# Requirement Analysis Report for Waste Food Management & Donation Project

## 1. Introduction

### 1.1 Purpose

The Waste Food Management & Donation project aims to reduce food waste and hunger by efficiently redistributing surplus food to those in need. This system will connect food donors, such as restaurants, supermarkets, and households, with charitable organizations and individuals in need.

### 1.2 Scope

The system will:

- Enable food donors to register and list surplus food items.

- Facilitate logistics for food collection and distribution.

- Allow recipients to register and request food.

- Provide real-time tracking and reporting on food donations and waste reduction.

### 1.3Objectives

1. Minimize Food Waste: Facilitate the collection and redistribution of surplus food.

2. Promote Food Donations: Encourage organizations and individuals to donate excess food.

3. Ensure Food Safety: Maintain quality standards during collection, storage, and distribution.

4. Increase Accessibility: Provide an easy-to-use platform for donors and recipients.

5. Raise Awareness: Educate the public about food waste and its impact.

**##2. Research**

**Global Food Waste Statistics**

* Approximately 17% of global food production is wasted annually.
* In high-income countries, waste occurs mainly at the consumption stage, while in low-income countries, it happens during production and distribution.

**Impact of Food Waste**

* **Environmental**: Food waste contributes to 8-10% of global greenhouse gas emissions.
* **Economic**: Wasted food represents a loss of $1 trillion annually.
* **Social**: Wasted food could feed 1.26 billion people facing hunger.

**Existing Solutions**

* Food rescue organizations such as Feeding America and FareShare.
* Apps and platforms like Too Good To Go and OLIO that connect surplus food with consumers.
* Government policies encouraging food donation and waste reduction.

**##3. Project Description**

**Key Components**

1. **Food Recovery**
   * Partnerships with restaurants, grocery stores, and event venues to collect surplus food.
   * Establishment of efficient logistics for storage and transportation.
2. **Donation Network**
   * Collaboration with food banks, shelters, and community kitchens to redistribute food.
   * Development of an online platform to connect donors and recipients in real time.
3. **Awareness Campaign**
   * Educational programs in schools and communities about food waste and sustainable consumption.
   * Social media campaigns to encourage individuals and businesses to donate surplus food.
4. **Sustainable Practices**
   * Composting inedible food waste to reduce landfill contributions.
   * Encouraging businesses to adopt inventory and portion control techniques.