A

MINI PROJECT REPORT

ON

FOOD WASTE MANAGEMENT SYSTEM

Submitted in partial fulfillment of the requirements for the degree of

Bachelor of Technology
In
Information Technology

By

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Under the guidance
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Academic Year 2022-23

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Academic Year 2022-23

CERTIFICATE

This is to certify that the TY B.TECH. Mini Project Report Entitled

"FOOD WASTE MANAGEMENT SYSTEM"

Submitted by

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is a record of bonafide work carried out by him/her, under our guidance, in partial fulfillment of the requirement for the award of Degree of Bachelors of Technology (Information Technology) at Shri Vile Parle Kelawani Mandal's Institute Of Technology, Dhule under the Dr. Babasaheb Ambedkar Technological University, Lonere, Maharashtra. This work is done during semester V of Academic year 2022-23

Date:
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Name and Sign with date
Examiner-1

Name and Sign with date
Examiner-2

DECLARATION

We declare that this written submission represents my ideas in our own words and where others ideas or words have been included, we have adequately cited and referenced the sources. We also declare that we have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will cause disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

Signatures

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It gives us immense pleasure in expressing sincere sense of gratitude towards our project guide Prof. Bhushan Chaudhari for the assistance, valuable guidance and co-operation in carrying out this Project successfully. It has been a privilege for us to have been associated with Dr. Bhushan Chaudhari, Head of Department, during our project work. We have greatly benefited from his valuable suggestions. We express our deep sense of gratitude to him for his valuable guidance, constant encouragement and patience throughout this work.

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Names of Team Members:

1) Dhiraj Patil
2) Lokesh Patil
3) Harshit Gujrathi
4) Chetan Khairnar

ABSTRACT

Abstract: Wasting food is a common problem in our society. Food waste management is crucial since it can improve our environmental and economic sustainability.

We have identified the use of mobile technology to reduce food waste management and built an web application that allows restaurants to donate and share their foods and leftovers with people in need.

This Web Adding an interface between NGO food supplier details and customers.

This Web is using the firebase storage and real-time database. Any user in need can see all the food images donated by different users and add it to his or her carts

Keywords: Web Based Application,NGO.

LIST OF ABBREVIATIONS

EN	Entropy
NGO	Non-governmental organization
SMS	Short Message Service

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6.1 Conclusion

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7 **References** (must be as per the IEEE citation rules)

Appendix

- Datasheets of all components used in the design
- Formulae / Mathematical support used in algorithm development
- Quality Assessment Measures (used for testing outputs)

Paper and/or Certificate Published in Journal/Conference (if any)

1. CHAPTER 1: Introduction

1.1 Introduction:

Food waste or food loss is food that is not been served in restaurants and functions. The causes of food waste occur at different stages of producing, processing, retailing and even consumption. Food Waste management is one of the core concerns of modern age. Many people waste a lot of food as they don't value food since they get it so easily. On the other hand, there are even people who don't get any food to eat for days. So, there is need to create concern about this.

That's why we are creating an web app 'Food Waste Management System'. Our web provides the interface between User and NGO's, which provides direct communication between the NGO's and User's via SMS. It helps to manage the food wastage with simply send SMS to NGO's who are available in that area and inform them about food availability.

This web-based application for food waste management can assist in collecting the leftover food from hotels, restaurants, marriage halls, social, political functions& religious events to distribute among those who are in need. NGOs, that are helping poor communities to battle against starvation and malnutrition, can raise a request for supply of excess/left-over food from restaurants through this application. Once the request is accepted, the NGOs can collect the food from the venue for distribution. In this way this web-based app for food waste management will help the donors to reduce food waste and help in feeding the poor and needy people.

1.2 Motivation:

- As per the knowledge the technology is going advances and growing day by day. Our main motto is to help needy people.
- The idea behind over project can be use by many people who wish to donate things to needy organizations.

1.3 Problem Statement and Objective:

Every day the people are wasting lots of foods. So we have to reduce that food wastage problem. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. Developing an web application for creating a path between service provider's and NGO's

Objective:

- To provide a better communication between user and NGO's
- Develop a Web Based application that reduces the amount of food wastage produced in restaurants, functions and mess

1.4 Scope:

2.CHAPTER 2: Litrature Survey

2.1Litrature Survey:

- In year 2022, Vinayak Bharadi[1] through their research paper explained the food waste management through their website application.
- It has advantage that it helps to manage food wastage for the people who needs it. We are going to make an web app which will be more efficient for users.
- In year 2020, Dr. T. Sankar[2] through their research paper explained and implemented waste food management app.
- It has advantage that it can be used in an android system and more efficient for managing**.**

