

A

Theme Based Project Report

On

FOOD WASTE MANAGEMENT SYSTEM

Submitted for partial fulfilment of the requirements for the award of the degree of

BACHELOR OF ENGINEERING

in

COMPUTER SCIENCE AND ENGINEERING

By

Banothu Snehalatha (2451-23-733-129)

Badam Aishwarya (2451-22-748-147)

Batharaju Manasa(2451-22-748-183)

Under the guidance of

Vuyyala Sathish

Assistant Professor

Department of CSE



MATURI VENKATA SUBBA RAO(MVS) ENGINEERING COLLEGE

(An Autonomous Institution)

Department of Computer Science and Engineering

(Affiliated to Osmania University & Recognized by AICTE)

Nadergul,Balapur Mandal,Hyderabad-501 510

Academic Year:2024-2025

MATURI VENKATA SUBBA RAO(MVSR) ENGINEERING COLLEGE

(An Autonomous Institution)

Department of Computer Science and Engineering

(Affiliated to Osmania University & Recognized by AICTE)

Nadergul,Balapur Mandal,Hyderabad-501 510



CERTIFICATE

This is to certify that the Theme Based Project work entitled "**FEED THE NEED**" is a bonafide work carried out by **Banothu Snehalatha (2451- 23-733-129)**, **Badam Aishwarya (2451- 23-733-147)**, **Batharaju Manasa (2451-23-733-183)**, in partial fulfilment of the requirements for the award of degree of **Bachelor of Engineering in Computer Science and Engineering** from **Maturi Venkata Subba Rao(MVSR) Engineering College**,affiliated to OSMANIA UNIVERSITY, Hyderabad, during the Academic Year 2024-2025, under our guidance and supervision.

The results embodied in this report have not been submitted to any other university or institute for the award of any degree or diploma

Internal Guide

Vuyyala Sathish

Asst. Prof., Dept. of CSE,

MVSREC

Project Coordinators

Head of the Department

Prof . J. Prasanna Kumar

Professor & HoD,CSE,

MVSREC

External Examiner:

DECLARATION

This is to certify that the work reported in the present Theme Based Project work entitled "**FEED THE NEED**" is a record of bonafide work done by us in the Department of Computer Science and Engineering, Maturi Venkata Subba Rao Engineering College, Osmania University. The reports are based on the work done entirely by us and not copied from any other source.

The results embodied in this report have not been submitted to any other University or Institute for the award of any degree or diploma to the best of our knowledge and belief.

Banothu Snehalatha

(2451-23-733-129)

Badam Aishwarya

(2451-23-733-147)

Batharaju Manasa

(2451-23-733-183)

ACKNOWLEDGEMENT

We would like to express our sincere gratitude and indebtedness to our project guide **Vuyyala Sathish** Professor for his valuable suggestions and interest throughout the course of this Project.

We are also thankful to our Project coordinators **K. Murali Krishna, Godala Madhu** and **K. Shyam Sunder Reddy**. We also thank **Prof. J. Prasanna Kumar**, HoD, Dept. of CSE, MVSREC and **Prof. Vijaya Gunturu**, Principal, MVSREC for providing excellent infrastructure and a nice atmosphere for completing this partial fulfilment of the requirements for the award of degree of Bachelor of Engineering in Computer Science and Engineering.

We convey our heartfelt thanks to the lab staff for allowing us to use the required equipment whenever needed.

Finally, we would like to take this opportunity to thank our family for their support through the work. We sincerely acknowledge and thank all those who gave directly or indirectly their support in completion of this work.

Banothu Snehalatha (2451-23-733-129)

Badam Aishwarya (2451-23-733-147)

Batharaju Manasa (2451-23-733-183)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

VISION

To impart technical education of the highest standards, producing competent and confident engineers with an ability to use computer science knowledge to solve societal problems.

MISSION

- ★ To make the learning process exciting, stimulating, and interesting.
- ★ To impart adequate fundamental knowledge and soft skills to students.
- ★ To expose students to advanced computer technologies to excel in engineering practices by bringing out the creativity in students.
- ★ To develop economically feasible and socially acceptable software.

Program Educational Objectives (PEOs)

The Bachelor's program in Computer Science and Engineering is aimed at preparing graduates who will: -

PEO-1: Achieve recognition through demonstration of technical competence for successful execution of software projects to meet customer business objectives.

PEO-2: Practice life-long learning by pursuing professional certifications, higher education, or research in the emerging areas of information processing and intelligent systems at a global level.

PEO-3: Contribute to society by understanding the impact of computing using a multidisciplinary and ethical approach.

Program Outcomes (POs)

PO 1: Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization for the solution of complex engineering problems.

PO 2: Problem analysis: Identify, formulate, research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

PO 3: Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety, and cultural, societal, and environmental considerations.

PO 4: Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

PO 5: Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

PO 6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal, and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

PO 7: Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and the need for sustainable development.

PO 8: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

PO 9: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

PO 10: Communication: Communicate effectively on complex engineering activities with the engineering community and with the society at large, such as being able to comprehend and write effective reports and design documentation, make effective presentations, and give and

receive clear instructions.

PO 11: Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

PO 12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOS)

PSO-1: Demonstrate competence to build effective solutions for computational real-world problems using software and hardware across multi-disciplinary domains.

PSO-2: Adapt to current computing trends for meeting the industrial and societal needs through a holistic professional development leading to pioneering careers or entrepreneurship.

COURSE OBJECTIVES AND OUTCOMES

Course Title: Theme Based Project

Course Code:U21PW381CS

Course Objectives

- ★ To enhance practical and professional skills.
- ★ To familiarize tools and techniques of systematic literature survey and documentation.
- ★ To expose the students to industry practices and teamwork.
- ★ To encourage students to work with innovative and entrepreneurial ideas.

