iJRASET
International Journal For Research in Applied Science and Engineering Technology



INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 10 **Issue:** XII **Month of publication:** December 2022

DOI: https://doi.org/10.22214/ijraset.2022.47720

www.ijraset.com

Call: 08813907089 | E-mail ID: ijraset@gmail.com

International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 10 Issue XII Dec 2022- Available at www.ijraset.com

Food Donation Application: Software Development Life Cycle Case Study

Prof. Sangita Jaybhaye[1], Rohit Jadhav[2], Sushil Kandhare[3], Ganesh Karode[4], Omkar Karpe[5]
[1, 2, 3, 4, 5]*VIT Pune*

Abstract: ***Many people face starvation because of food shortages. Food shortages in developing countries are common. Smallholders and laborers are the most affected. In addition, in the current pandemic, laborers' employment has been taken away, leaving them unable to feed themselves and their families. There are several ways and means to help the needy, but nothing works better than making a contribution to an organization dedicated to helping poor communities battle against poverty. People living in NGOs also face food shortage issues. This application can help needy people eat food. With the help of this application, restaurants can serve food to many people.***
Keywords: Food, Pandemic, NGOs, Food Shortage

I. INTRODUCTION

The Food Donation Platform paper provides and provides a forum that links donors with NGOs. A concept is proposed z for a food donation network and the effect on society through this medium is discussed. In this paper, the downside is that no GPS service is available. That implies that the structure does not make it easy for the company or charity. Maintaining food sustainability is crucial to enhancing the quality of life of people at all levels of society. The current economic crisis has increased the number of people living in food-poverty situations, especially in developing regions. In spite of a growing understanding of the value of waste reduction and food surplus management, ICTs are still vague and poorly reported in this domain. The increase in the large amount of wastage of food makes the need for donation of food. In countries like India, food wastage is a huge issue. Marriages, canteen, restaurants, social and family get-together and functions expel so much of food. Instead of wasting food we can put them in use by donating them to various organizations such as orphanages, NGO's, etc.

II. LITERATURE SURVEY

The user has learned about the restaurant specifics through user login. The user can view the restaurant's name, address, and type of cuisine available, as well as the number of people the dish serves, as well as Google map photos.[1]

To create an Android app that eliminates food waste in restaurants, functions, and messes. By supplying information such as the location of surplus food and the quantity of food available. Immediately send out alerts to local nonprofits, orphanages, and volunteers to collect them.[2]

In order to assist, they created a web-based application that will allow individuals to give their leftovers, as well as books and clothing, and persons in need of a meal will be able to acquire something to fill their empty stomach. A person will submit a new request to the administrator, who will approve it.[3]

This framework would establish a shared communication platform for hotels, charities and individuals, where charities and individuals can contact restaurants that have remaining food directly and report generation. Displaying how much food is given by which restaurant and giving reward points Food Donor, Food Receiver, Third Party Provider, Admin are the key modules in this framework.[4]

People nowadays donate food manually by visiting various NGO, organizations around them. So, this system is an internet-based application where food donors and volunteers from NGO communicate with each other over internet to discuss the availability of food and other details.[5]

"Reducing Food Waste Through Donation", published in 2018, states that a large amount of food is wasted at weddings, restaurants, social functions and some other places. So they came up with the idea of developing a web application through which people could easily donate their leftovers without any manual work. They worked to develop a food donation portal where food can be donated by large retail chains and potentially other organizations. Their request was solemnly aimed at donating food and no other items such as clothes or books etc. [6]