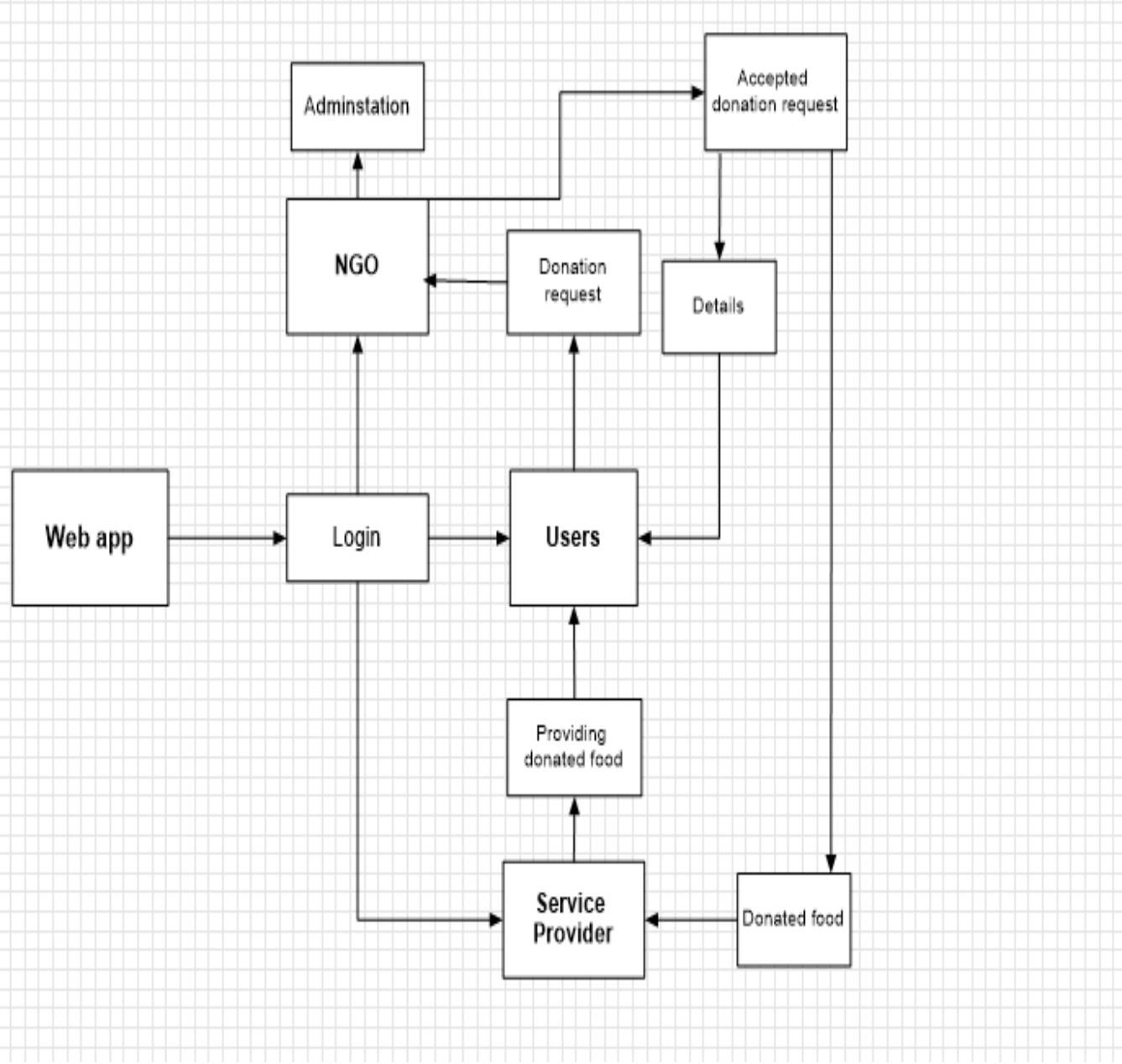
2.2 Litrature Survey Table:

Sr.No	Reference Name	Work Description	Problem Found	Any other criteria
1.	Vinayak Bharadi - waste Management system (2022)	Waste Management App it helps to manage food wastage for the people who needs it which will be more efficient for users	Mobile app instead of portal	Efficiency of users
2.	Dr. T. Sankar - Food waste Management App	Implemented waste food management app.	Mobile app	More efficiency of users connectivity
3.	Pavan Manjunath, Pritam Gajkumar Shah, IEEE	Implementing waste food management IOT based	Mobile app	More user friendly interface
4.	International Journal of Engineering Research & Technology (IJERT) - 2022	Web - based Application for Food Waste Management	Web app instead of mobile app	-----
5.	International Journal of research In applied Science and Engineering Technology(IJRASET) – 2022	Approach for connection for donors and NGO's that will improve the food waste Mangement	Research of Food Management	Approach manages the left over food stuff throught internet