Course Outcomes

- ★ Demonstrate the ability to synthesize and apply the knowledge and skills acquired in the academic program to the real world problems.
- ★ Evaluate different solutions based on economic and technical feasibility
- ★ Effectively plan a project and confidently perform all aspects of project management.
- ★ Demonstrate effective coding, written, presentation and oral communication

COURSE CERTIFICATION





AWARD of FINAL EXAM COMPLETION
Database Programming with SQL

PRESENTED TO

2451-23-733-147 BADAM AISHWARYA

FOR SATISFACTORY COMPLETION OF COURSE FINAL EXAM

13th November 2024

William McCabe
Vice President, Oracle Academy



AWARD of COURSE COMPLETION
Database Programming with SQL

PRESENTED TO

2451-23-733-183 BATHARAJU MANASA

FOR SATISFACTORY COMPLETION OF ALL COURSEWORK

13th November 2024

William McCabe
Vice President, Oracle Academy



AWARD of FINAL EXAM COMPLETION
Database Programming with SQL

PRESENTED TO

2451-23-733-129 BANOTHU SNEHALATHA

FOR SATISFACTORY COMPLETION OF COURSE FINAL EXAM

14th November 2024

William McCabe
Vice President, Oracle Academy

ABSTRACT

The **Feed the Need** system tackles the growing issue of food wastage, particularly in hostels, restaurants, and function halls, by providing a platform that connects food donors with volunteers who manage the collection and distribution of surplus food to underserved communities. Through a user-friendly interface, donors can easily log excess food, allowing volunteers to view available donations, accept pickup assignments, and distribute the food to those facing food insecurity. Administrators oversee the entire system, managing user accounts, monitoring donations, ensuring food safety, and ensuring smooth operations. By repurposing food that would otherwise go to waste, the system helps alleviate hunger while minimizing environmental impact. The platform fosters a culture of sustainability and social responsibility, encouraging individuals and organizations to contribute to the well-being of their communities. Ultimately, **Feed the Need** aims to reduce food waste, address hunger, and create a more compassionate society by ensuring that food resources are used effectively to support those in need.

LIST OF FIGURES

Fig no	Name of the Figure	Page no
2.1	System Architecture	5
3.1	Class Diagram	8
3.2	Use Case Diagram	9
3.3	Sequence Diagram	10
4.1	Front page	13
4.2	Login page	14
4.3	Home page	14
4.4	Food donation form	15
4.5	Admin page	16
4.6	Volunteer page	17
4.7	Analysis report	18

Table Of Contents

Contents	PAGE NO
Title Page	i
Certification	ii
Declaration	iii
Acknowledgement	iv
Vision Mission & Programme Educational Objectives	v
Program Specific Outcomes	vi
Course Objectives And Outcomes	vii
Course Certifications	viii
Abstract	x
Chapters	
1 .Introduction	1-2
1.1 problem Statement	1
1.2 Existing System	1
1.3 Proposed System	2
1.4 Scope	2
2. System Architecture specification	3-5
2.1 Software Requirements	3
2.1.1 Functional Requirements	3
2.1.2 Non - Functional Requirements	4
2.2 Hardware Requirements	5

2.3 System Architecture/Block Diagram	5
3. System Design	6-10
3.1 Methodology	6
3.1.1 Algorithms Description	7
3.2 Structural Diagram	8
3.3 Behavioral Diagram	9
3.4 Sequence Diagram	10
4 . Implementation	11-17
4.1 Environmental Setup	11
4.2 Implementation Details	12
4.3 Results	13-17
Conclusion & Future Enhancements	19
References	20
Appendix : Pseudo code	21-25

CHAPTER - 1

INTRODUCTION

Food wastage is a growing concern across the globe, with significant amounts of edible food being discarded daily. This issue is especially prevalent in places such as restaurants, function halls, hotels, and event venues, where surplus food is a common occurrence. Despite being perfectly edible, this food often ends up in landfills instead of being used to help those in need, contributing to both hunger and environmental damage. While many businesses and individuals are willing to donate surplus food, they face numerous challenges. Uncertainty about the donation process, such as where to donate or how to ensure the food reaches the right recipients, often discourages them. Moreover, logistical issues like food safety, transportation, and compliance with regulations add to the complexity. As a result, valuable resources are wasted, and opportunities to support underprivileged communities are lost.

In addition to addressing food insecurity, reducing food waste has environmental benefits, as it minimizes the resources used in producing, transporting, and disposing of food. A streamlined and reliable platform is critical to connect donors and recipients effectively. Such a system not only simplifies the donation process but also fosters a culture of sharing, sustainability, and social responsibility.

1.1 Problem statement

Despite the availability of surplus food, the lack of a structured platform for donations leads to significant wastage. Donors face challenges with logistics, safety compliance, and ensuring the food reaches those in need efficiently.

1.2 Existing systems

In the current scenario, surplus food from restaurants, hotels, and event venues is often wasted due to the absence of a streamlined process for donation. Donors struggle to identify reliable channels to distribute excess food to the needy. While some organizations facilitate food donations, the lack of centralized tracking and communication creates inefficiencies. Manual processes for coordinating donations are time-consuming and prone to delays. There is no real-time system to monitor donations, leading to logistical challenges and increased wastage.

Additionally, ensuring food safety and compliance is difficult without proper tools, discouraging potential donors from contributing.

1.3 Proposed System

The proposed Food Donation Management System offers a structured platform to bridge the gap between food donors and recipients. It allows restaurants, hotels, and event venues to log surplus food donations through a user-friendly interface. Volunteers and administrators can manage food collection, distribution, and tracking in real time. The system includes features for ensuring food safety and compliance with regulations, building trust among users. Automated notifications streamline coordination, reducing delays in food pickup and delivery. By leveraging technology, the platform ensures efficient logistics, reduces food waste, and fosters a culture of sustainability and social responsibility.

1.4 Scope

The Food Donation Management System aims to provide a centralized platform for businesses and individuals to donate surplus food easily and efficiently. It connects donors with volunteers and recipients, ensuring timely and safe distribution of food to those in need. The system supports real-time tracking, compliance with food safety regulations, and promotes sustainability. Additionally, it encourages a culture of social responsibility and reduces food wastage through streamlined donation processes.

CHAPTER - 2

2. SYSTEM ARCHITECTURE SPECIFICATION

2.1 Software Requirements

- IDE Used : Visual Studio
- Frontend : HTML, CSS, JavaScript
- Backend : PHP , XAMPP
- Database: MYSQL

2.1.1 Functional Requirements:

1. User Management

- User Registration and Authentication: Users can create accounts, log in, and manage profiles securely.
- Role-based Access: Different roles (admin, donor, volunteer, recipient) have specific access rights.
- Profile Management: Users can update personal and contact information.
- Password Recovery: Users can recover forgotten passwords through email or SMS.

2. Donation and Volunteer Management

- Food Donation Logging: Donors can log surplus food donations with details like type and quantity.
- Donation Approval: Admins approve donations before they appear on the platform.
- Volunteer Registration and Management: Volunteers can register, accept, or decline pickup requests
- Donation Pickup Scheduling: Donors and volunteers can schedule pickup times for food donations.

3. Reporting and Feedback

- Reporting and Analytics: Admins have access to reports on donations, trends, and impact.

- Feedback System: Users can provide feedback on the donation process.
- Search and Filter Functionality: Users can search and filter donations by type, location, or urgency.
- Admin Dashboard: Admins can view real-time data and track all activities.