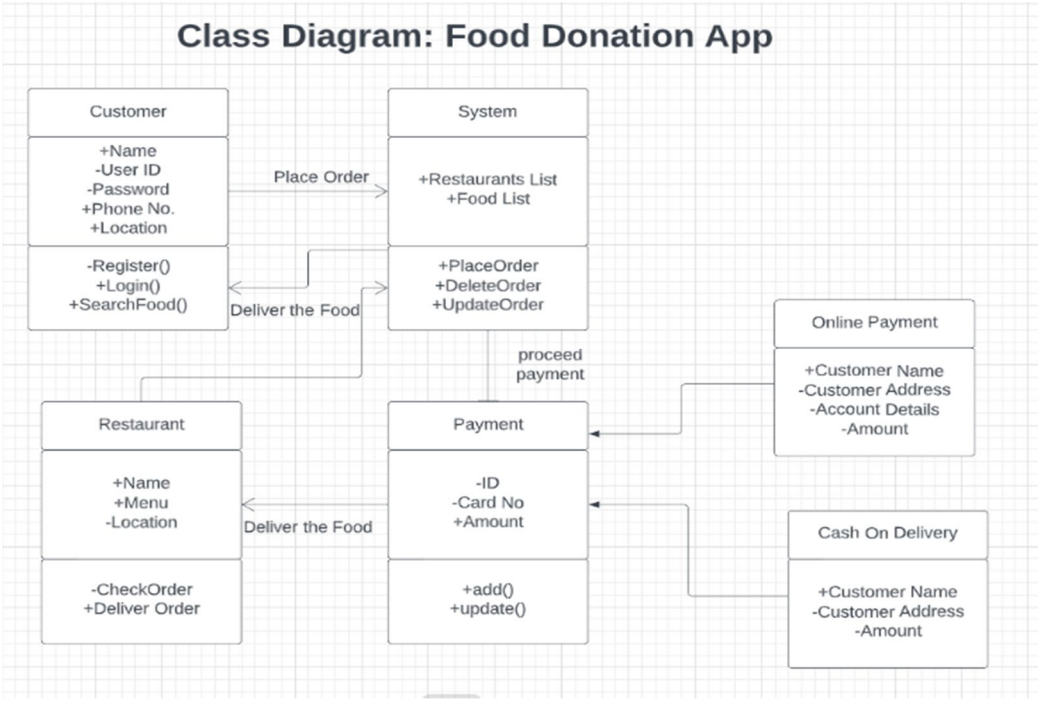
©IJRASET: All Rights are Reserved

The "Food Donation Portal", published in 2015, informs us about the development of food donation services and offers a way to connect donors with NGOs. The idea of a food donation grid is introduced and the impact on society through these means is indicated. The disadvantage of this document is that there is no GPS service available to track the person who collects the donation from the donor, which means that the system does not allow the institution or NGO to find the nearest donor ready to donate in the region and they have to find the donor themselves. [7]

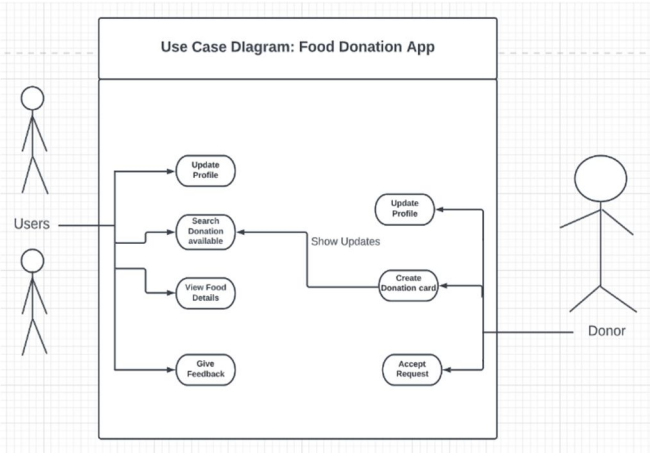
"More than food sharing: Supporting food waste reduction with ICT", published in 2016, states that food security plays a major role in improving the quality of life of people at all levels of society. The recent economic crisis has increased the number of people living in conditions of food poverty, especially in developed areas. Despite the growing awareness of the importance of reducing food waste and controlling excess food, the role of ICT in this area is still unclear and barely documented. This paper tells us about the use of ICT tools to restore surplus food at different stages of the supply chain and also shows us the way forward for an integrated set of ICT tools to mitigate waste from producers to households. [8]

