

## Phase 4: Requirement Analysis Phase

### Project Title: To Supply Leftover Food to Poor

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## Introduction

Requirement analysis is a crucial phase that identifies what the system needs to do and how it should perform. It ensures that all user and business needs are understood clearly before system development begins. For the Salesforce-based project “To Supply Leftover Food to Poor,” this phase ensures that all processes — such as managing donors, food details, volunteers, NGOs, and deliveries — are properly defined and documented before implementation. The analysis helps in translating real-world needs into technical and functional requirements that will guide system development effectively.

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## Purpose of Requirement Analysis

The main purpose of this phase is to gather and define the requirements needed to develop a reliable and efficient Salesforce CRM solution for food donation management. By identifying and understanding the needs of food donors, NGOs, and volunteers, the system can be designed to automate the process of collecting, managing, and distributing leftover food. This helps ensure that food reaches those in need efficiently and that the entire donation process remains transparent and traceable through Salesforce automation and reports.

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## Methods of Requirement Gathering

To identify accurate project requirements, the following methods were used:

- **Observation:** Studying how food donors and NGOs currently handle food collection and distribution manually.
  - **Interview/Discussion:** Engaging with restaurant owners, hostel managers, and NGO representatives to understand challenges in existing donation systems.
  - **Analysis of Existing Systems:** Reviewing existing food donation platforms and identifying their limitations, such as lack of automation and tracking.
  - **Brainstorming:** Discussing innovative ideas and features that could make the donation process faster, more reliable, and fully automated.
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## Functional Requirements

Functional requirements describe what the system must do. The main functional requirements for the Salesforce-based Food Donation Management System include:

### 1. Donor Management:

- Register new donors with their details such as name, address, and contact information.
- Manage multiple donor types such as restaurants, hostels, or event organizers.

### 2. Food Donation Management:

- Add and manage leftover food details such as type, quantity, and expiry time.
- Automatically notify nearby NGOs and volunteers about new donations.
- Allow real-time tracking of donation availability and status.

### 3. Volunteer Management:

- Maintain volunteer details and assign collection or delivery tasks automatically.
- Update status after successful pickup or delivery.

### 4. NGO Management:

- Register NGOs and store details about their location, contact information, and availability.
- Track food requests and deliveries received.

### 5. Delivery and Tracking:

- Create delivery records linking donor, volunteer, and NGO details.
- Track each delivery's pickup and drop status in real time.

### 6. Report and Dashboard Generation:

- Generate reports showing total food donations, deliveries, and beneficiaries.
- Display dashboards showing performance metrics like total food saved, donors registered, and volunteers active.

### 7. Automation and Notifications:

- Use Salesforce Flows to send notifications to NGOs and volunteers when new food is available.
- Notify donors when their food has been successfully delivered.

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## Non-Functional Requirements

Non-functional requirements define how the system performs rather than what it does. The non-functional requirements for this CRM-based system include:

### **1. Performance:**

- The system should process data and update donation statuses quickly.
- Dashboards should load and refresh without noticeable delay.

### **2. Security:**

- Donor and beneficiary data must be protected using Salesforce's built-in security mechanisms.
- Access should be role-based to ensure that only authorized users can view or modify records.

### **3. Reliability:**

- The system should perform consistently without data loss or errors.
- Regular backups should be maintained in Salesforce.

### **4. Usability:**

- The interface should be simple and intuitive for donors, volunteers, and NGOs.
- Common tasks like food registration, tracking, and reporting should be performed with minimal steps.

### **5. Scalability:**

- The system should support an increasing number of donors, NGOs, and food donations as participation grows.

### **6. Maintainability:**

- The system should be easy to update and expand in the future (e.g., adding new modules like food quality monitoring or route optimization).

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## **System Requirements**

To implement the Salesforce project effectively, the following system requirements are necessary:

### **1. Hardware Requirements:**

- Computer or laptop with at least 4 GB RAM.
- Stable internet connection.
- Browser support (Google Chrome, Microsoft Edge, or Firefox).

### **2. Software Requirements:**

- Salesforce Developer Edition account for building the CRM.
  - SmartInternz Platform access for progress tracking and submission.
  - GitHub account for project documentation.
  - Microsoft Word or PDF software for preparing reports.
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## Requirement Validation

Before starting the system implementation, all requirements were reviewed and validated to ensure they:

- Are technically feasible within Salesforce.
- Align with the project's goal of reducing food wastage and feeding the poor.
- Can be implemented within the given timeline and resources.

Validation was performed through team discussions and prototype testing on the Salesforce platform to confirm that all functional and non-functional goals could be achieved effectively.

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## Conclusion

The Requirement Analysis Phase provides a clear understanding of what the “To Supply Leftover Food to Poor” system must achieve. It defines the essential functions — from donor management to delivery tracking — along with security, performance, and usability expectations. By outlining all requirements systematically, this phase builds a strong foundation for developing a robust and automated Salesforce CRM solution that connects donors, volunteers, and NGOs efficiently. The outcome of this phase ensures that the final system fulfills all user needs and contributes to reducing food wastage through technology-driven social service.