4. Social Integration and Platform Awareness

- Social Media Sharing: Users can share donations and activities on social media.
- Event Integration: Enables businesses and organizations to manage food donation drives.
- Public Awareness Campaigns: Notifications about ongoing donation campaigns.
- Promoting Sustainable Practices: Provides educational content on reducing food waste.

2.1.2 Non Functional requirements

Performance

- The system should handle multiple concurrent users without delays.
- It should ensure fast processing of donation requests and updates.

Security

- All personal and donation data must be encrypted and stored securely.
- The system should implement role-based access control (RBAC) to protect sensitive user data.

Usability

- The platform should have an intuitive, easy-to-navigate interface suitable for all age groups.
- It should be responsive and accessible across various devices like desktops, smartphones, and tablets.

Reliability

- The platform should have an uptime of at least 99.5%, ensuring continuous availability.
- The system should be fault-tolerant and capable of recovering from errors without data

loss.

2.2 Hardware Requirements

- RAM: 8GB
- Processor: Intel® Core™ i5-11320H (11th Gen) @ 3.20GHz, 2.50GHz or equivalent
- Storage: 458 GB

2.3 SYSTEM ARCHITECTURE

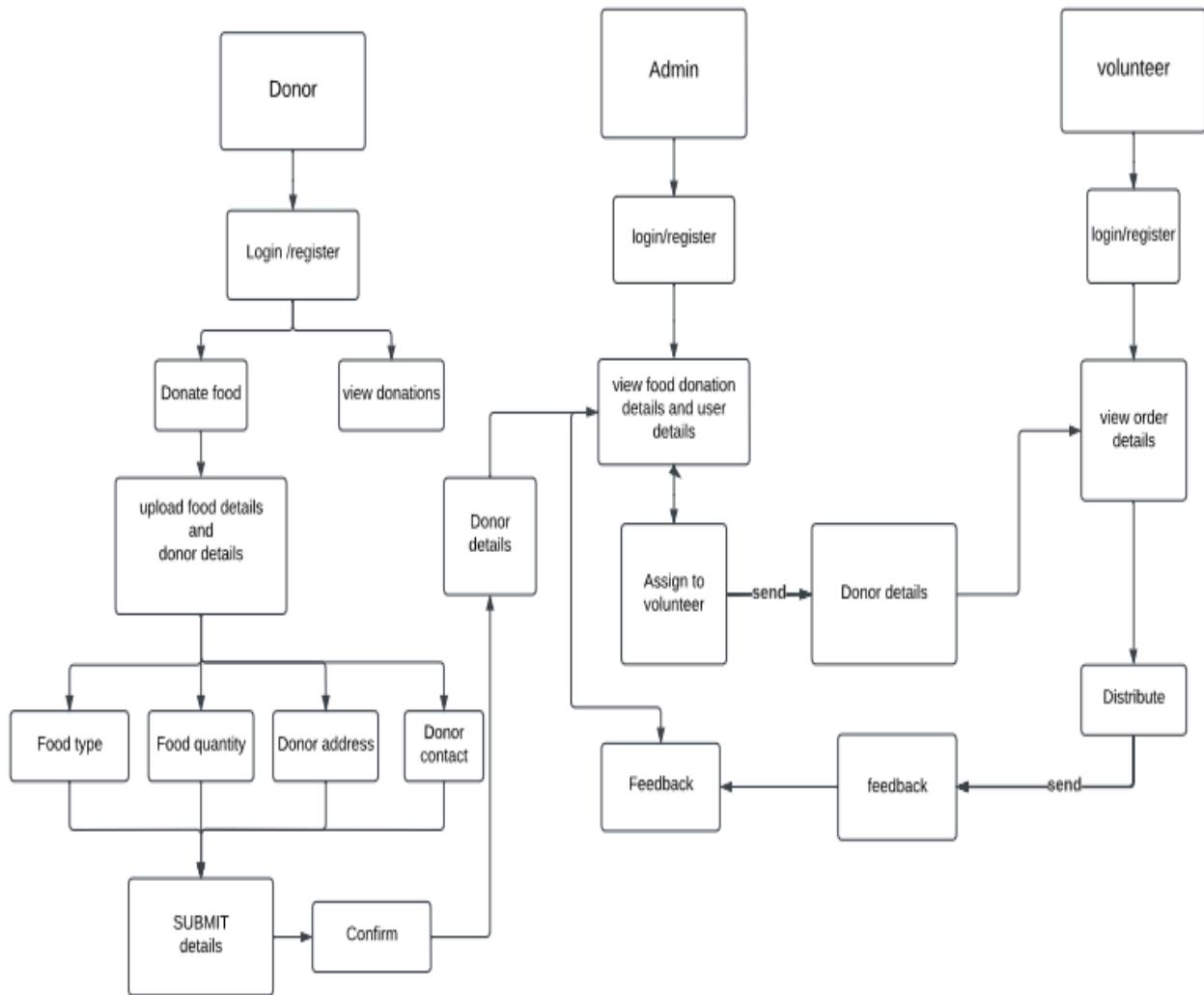


fig.2.1(system architecture)

CHAPTER 3

3. System Design

The Food Waste Management System follows a client-server architecture with a web-based front end and a backend managed via PHP and MySQL. Donors, volunteers, and admins interact with the system through user-friendly interfaces accessible on desktop and mobile platforms. The server processes donation data, manages user authentication, and stores donation records in a secure MySQL database. Volunteers can view available donations, accept pickups, and track deliveries. The system will ensure data security with SSL encryption and role-based access control. Admins can monitor activities, approve donations, and manage users. Real-time notifications and donation tracking will be implemented for transparency. The platform is scalable to handle increased users and data efficiently.

3.1 Methodology

The Food Waste Management System will be developed in clear, sequential phases: starting with requirement gathering, followed by design, development, and testing. After implementation, the system will be deployed and regularly updated based on user feedback and system performance. Each phase ensures a structured progression toward an efficient and effective solution.

Implementation

Here's the implementation breakdown of the Food Waste Management System with detailed steps:

1. Frontend Development:

- Design intuitive user interfaces using HTML, CSS, and JavaScript for donors, volunteers, and administrators.
- Ensure responsiveness and smooth user experience across different devices like mobile and desktop.

2. Backend Development:

- Develop server-side functionality using PHP to handle donation management, user authentication, and volunteer coordination.
- Use MySQL for secure and efficient storage of user and donation data, enabling real-time updates and data retrieval.

3. Integration and Testing:

- Integrate frontend and backend components for seamless data exchange and user interaction.
- Conduct thorough testing to ensure proper functionality, security, and performance across various platforms.