III. PROPOSED METHODOLOGY

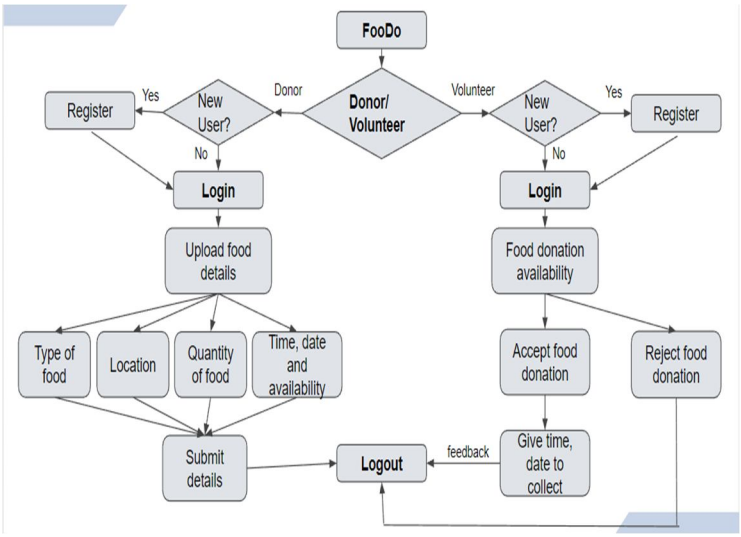
A. Design



Class Diagram

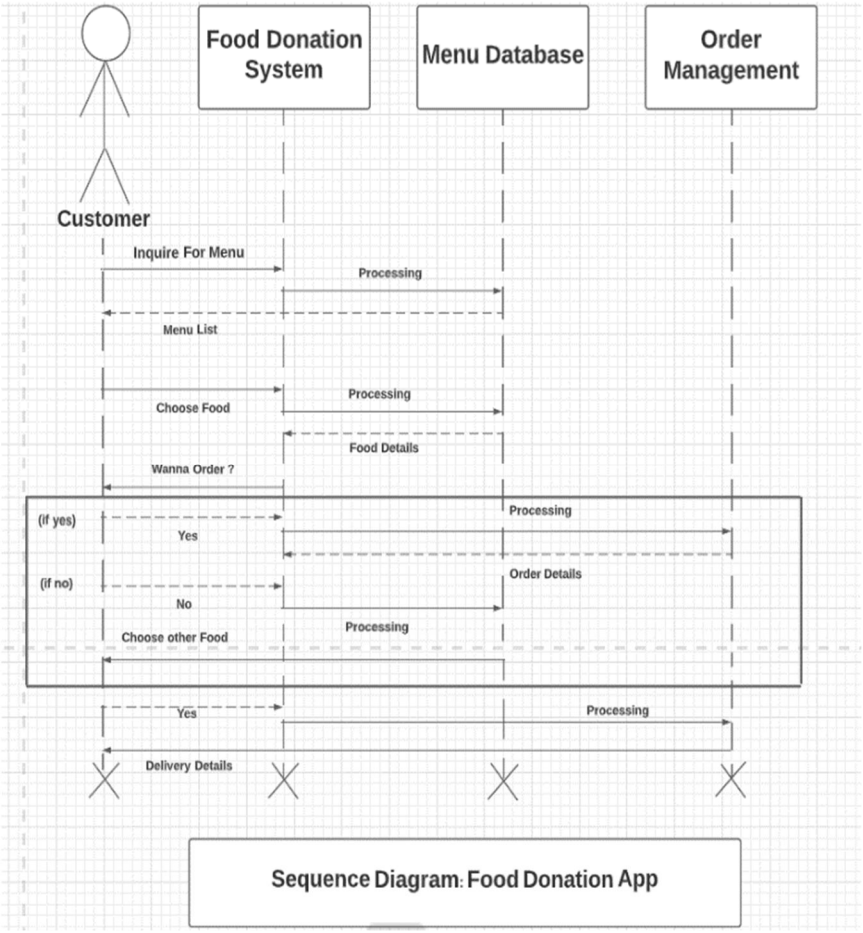


Use Case Diagram



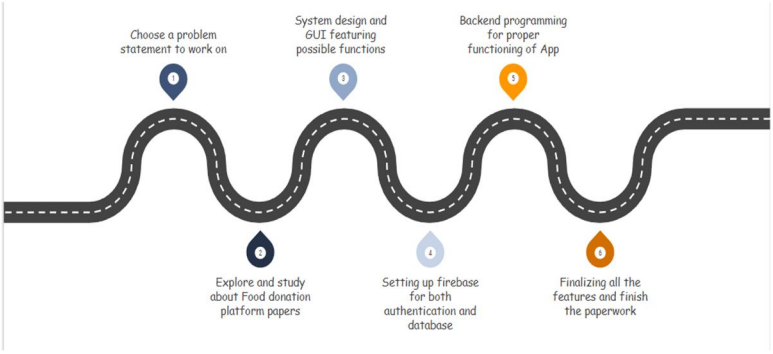
Activity Diagram

Above is the flowchart of the Food Donation App, in this we have 2 categories one for receiver/user and other for donor. For registration and login purposes in both cases we have the same process of it but with some extra info of food type, quantity in case of donor. Both can create, edit profiles of their own and change any info any time. Later on, Donors can create a donation card for confirmation of donation availability, and which will be visible to the user and through this card user can connect to the donor and can see their contact details on progress of deal. Finally, they can give feedback to the donor and write reviews.