3.CHAPTER 3: Proposed System

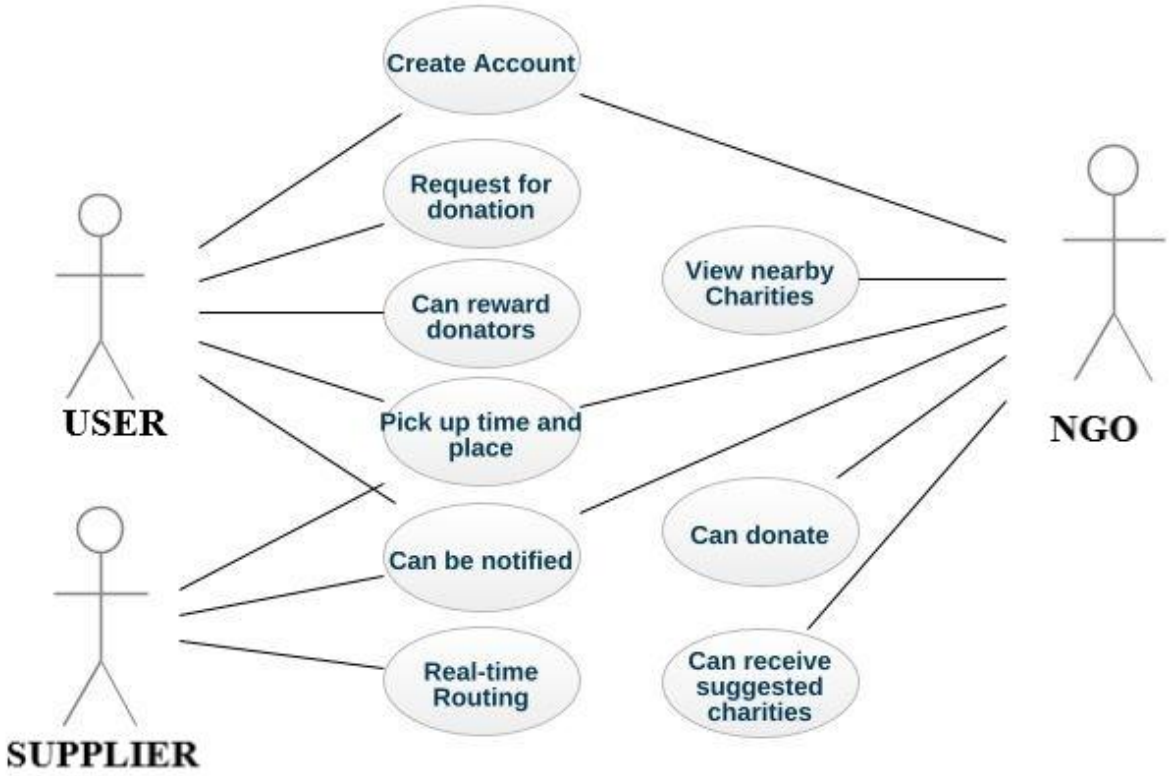
In this proposed system proper implementation of website is achieved with various features. In this proposed system, the Donors and NGOs (Non-Governmental Organizations) can find one another easily through the details given by the admin. It contains a separate logistics login who can collect the foodpackets from the Donors and deliver to the Non-Governmental Organizations. It is helpful for the restaurants to know that how much food they have produced in excess day-by-day. It also helps to donate the leftover/excess food regularly for the needy people.