4 . Deployment and Maintenance:

- Deploy the system on an Apache server for stable and secure access.
- Regularly monitor the system and apply updates based on user feedback and system performance.

3.1.1 Algorithms Description

Food Donation Matching Algorithm: The system uses a matching algorithm to connect donors (restaurants, hostels, event venues) with volunteers or recipients based on food type, quantity, and proximity. This ensures that donations are delivered efficiently by matching the donor's location with the nearest volunteer, reducing transport time and food spoilage. The algorithm optimizes the assignment of volunteers and considers time windows for pickup to minimize food waste.

User Authentication Algorithm: The user authentication process ensures that only authorized participants can access the system. Using encryption and secure hashing techniques, the system verifies the identity of users (donors, volunteers, administrators) and provides role-based access control. This algorithm ensures that sensitive data is protected and that only designated users can perform specific actions such as accepting donations or managing the platform.

Food Donation Acceptance Algorithm: After a food donation is logged, the system employs an algorithm to assess the best volunteer or recipient based on location, availability, and food requirements. The algorithm calculates optimal routes for food pickup, considering traffic patterns and proximity to minimize delivery time. This helps ensure timely and safe delivery of food, reducing the chances of food spoilage during transit.

Feedback and Rating Algorithm: This algorithm collects feedback from both donors and volunteers after each donation. It uses sentiment analysis to gauge satisfaction levels and detect any concerns in the donation process. Based on the feedback, the system ranks volunteers and donations, allowing high-rated volunteers to be prioritized for future donations, thus improving the efficiency and reliability of the system.

These algorithms work in tandem to optimize the collection, distribution, and tracking of donated food, improving both the operational efficiency of the system and the experience of its users.

3.2 Structural Diagrams

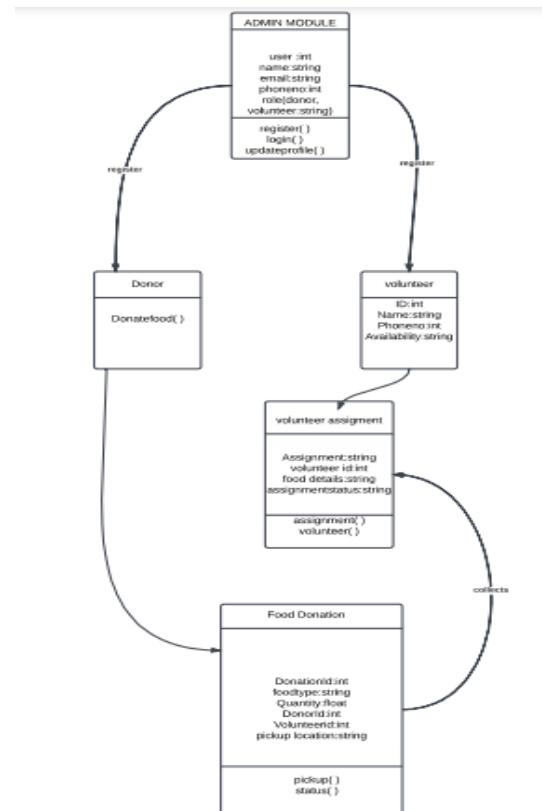


fig.3.1(class diagram)

3.3 Behavioral Diagrams

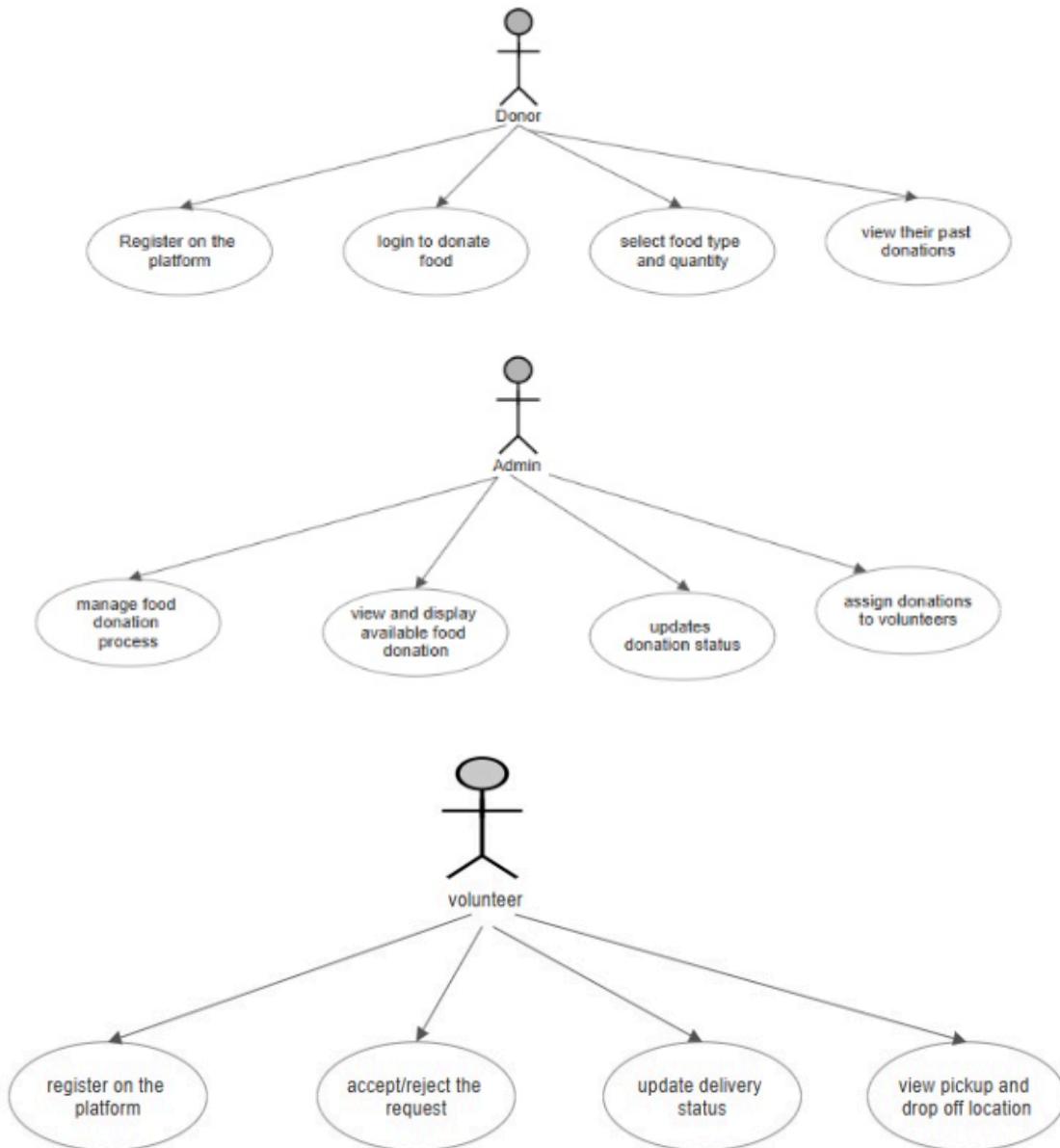


fig.3.2(use case diagram)