Sequence Diagram

B. Workflow



1) Choose a problem statement to work on.
2) Explore and study about Food donation platform papers.
3) System design and GUI featuring possible functions.
4) Setting up a firebase for both authentication and database.
5) Backend programming for proper functioning of App.
6) Finalizing all the features and finishing the paperwork.

C. Technology

1) Android Studio



All the UI design is done in the .xml file of android studio built in and for backend purposes 100% Java is used.

2) Firebase

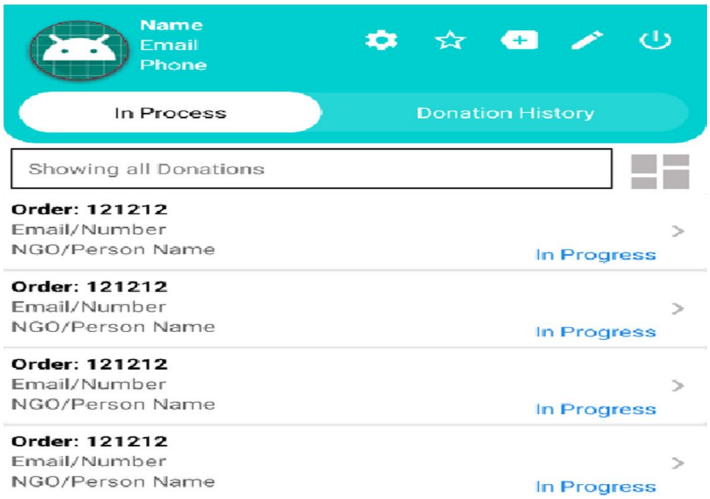


Android studio provides simple interfacing of firebase to the project with .json file and Firebase gives authentication and realtime database features which are required for any application.

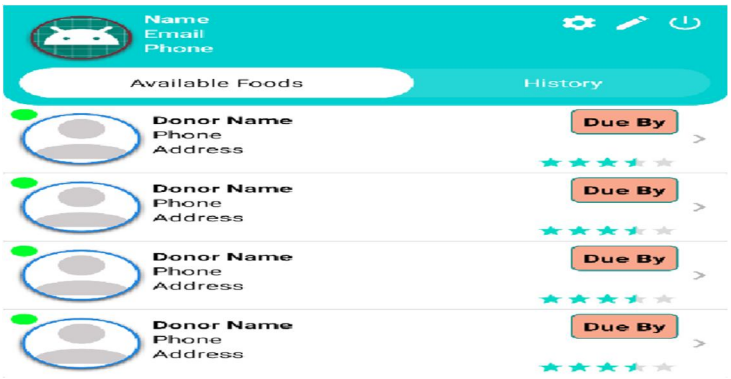
IV. IMPLEMENTATION AND OUTCOME

1) Starting with the project we created the android project targeting API 30 phones.
2) For signup, login and user/donor authentication 2-3 pages activity is created with phone no, mail access.
3) For user and donor, based on their mail's provided will be categories and login to the user and donor pages.
4) In donor, he can create a donation cardview so that the user can access it and get connected to the donor.
5) In user, he can view all the cardview donations available and can finalize the one.
6) Both user and donor can create, edit profiles by changing dp, name, email, phone no., etc.
7) On accepting donation card requests, users can see the contact and location details.
8) Finally, users can give feedback/review to the NGO/donor.

