# REQUIREMENT PHASE

## TECHNALOGY STACK

Date            : 4 Nov 2025

Team ID         : NM2025TMID03861

Project Name    : To Supply Leftover Food to Poor

Maximum Marks: 4 Marks

Okay, I understand. You'd like the Technology Stack presented in a table format for clarity.

Here is the Technology Stack table, categorized for easier understanding:

### Technology Stack Table: Salesforce Food Rescue Connect (Intermediate)

| Category | Technology/Tool | Purpose & Use Case |
|---|---|---|
| **I. Core Salesforce Platform** | | |
| **Salesforce Cloud Foundation** | Sales Cloud / Service Cloud | Provides foundational CRM objects (Accounts, Contacts) and platform features, extended for donor/recipient management. |
| **External User Engagement** | Community Cloud (Experience Cloud) | Secure portal for Food Donors, Recipients, and Volunteers to interact with the platform. Custom branding and simplified UX. |
| **Data Storage** | Salesforce Standard Objects | Leverage existing objects like Account, Contact, Case for core entities and interactions. |

| Category | Tool/Technology | Description |
|---|---|---|
| | Salesforce Custom Objects & Fields | Store project-specific data like Food_Offer__c, Donation_Allocation__c, Delivery_Task__c, Volunteer_Availability__c, Inspection_Report__c. |
| **II. Declarative Development (Low-Code)** | | |
| **Process Automation & UX** | Salesforce Flow | Automate complex business logic (e.g., allocation, notifications), create guided user experiences (wizards). |
| **Data Validation** | Validation Rules | Enforce data integrity and business rules at the record level. |
| **Configuration Management** | Custom Metadata Types / Custom Settings | Store configurable application parameters (e.g., matching thresholds, API keys, notification content). |
| **Reporting & Analytics** | Salesforce Reports & Dashboards | Generate comprehensive operational reports and visual dashboards for all users and admins. |
| **III. Programmatic Development (Pro-Code)** | | |
| **Backend Logic** | Apex | Implement complex business logic, triggers, batch processing (e.g., route optimization calculations), scheduled jobs, external API callouts. |
| **User Interface** | Lightning Web Components (LWC) | Build modern, responsive, high-performance UI components (e.g., custom forms, interactive dashboards, mobile views). |
| **Data Querying** | SOQL (Salesforce Object Query Language) | Efficiently query data from Salesforce objects in Apex and LWC. |
| | SOSL (Salesforce Object Search Language) | Perform text-based searches across multiple objects. |
| **IV. External Integrations** | | |

| | | |
|---|---|---|
| **Mapping & Geolocation** | Google Maps Platform APIs (Geocoding, Directions, etc.) | Convert addresses to coordinates, calculate distances, optimize routes, provide navigation for volunteers. |
| **SMS Notifications** | Twilio API | Send automated SMS messages for alerts, confirmations, and reminders to users. |
| **V. Development Tools & Practices** | | |
| **CLI & Org Management** | Salesforce DX (SFDX CLI) | Command-line interface for managing Salesforce projects, scratch orgs, source control, and deployments. |
| **Integrated Development Environment** | VS Code (with Salesforce Extensions) | Primary IDE for writing Apex, LWC, and other Salesforce metadata. |
| **Version Control** | Git (e.g., GitHub, GitLab, Bitbucket) | Source code management for tracking changes, collaboration, and team development. |
| **CI/CD (Intermediate)** | GitHub Actions / GitLab CI / Azure DevOps | Automate testing and deployment pipelines for continuous integration and delivery. |
| **Data Migration/Management** | Data Loader / Workbench | Tools for bulk importing, exporting, and updating data records. |
| **VI. Mobile Strategy** | | |
| **Standard Mobile Access** | Salesforce Mobile App | Basic access for Salesforce administrators and internal power users. |
| **Tailored Mobile Experience** | Custom LWC within Experience Cloud | Provide a tailored, mobile-optimized Progressive Web App (PWA) experience for external users (volunteers, local donors/recipients). |