3.4 Sequence Diagram

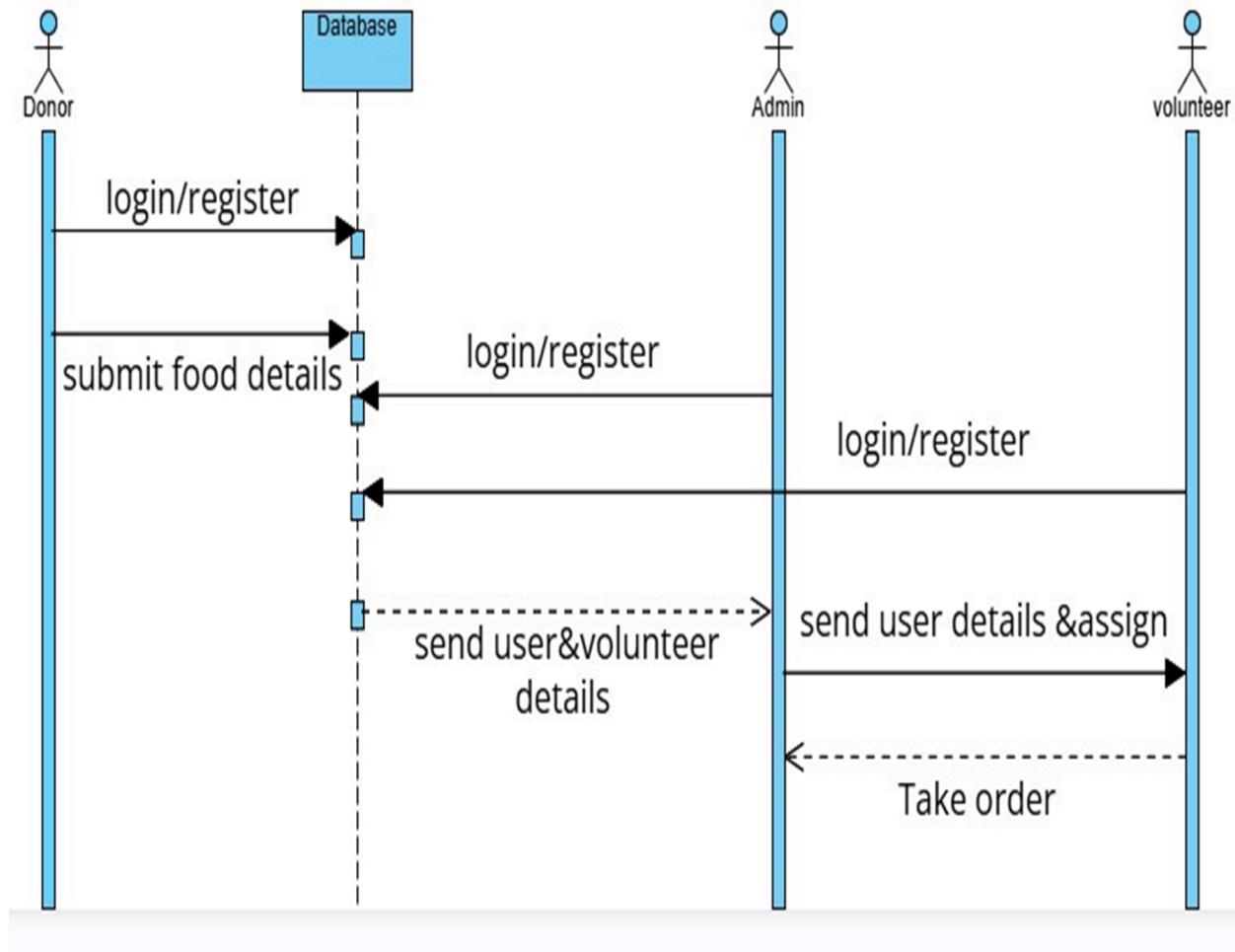


fig.3.3(sequence diagram)

CHAPTER - 4

4. Implementation

4.1 Environmental Setup

Installing an Editor: Visual Studio Code

1. Download Visual Studio Code by visiting the link below based on your operating system:

<https://code.visualstudio.com/download>

Setting Up XAMPP Server (Apache + MySQL + PHP)

2. Download and install XAMPP (includes Apache server, MySQL database, and PHP):

<https://www.apachefriends.org/download.html>

Creating the Project Folder in XAMPP:

- A project folder named food waste management System was created within the htdocs directory of XAMPP to store the project's files.
- The htdocs folder is the root directory where all web files are placed for the local server. The path to this directory on Windows is typically C:\xampp\htdocs\.

Setting Up the Database in phpMyAdmin:

- phpMyAdmin, which is bundled with XAMPP, was used to manage the MySQL database for the project.
- A new database, food_waste_db, was created, and the necessary tables were defined to store data for donors, volunteers, food donations, and recipients.

Testing the Environment:

- The URL http://localhost/food_waste_management_system/ was entered to ensure the project was running smoothly.

4.2 Implementation Details

The Food Waste Management System aims to connect food donors (such as restaurants, hostels, function halls) with volunteers who manage food donations and distribution to underserved communities. The implementation of this project involves both frontend and backend development, user authentication, and database management.

Frontend Development (HTML, CSS, JavaScript)

Initialize Project:

- Create the project folder and set up HTML, CSS, and JavaScript files.

Create Components:

- Develop user-friendly UI components for Donation Forms, Volunteer Dashboards, and Admin Panels.

Set Up Routing:

- Use JavaScript to implement navigation between pages like Home, Login, Donation, and Volunteer Management.

Styling:

- Design responsive pages with CSS for an engaging and accessible user interface.

Backend Development (PHP, MySQL)

Initialize Project:

- Set up a new PHP project on the XAMPP server and configure the MySQL database.

Define Routes:

- Create PHP scripts to handle requests for user authentication, donation logging, and task assignment.

Create Services:

- Implement backend services for managing donor submissions, volunteer approvals, and admin controls.

Define Database Models:

- Use MySQL to create tables for storing users, donations, and volunteer tasks.

Set Up Middleware:

- Implement error handling, validation, and session management for secure operations.

