Experiment – 3

SRS Documentation

Food Management System

Software Engineering

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1. Introduction:

1.1 Purpose

The purpose of this document is to define the functional, non-functional, and system requirements for the Food Waste Management System. The system aims to efficiently collect excess or leftover food from donors such as hotels, restaurants, and marriage halls and distribute it to needy people.

1.2 Scope

The Food Waste Management System is a web-based application designed to minimize food waste by facilitating food donations. It allows donors to register and donate excess food, administrators to manage and distribute the food, and delivery personnel to handle transportation.

Key features include:

- User registration and login
- Food donation and listing
- Admin control for food distribution
- Delivery tracking

2. Overall Description:

2.1 Tools and Technologies

- Frontend: HTML, CSS, JavaScript
- Backend: PHP
- Webserver: XAMPP server
- Database: MySQL

2.2 System Modules

2.2.1 User Module

- The User module is for people who wish to donate excess or leftover food.
- Users (hotels, restaurants, individuals) can register, log in, and donate food.

- They can specify the type and quantity of food and track their donations.
- The system matches their donation with nearby needy individuals or organizations.
- The User module provides information to the admin module for further processing.

2.2.2 Administrator Module

- The admin module is managed by NGOs, charities, or trusts.
- It receives food donation details from the User module and lists them for NGOs and charities.
- Admins manage and track donation requests and oversee the distribution process.
- They ensure that food is assigned properly to organizations in need.
- NGOs and charities can request a pickup via the Delivery module.

2.2.3 Delivery Person Module

- The Delivery module is for individuals who wish to help by providing pickup and delivery services.
- Delivery personnel can register and view pickup and drop-off locations.
- They facilitate the transportation of donated food to the requested destinations.
- This module ensures efficient distribution and tracking of food donations.

3. Functional Requirements

1. **User Management:**
    - Users can register, log in, and manage profiles.
    - Admins can manage users and ensure compliance.

2. **Food Donation and Listing:**
    - Users can list food donations with details such as type, quantity, and expiry date.
    - Admins verify and approve donations before making them available to NGOs.
3. **Food Request and Matching:**
    - NGOs and charities can browse and request available food donations.
    - The system matches donations to the nearest needy recipients.
4. **Pickup and Delivery Management:**
    - Delivery personnel receive pickup and drop-off assignments.
    - The system tracks the status of donations from collection to delivery.
5. **Notifications and Alerts:**
    - Users, admins, and delivery personnel receive real-time updates.
    - Alerts for new food donations, pickup requests, and delivery status.

4. Non-Functional Requirements

1. **Performance Requirements:**
    - The system should support at least 500 concurrent users.
    - Food donation search results should load within 3 seconds.
2. **Security Requirements:**
    - Data encryption for secure transactions and user privacy.
    - Role-based access control for different user types.

3. **Usability Requirements:**
    - Responsive design for mobile and desktop devices.
    - Intuitive user interface for ease of use.
4. **Reliability and Availability:**
    - The system should have 99.5% uptime.
    - Backup and recovery mechanisms for database safety.
5. **Scalability:**
    - The system should be capable of handling increased users and transactions.
    - Cloud-based hosting for future expansion.

5. Design Constraints

5.1 Features

- Mobile Screen Friendly Website
- Chatbot Support
- Secure Login

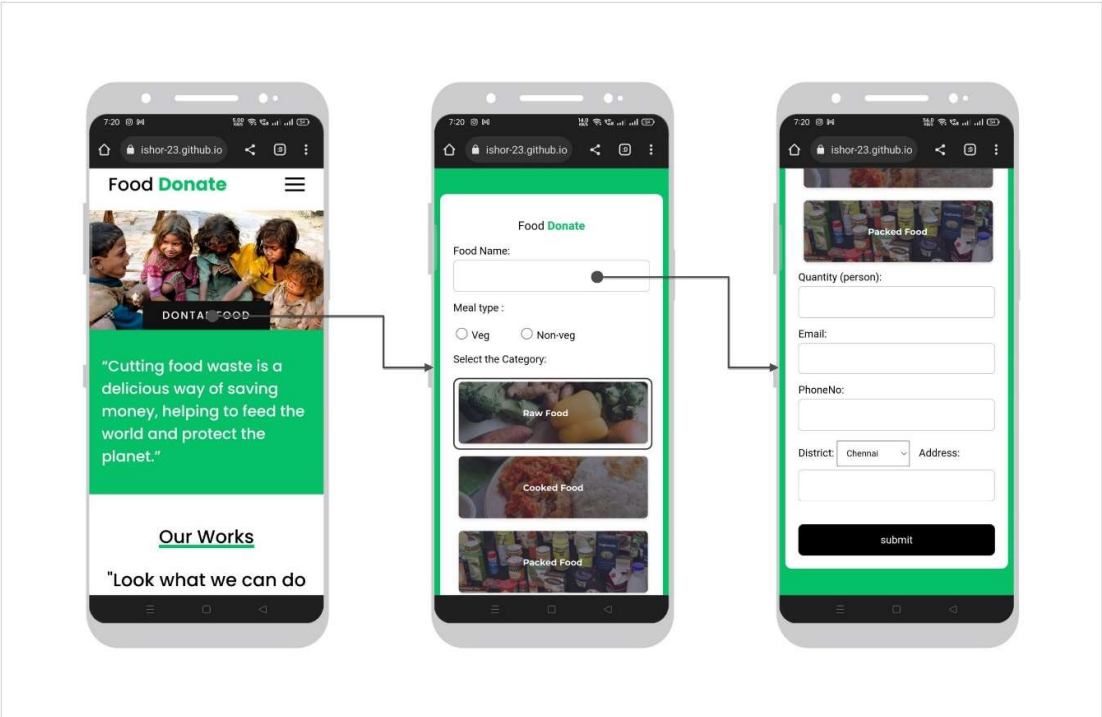
5.2. How to Run the System

- Download the project ZIP file.
- Extract the file and copy the folder.
- Paste inside the root directory:
    - For XAMPP: xampp/htdocs/
    - For WAMP: wamp/www/
    - For LAMP: /var/www/html/
- Open PHPMyAdmin (http://localhost/phpmyadmin).
- Create a database.
- Import demo.sql file (inside the database folder).
- Run the script: http://localhost/folderName.

5.3. Conclusion

The Food Waste Management System is designed to reduce food wastage by enabling efficient food donation and distribution. The system connects donors, administrators,

and delivery personnel to ensure that surplus food reaches those in need, benefiting the community and promoting sustainability.



6. Appendix

6.1 References

- IEEE SRS Standard 830-1998
- Food Donation Management Guidelines Document, Version 1.0
- XAMPP Documentation
- MySQL Official Documentation

6.2 Glossary

- Donor: An individual or organization providing surplus food.
- Recipient: An individual or entity receiving donated food.
- Admin: An administrator managing users and ensuring compliance with guidelines.
- SSL/TLS: Secure Sockets Layer / Transport Layer Security.

- Geolocation: The process of determining a user's physical location.

6.3 Future Enhancements

- Integration with AI-based food demand prediction models.
- Blockchain-based tracking for food donations.
- Mobile app development for Android and iOS.
- Enhanced chatbot capabilities for automated donor-recipient matching.