3.1 Architecture of System:



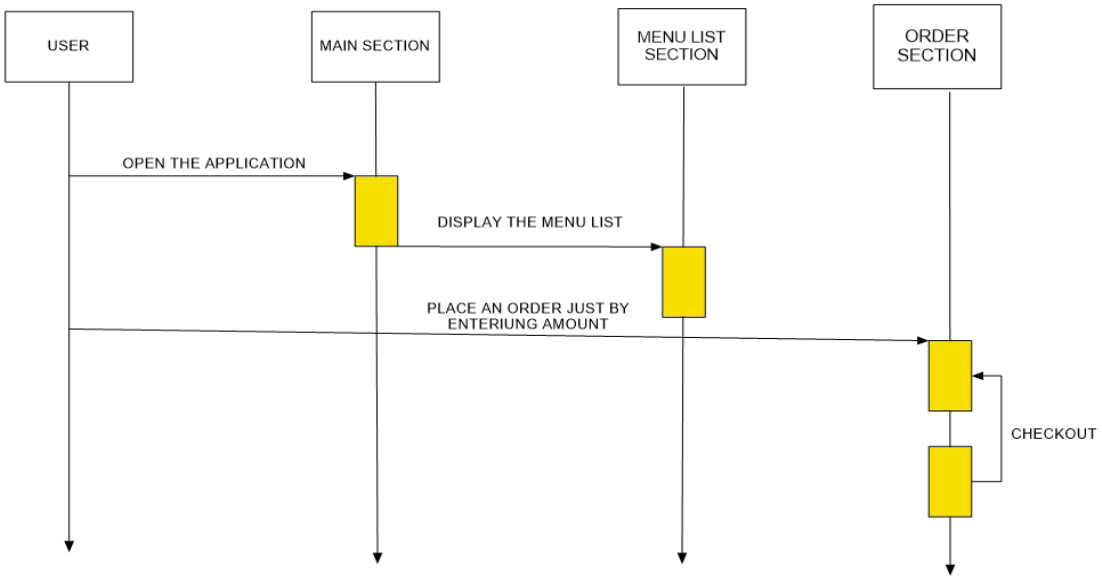
3.1 System Architecture

3.2 Use Case Diagram:



3.2 Use Case Diagram

3.3 Sequence Diagram for Placeing an Order:



3.3 Sequence Diagram for Placeing an Order

