder, Custom Metadata
8	Integration	Optional external integration with Google Maps or NGO APIs.	Salesforce API / REST Connectors
9	Data Integrity	Relationships and validation rules ensure accurate data linking.	Master-Detail & Lookup Relationships
10	Transparency	Reports and dashboards provide transparent view of food supply flow.	Salesforce Reports & Dashboards