4.3 Results

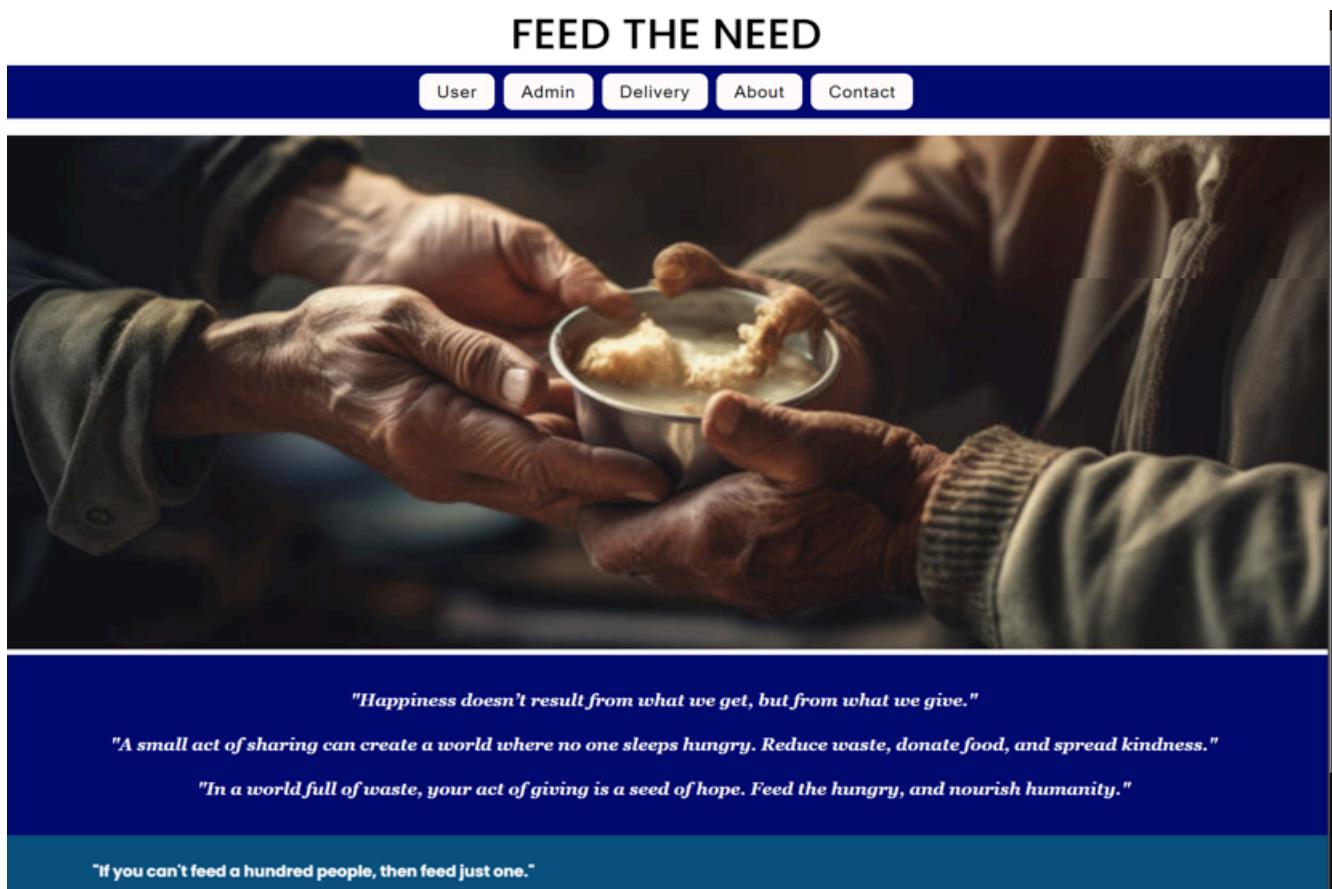


fig.4.1(Front page)

Feed The Need

Create your account

User name

Email

Password

 @

Food The Need

Welcome back !

Email address

Password

 @

Male Female

Continue

Already have an account? [Sign in](#)

Sign in

Don't have an account? [Register](#)

fig.4.2(Login page)

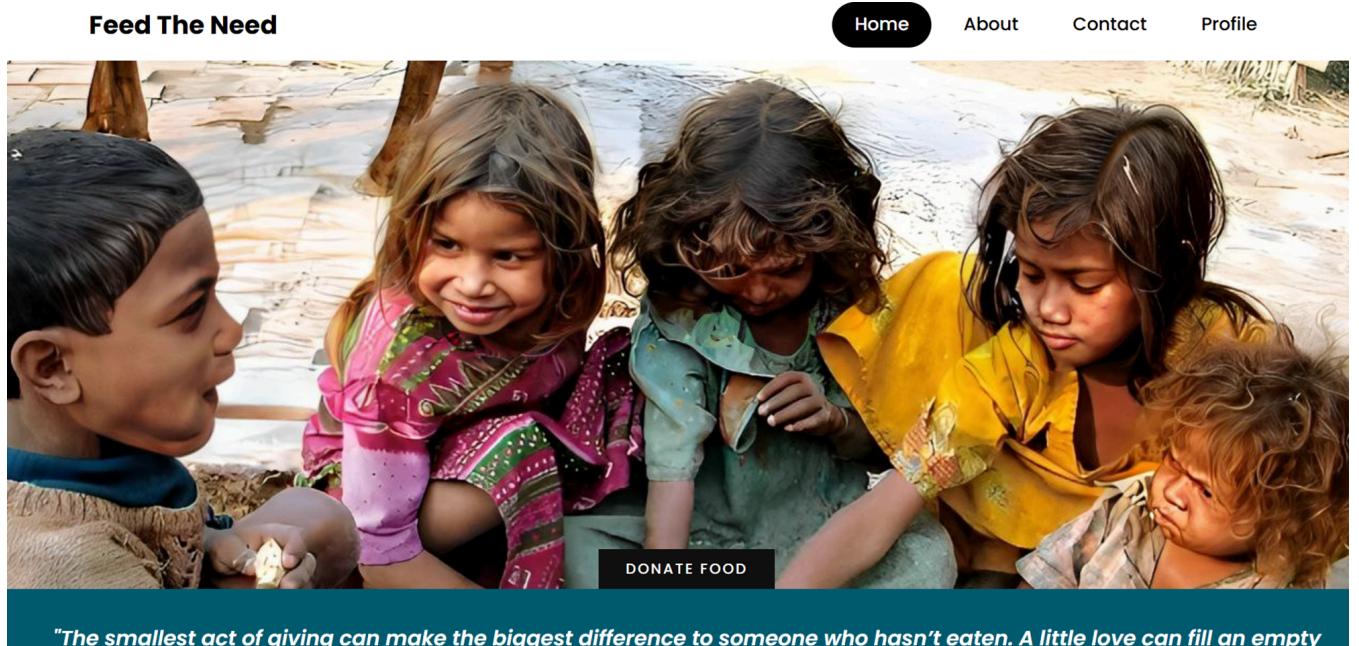


fig.4.3(Home page)