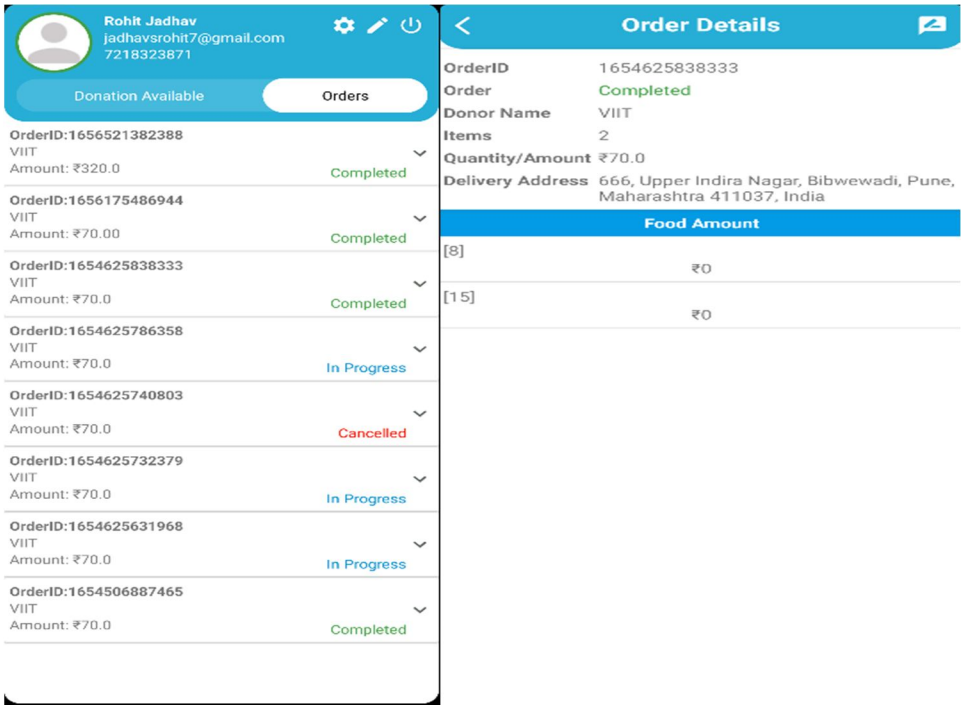
©IJRASET: All Rights are Reserved | SJ Impact Factor 7.538 | ISRA Journal Impact Factor 7.894 |



a) Donor Activity page with option of creating donation card containing details of contact and availability, with donor profile settings.



b) Volunteer Activity page with active donation cards visible, along with the due time of availability and volunteer profile settings.