4. CHAPTER 4: Experimentation and Results

Add screenshot of implementation

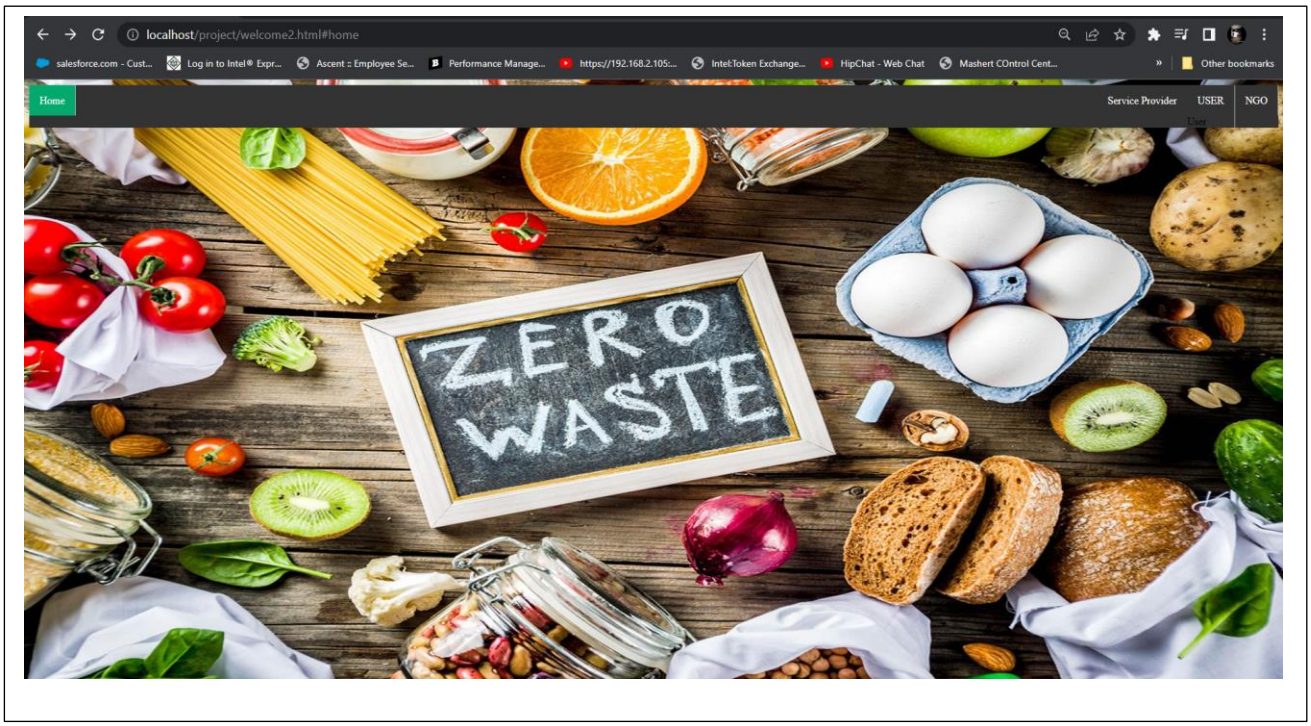


Figure: Home page

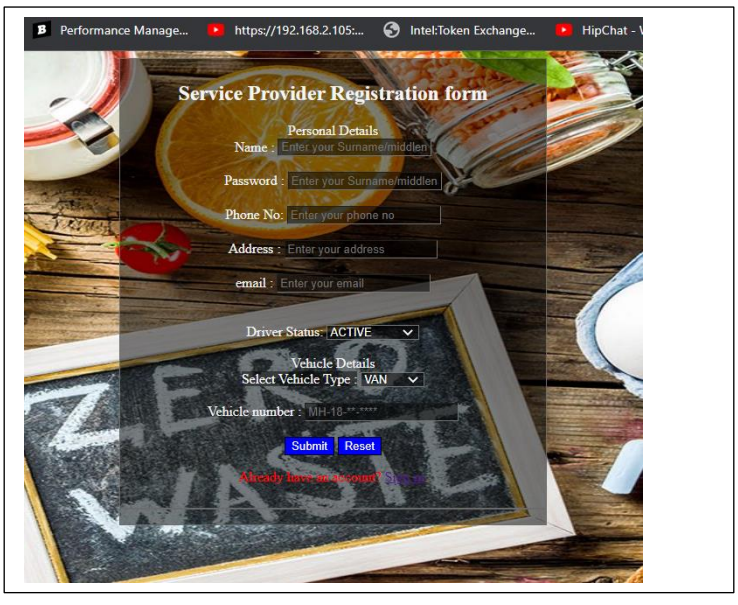


Figure: Registration form of Service Provider

Figure: login page of Service Provider