Food Donation Form

Food Name:

Meal type :
 Veg Non-veg

Select the Category:
 Raw Food Cooked Food
 Packed Food

Quantity:(number of person /kg)

Contact Details

Name:

PhoneNo:

District: Madurai Address:

fig.4.4(Food donation form)

ADMIN

- [Dashboard](#)
- [Analytics](#)
- [Donates](#)
- [Feedbacks](#)
- [Profile](#)

Food Donate

Dashboard

Total users 3	Feedbacks 1	Total donates 3
------------------	----------------	--------------------

Recent Donations

NAME	FOOD	CATEGORY	PHONENO	DATE/TIME	ADDRESS	QUANTITY	Get Food
teju	biryani	cooked-food	5555566666	2024-11-24 20:57:23	annanagar	6	Get Food
siri	rice,dhal	cooked-food	8888899999	2024-11-27 18:18:44	Nungambakkam High Road, Nungambakkam, Chennai, Tamil Nadu 600034	10	Get Food

[Logout](#) [Dark Mode](#)

ADMIN

- [Dashboard](#)
- [Analytics](#)
- [Donates](#)
- [Feedbacks](#)
- [Profile](#)
- [Logout](#)

≡

Feed The Need

Select Location: [Get Details](#)

NAME	FOOD	CATEGORY	PHONENO	DATE/TIME	ADDRESS	QUANTITY
teju	biryani	cooked-food	5555566666	2024-II-24 20:57:23	annanagar	6
siri	rice,dhal	cooked-food	8888899999	2024-II-27 18:18:44	Nungambakkam High Road, Nungambakkam, Chennai, Tamil Nadu 600034	10

fig.4.5(Admin page)

Feed The Need

[Home](#) [map](#) [myorders](#)

Welcome aishwarya



My orders

NAME	PHONENO	DATE/TIME	PICKUP ADDRESS	DELIVERY ADDRESS	ACTION
siri	8888899999	2024-II-27 18:18:44	Nungambakkam High Road, Nungambakkam, Chennai, Tamil Nadu 600034	nalgonda	Take order

Feed The Need[Home](#) [map](#) [myorders](#)

[Take orders](#)

Order assigned to you

NAME	PHONENO	DATE/TIME	PICKUP ADDRESS	DELIVERY ADDRESS
teju	5555566666	2024-11-24 20:57:23	annanagar	nalgonda

fig.4.6(volunteer page)

Cases

Test Case	Description	Input	Output	Status
Login User	Verifies that the user can successfully log in with correct credentials.	Valid username and password	User logged in, redirect to dashboard	pass
Submit food details	Ensures the donor can submit valid food donation details to the system.	Valid food details	Donation logged in System	pass
Admin Review Donation	admin can approve food donation, updating its status.	Admin approves Donation	Donation Status updated(Approved)	pass
Assign Volunteer	Ensures the admin can assign a volunteer to pick up and deliver the food donation.	Admin assigns donations to volunteer	Volunteer assigned by admin	pass
Volunteer Pickup Status	Ensures the admin can assign a volunteer to pick up and deliver the food donation.	Volunteer updates status to pickup	Status updated in system	pass
VolunteerDelivery Status	Confirms that the volunteer can update the status to "Delivered" after food is delivered to those in need.	Volunteer updates the status to delivered	Volunteer confirms the delivery	pass
Search donations	Verifies that the admin can search and view donations.	Admin Search the donations	List of relevant donations are displayed	pass
View Donation History	Ensures that the donor can view a history of all their past donations	Donor views Donation history	List of all previous donations made by user displayed	pass
Notify Donor	Verifies that the volunteer collects the food and delivers it to the recipients.	After pickup and delivery updates	Volunteer collects the food and delivered to the people in need	pass

CHAPTER-5

CONCLUSION & FUTURE ENHANCEMENTS

Conclusion

The Food Waste Management System addresses the critical issue of food wastage by providing a seamless platform that connects donors with volunteers to distribute surplus food to those in need. It promotes sustainability, reduces environmental impact, and helps alleviate hunger in underserved communities. By making food donation efficient and accessible, the system fosters a culture of sharing and social responsibility. This initiative highlights the importance of collective efforts to tackle food waste and ensures that valuable resources are utilized effectively to support those in need.

Future Enhancements

The Food Waste Management System can incorporate real-time tracking for food pickups and deliveries to improve transparency and efficiency. Enhancing user notifications for updates on donation status can increase engagement. Expanding the platform's reach to include more volunteers and donors will further reduce food wastage. Simple reporting tools can also be added to help monitor the impact of donations over time.

REFERENCES

- [1] Coding with Harry (n.d.). *PHP and MySQL tutorials for beginners*. https://www.youtube.com/channel/UClFqls3bClnGxqI0q1rP_kQ [Accessed 15 April 2024].
- [2] Traversy Media (n.d.). *Full-stack PHP development series*. <https://www.youtube.com/c/TraversyMedia> [Accessed 15 April 2024].
- [3] Net Ninja (n.d.). *MySQL crash course*: <https://www.youtube.com/c/TheNetNinja> [Accessed 15 April 2024].
- [4] Cisco Networking Academy (n.d.). *Certification in JavaScript programming*. <https://www.netacad.com/courses/javascript> [Accessed 15 April 2024].
- [5] Oracle Academy (n.d.). *Learning advanced features of MySQL* : <https://academy.oracle.com> [Accessed 15 April 2024].
- [6] Dermody, N., Hornberger, M., Piguet, O., Hodges, J. R., & Irish, M. (2016). *Prospective systems for food supply chain management: A clinical approach*. Journal of Sustainability Studies, 50(2), 425–441.
- [7] Hill, J., Randolph Ford, W., & Farreras, I. (2015). *Technology and food donation systems: A comparative analysis of real-time and offline solutions*. Computers in Human Behavior, 49, pp.245-250.
- [8] Hoermann, S., McCabe, K. L., Milne, D. N., & Calvo, R. A. (2017). *Application of asynchronous systems for real-time food donation management*. Journal of Food Systems Research, 19(8), e267. Available at: <https://doi.org/10.2196/jfsr.7023> [Accessed 15 April 2024].