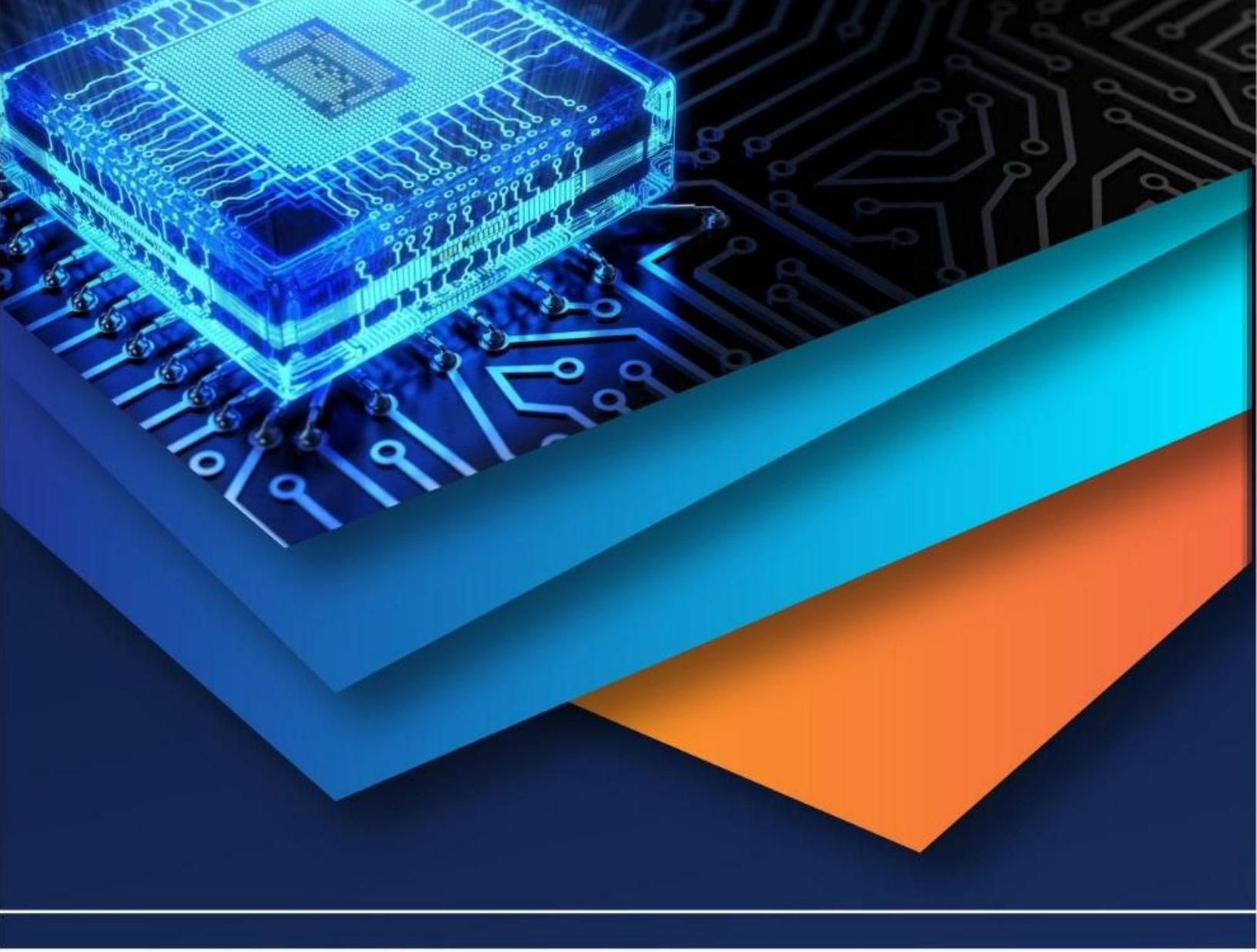
c) Here, under "Orders," the user can view the orders he has verified himself, along with orderId, Amount, NGO/Person Name, and primarily the order statuses of "In Progress," "Canceled," and "Complete." Additionally, if they want to know more about the order's specifics, click the order card. In the more info box that appears, they can add additional goods, food categories, and quantities, and lastly, the delivery address. The review button is also available for providing feedback on delivery or review of the NGO.

V. CONCLUSION AND FUTURE SCOPE

The excess food produced in functions gatherings can be easily donated. Visualization of the impact of donation has a positive impact on the users. An effort focused on feeding the hungry and minimizing food Wastage at the same time. An Application which can be used to donate or claim the excess food. Donating the excess food provides the location of where excess food is available & details of the food quantity available and sends immediate alerts to nearby NGO's, orphanages, and volunteers to collect them.

REFERENCES

[1] "Review in Food Wastage Reduction Through Donation Application" by Dr.T. Sankar, R. Raghavi published in year June 2020.
[2] "Mobile Application for Excess Food Donation and Analysis" by R. Adline Freeda, M.S. Sahlin Ahamed published in year Apr 2018.
[3] "GET A BITE: The charity-based application through which people can donate food, books and clothes to needy people" by A. Anandkumar, M. Aravinth Kumar, G. Guhan, M. Karthik published in year Apr 2020.
[4] "Aahar - Food Donation App" by Mrigank Mathur, Ishan Srivastava, Vaishnavi Rai, "Assistant Prof. Mr. S. Kalidass" published in year June 2021.
[5] "Availability of food for NGO through Mobile Application: FOOD FOR ALL" by Vidhi Panchal, Kajal Kuchekar, Snehal Tambe published in year Mar 2020.
[6] Divyesh Jethwa, Ayushi Agrawal, Rohan Kulkarni, Leena Raut, "Food Wastage Reduction Through Donation" 2018.
[7] Hunger in India - https://www.indiafoodbanking.org/hunger
[8] Aaron Ciaght, Adolfo Villafiorita, "Beyond food sharing: Supporting food wastage reduction using ICT" 2016.
[9] Amir Saxena, Khushi Verma, Aadi Patil, "Development of a food supply chain by PHP".
[10] Dhruvi Shah, Adnan Ansari, Ruchi Sharma, "Helping Hands".



10.22214/IJRASET

45.98

IMPACT FACTOR: 7.129

IMPACT FACTOR: 7.429

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Call : 08813907089 (24*7 Support on Whatsapp)