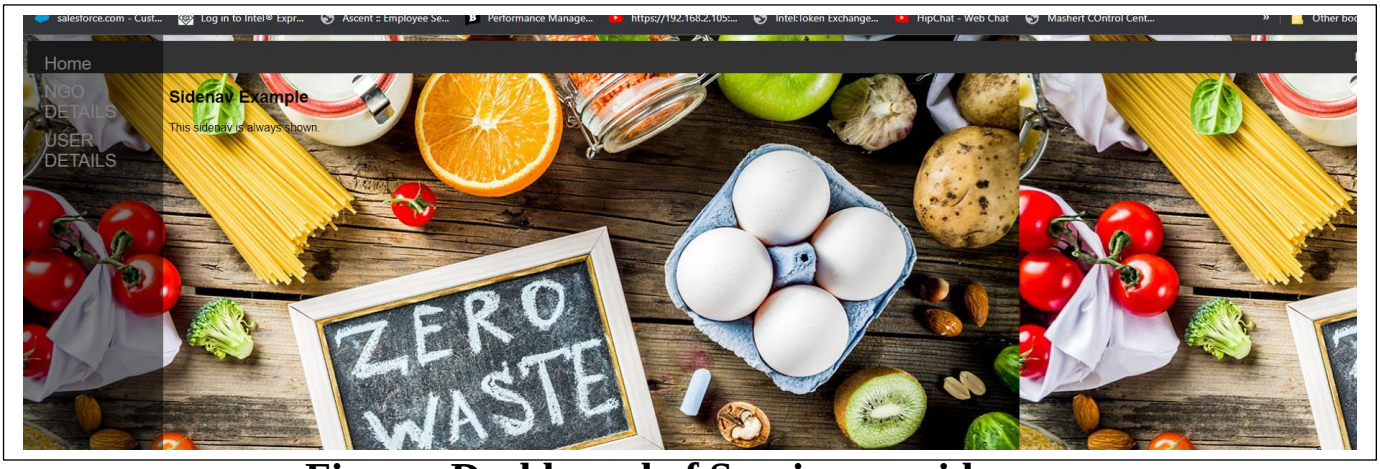


Figure: Dashboard of Service provider

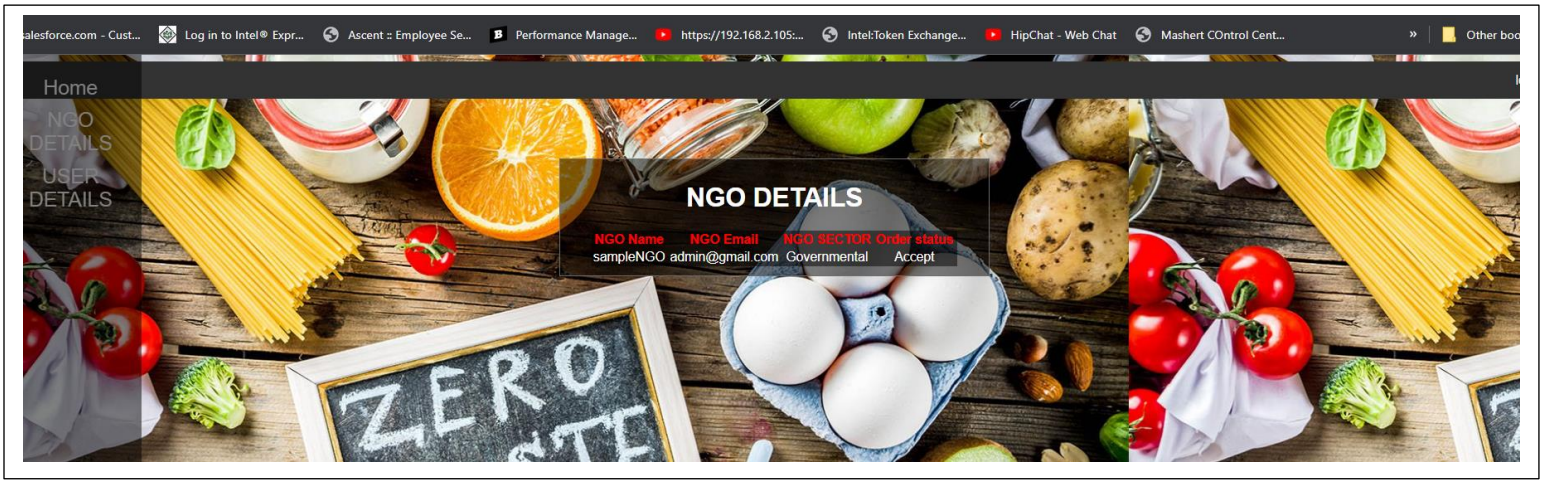


Figure: NGO DETAILS

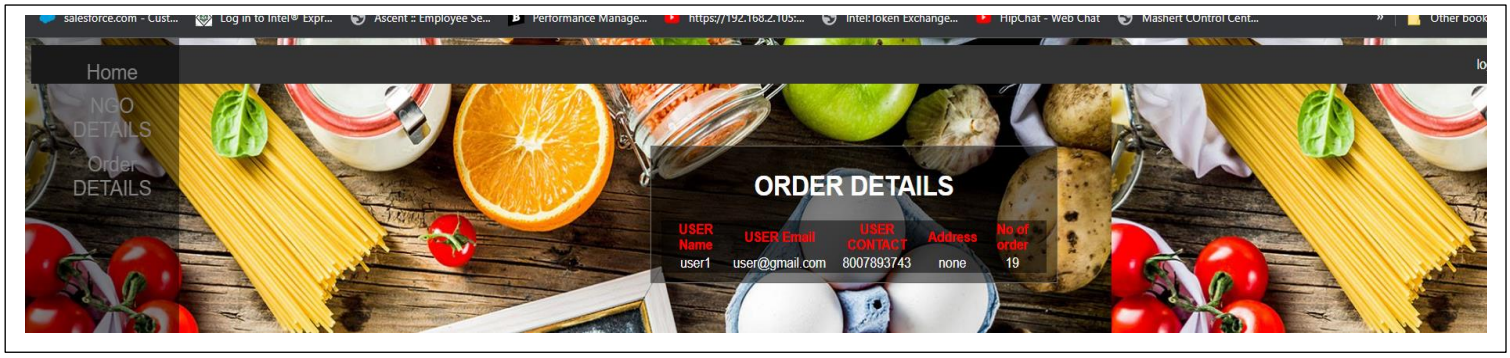
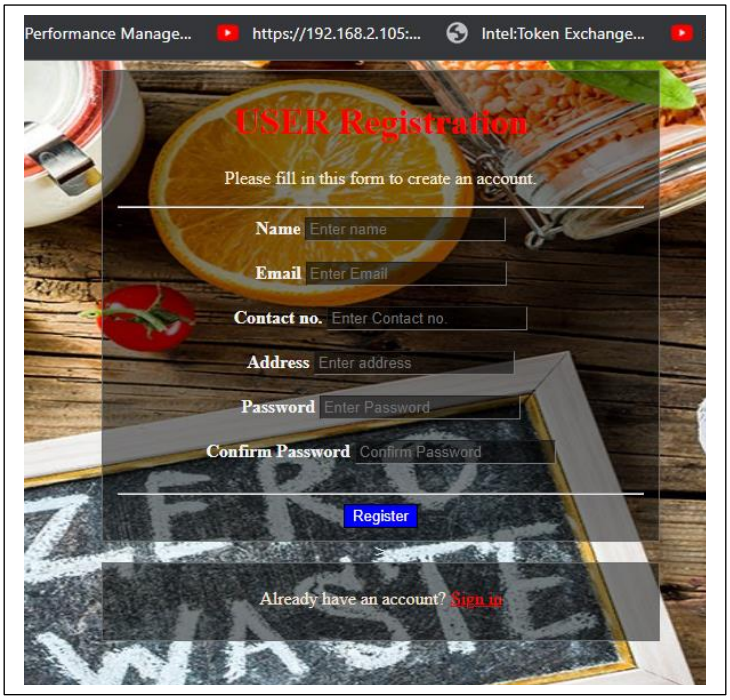