Appendix

Pseudo code

```

if (isset($_POST['sign'])) {
    $email = mysqli_real_escape_string($connection, $_POST['email']);
    $password = mysqli_real_escape_string($connection, $_POST['password']);

    // $sanitized_emailid = mysqli_real_escape_string($connection, $email);
    // $sanitized_password = mysqli_real_escape_string($connection, $password);

    $sql = "select * from login where email='$email'";
    $result = mysqli_query($connection, $sql);
    $num = mysqli_num_rows($result);
    <form action="" method="post">
        <p class="logo" style="">Food <b style="color:#06C167; ">Donate</b></p>
        <p id="heading" style="padding-left: 1px;"> Welcome back ! <img src="" alt="">
    </p>
    <div class="input">
        <input type="email" placeholder="Email address" name="email" value="" required/>
    </div>
    <div class="password">
        <input type="password" placeholder="Password" name="password" id="password" required />
        <i class=" uil-eye-slash showHidePw"></i>

        <?php
        if($msg==1){
            echo '<i class="bx bx-error-circle error-icon"></i>';
            echo '<p class="error">Password not match.</p>';
        }
        ?>
    </div>
    <div class="btn">
        <button type="submit" name="sign"> Sign in</button>
    </div>
<?php
include("login.php");
if($_SESSION['name']==""){
    header("location: signin.php");
}
// include("login.php");
$email id= $_SESSION['email'];

```

```

$connection=mysqli_connect("localhost","root","");
$db=mysqli_select_db($connection,'demo');
if(isset($_POST['submit']))
{
    $foodname=mysqli_real_escape_string($connection, $_POST['foodname']);
    $meal=mysqli_real_escape_string($connection, $_POST['meal']);
    $category=$_POST['image-choice'];
    $quantity=mysqli_real_escape_string($connection, $_POST['quantity']);
    // $email=$_POST['email'];
    $phoneno=mysqli_real_escape_string($connection, $_POST['phone no']);
    $district=mysqli_real_escape_string($connection, $_POST['district']);
    $address=mysqli_real_escape_string($connection, $_POST['address']);
    $name=mysqli_real_escape_string($connection, $_POST['name']);
    $query="insert into
    food_donations(email,food,type,category,phoneno,location,address,name,quantity)
    values('$emailid','$foodname','$meal','$category','$phoneno','$district','$address','$name','$quantity')";
    $query_run= mysqli_query($connection, $query);
    if($query_run)
    {
        echo '<script type="text/javascript">alert("data saved")</script>';
        header("location:delivery.html");
    }
    else{
        echo '<script type="text/javascript">alert("data not saved")</script>';
    }
}
?>

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Food Donate</title>
    <link rel="stylesheet" href="loginstyle.css">
</head>
<body style="background-color: #06C167;">
    <div class="container">
        <div class="regformf" >
        <form action="" method="post">
            <p class="logo">Food <b style="color: #06C167; ">Donate</b></p>

```

```

<div class="input">
<label for="food name" > Food Name:</label>
<input type="text" id="foodname" name="foodname" required/>
</div>

<div class="radio">
<label for="meal" >Meal type :</label>
<br><br>

<input type="radio" name="meal" id="veg" value="veg" required/>
<label for="veg" style="padding-right: 40px;">Veg</label>
<input type="radio" name="meal" id="Non-veg" value="Non-veg" >
<label for="Non-veg">Non-veg</label>

</div>
<br>
<div class="input">
<label for="food">Select the Category:</label>
<br><br>
<div class="image-radio-group">
    <input type="radio" id="raw-food" name="image-choice" value="raw-food">
    <label for="raw-food">
        
    </label>
    <input type="radio" id="cooked-food" name="image-choice" value="cooked-food" checked>
    <label for="cooked-food">
        
    </label>
    <input type="radio" id="packed-food" name="image-choice" value="packed-food">
    <label for="packed-food">
        
    </label>
</div>
<br>
<!-- <input type="text" id="food" name="food"> -->
</div>
<div class="input">
<label for="quantity">Quantity:(number of person /kg)</label>
<input type="text" id="quantity" name="quantity" required/>
</div>
<b><p style="text-align: center;">Contact Details</p></b>
<div class="input">
    <!-- <div>

```

```

<label for="email">Email:</label>
<input type="email" id="email" name="email">
</div> -->
<div>
<label for="name">Name:</label>
<input type="text" id="name" name="name" value=<?php echo"" . $_SESSION['name'] ;?>" required/>
</div>
<div>
    <label for="phone no">PhoneNo:</label>
    <input type="text" id="phone no" name="phone no" maxlength="10" pattern="[0-9]{10}" required />
</div>
<div class="input">
    <label for="location"></label>
    <label for="district">District:</label>
<select id="district" name="district" style="padding:10px;">
    <option value="chennai">Chennai</option>
    <option value="kancheepuram">Kancheepuram</option>
    <option value="hyderabad">hyderabad</option>
</select>
    <label for="address" style="padding-left: 10px;">Address:</label>
    <input type="text" id="address" name="address" required/><br>
</div>
<div class="btn">
    <button type="submit" name="submit"> submit</button>
</div>
</form>
</div>
</div>
</body>
</html>

// Define the SQL query to fetch unassigned orders
$sql = "SELECT * FROM food_donations WHERE assigned_to IS NULL and location=\\"$loc\\";

// Execute the query
$result=mysqli_query($connection, $sql);
$id=$_SESSION['Aid'];

// Check for errors
if (!$result) {
    die("Error executing query: " . mysqli_error($conn));
}

```

```

// Fetch the data as an associative array
$data = array();
while ($row = mysqli_fetch_assoc($result)) {
    $data[] = $row;
}

// If the delivery person has taken an order, update the assigned_to field in the database
if (isset($_POST['food']) && isset($_POST['delivery_person_id'])) {

    $order_id = $_POST['order_id'];
    $delivery_person_id = $_POST['delivery_person_id'];
    $sql = "SELECT * FROM food_donations WHERE Fid = $order_id AND assigned_to IS NOT NULL";
    $result = mysqli_query($connection, $sql);

    if (mysqli_num_rows($result) > 0) {
        // Order has already been assigned to someone else
        die("Sorry, this order has already been assigned to someone else.");
    }

    $sql = "UPDATE food_donations SET assigned_to = $delivery_person_id WHERE Fid = $order_id";
    // $result = mysqli_query($conn, $sql);
    $result = mysqli_query($connection, $sql);

    if (!$result) {
        die("Error assigning order: " . mysqli_error($conn));
    }

    // Reload the page to prevent duplicate assignments
    header('Location: ' . $_SERVER['REQUEST_URI']);
    // exit;
    ob_end_flush();
}
// mysqli_close($conn);

```