Figure: ORDER DETAILS



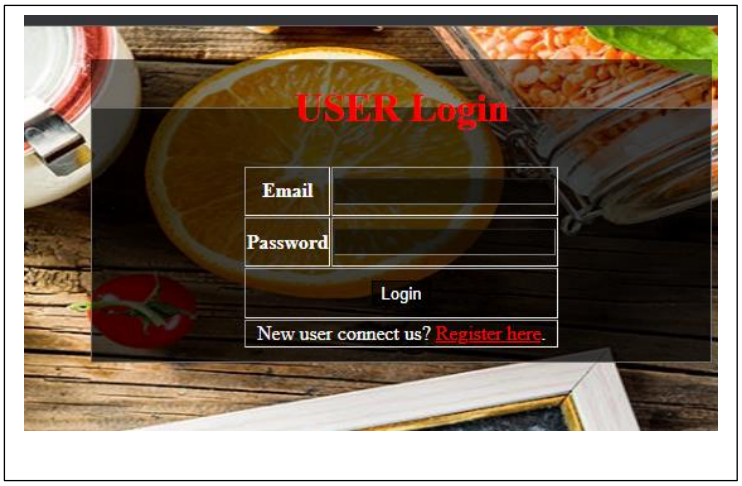


Figure: User Login Form

Figure : User registration form

FIGURE: Dashboard of User

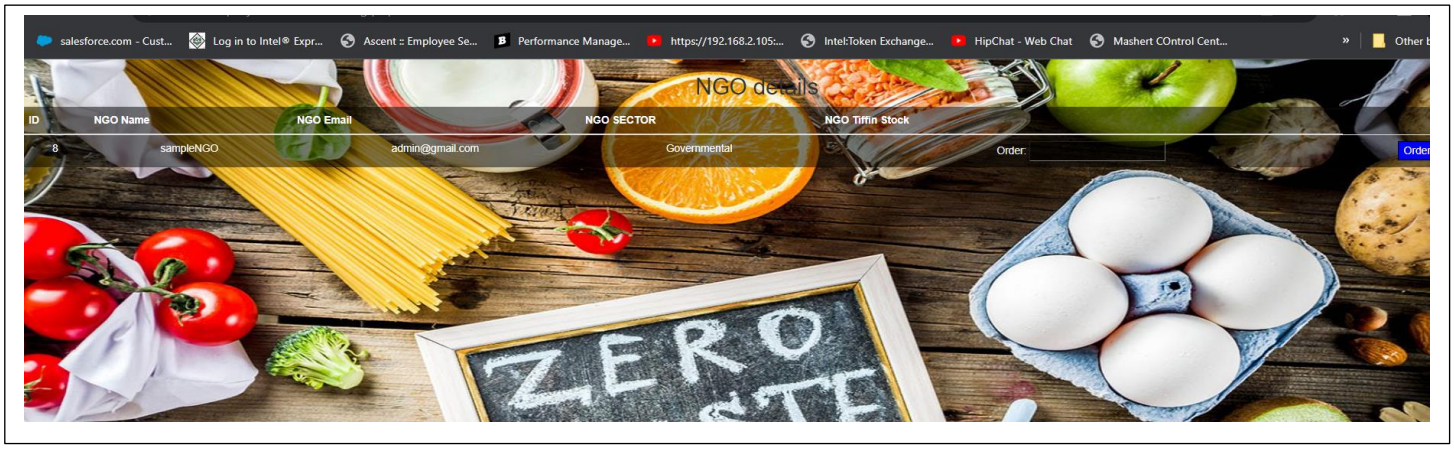
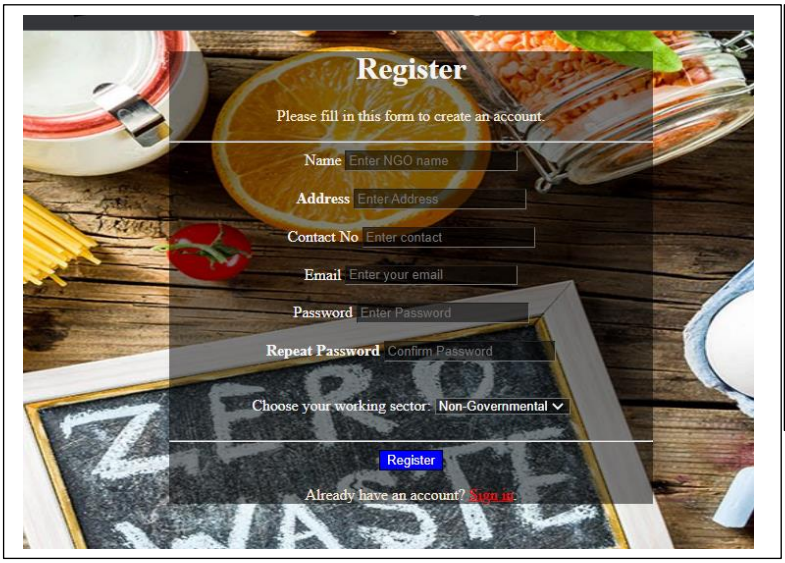


Figure: Order Quantity form



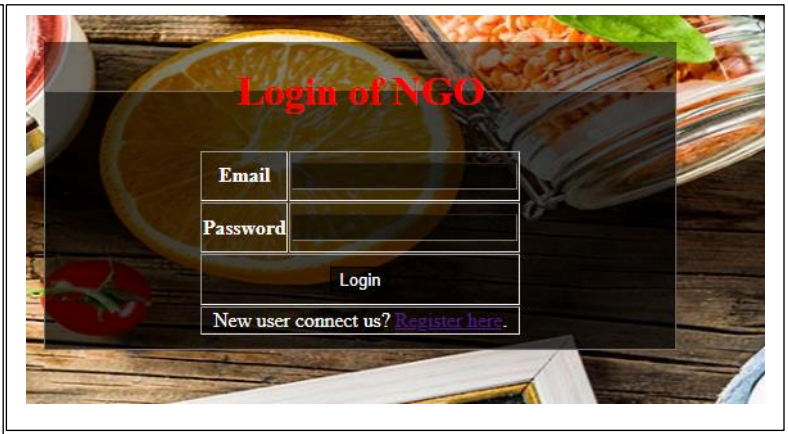


Figure: NGO Login Form

Figure: NGO registration Form

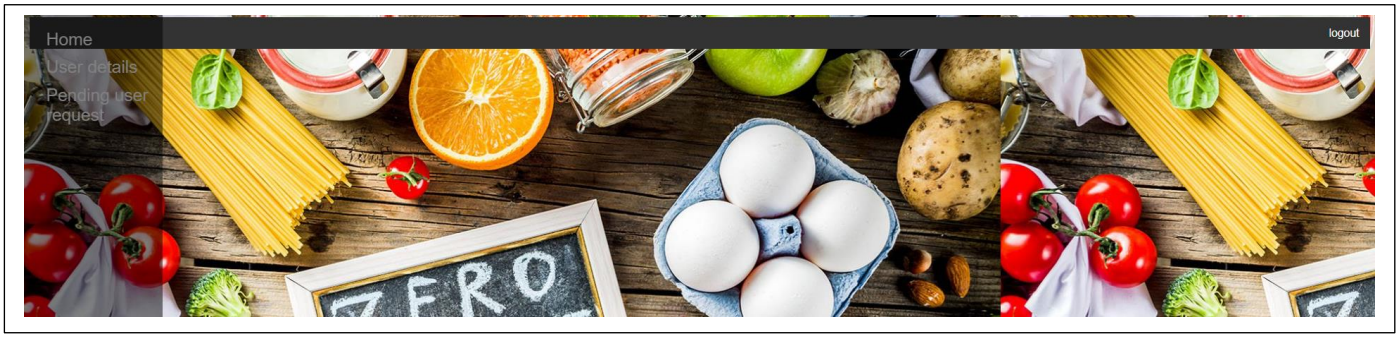


Figure: NGO Dashboard

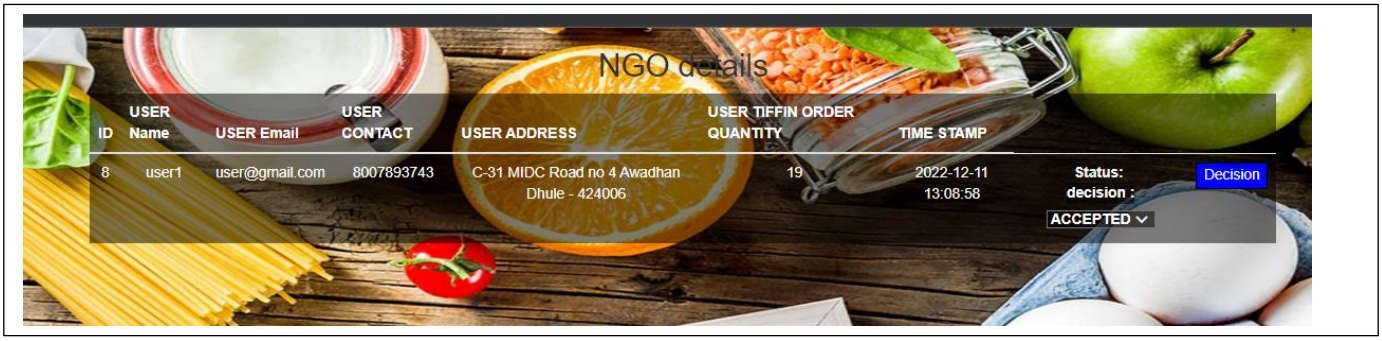


Figure: Pending request of user

Figure: User details

5.CHAPTER 5: Applications , Advantages and Diadvantages

5.1Applications:

- **Customer User:**
  In this module Customer user able to interact with NGO's to avoid the food wastage in functions, parties

- **NGO User:**
  In this module NGO user need to sign up and fill necessary details to avoid multiple forms at every situations

- **Providing a an Path:**
  In which the contact no of NGO is shared within required user.

- **Database Module:**
  It is crucial Module to maintain the all the data in proper way. In this module we create the table and store the NGO's details, Customer users details, history data and soon.

5.2Advantages:

- Redundant of form filling details
- Easy Mode for communication
- More privacy
- Better and simple User Interface
- Benefits will be both the restaurant (reducing food wastage), and the needy
- Keep track of wastage food for restaurant
- User can play role in saving food wastage and help the needy.
- You can gift food from home easily.
- Easy to used and user friendly.
- Food waste will be reduced.

5.3Disadvantages:

- Devices requirement is more.
- Stable Net connection.
- Wrong inputs will affect the project outputs.
- The android mobile user will not be able to insert or view details if the server goes down. Thus, there is disadvantage of single point failure.

6.CHAPTER 6: Conclusion and Future Scope

6.1 Conclusion:

This project entitled Web-based application for food waste management presents a complete overview of the implementation of a website that helps both Donors and NGOs. This website helps in collecting the leftover/excess food from the Donors and distributing the same to those who are in need. This web based application works properly and responsive to the users with proper retrieval from the database. Also there is a help menu available in all user logins which is answered by the admin. In this way this website comes with various features for the effective consumption of waste food by the needy people.

6.2 Future Scope:

- Also we extend our system to have many types of donating users likewise from organizations such as restaurants, family or a single user
- Adding the location facility to our web. The donating user should identify the location of the share food.
- Adding the time and date of each snack shared by users.
- Making the app supports multiple platforms.
- Different languages can be included.

6.3 Limitations of Project:

- Internet Connection is mandatory.

7.CHAPTER 7: References

[1] Vinayak Bharadi, Pavan Jadhav, Omkar Nanche, Onkar Munj, “Food Waste Management Using Machine Learning”, IJCRT - International Journal of Creative Research Thoughts ,Vol.10 , Issue April, (2022).

[2] Dr. T. Sankar , R. Raghavi, “Review in Food Wastage Reduction Through Donation Application ”, IJIREEICE - International Journal of Innovative Research in Electrical, Electronics, Instrumentation and Control Engineering, Vol. 8, Issue 6, June 2020

[3] Pavan Manjunath, Pritam Gajkumar Shah, IEEE, “IoT based Food Wastage System” proceedings of the IEEE, 2019

[4] Ms. R. Uma , S. Ranjith , I. Kaja Mohaidheen , S. R. Dharaneesh , IJERT, Web - based Application for Food Waste Management , 2022

[5] Madiha Saba , Pooja, Dr. Priyadarshini. Patil ,International Journal of research In applied Science and Engineering Technology(IJRASET), Research of Food Management ,2022

[6] www.rescuingleftovercuisine.org

[7] www.annakshetra.org/