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FEEDIE: FOOD DONATION APPLICATION

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Abstract: This survey paper presents a mobile application designed to streamline the process of food donation, addressing the inefficiencies and logistical challenges often encountered by traditional donation methods. The application leverages technology to connect donors, recipients, and volunteers, facilitating the efficient collection, distribution, and utilization of surplus food. Through an instance analysis approach, we demonstrate the effectiveness of the application in reducing food waste, increasing accessibility to nutritious meals for those in need, and fostering community engagement. Furthermore, we discuss the scalability and potential impact of such a solution in addressing food insecurity on a larger scale. Overall, this research contributes to the ongoing efforts to use technology to advance social justice, particularly within the framework of food sustainability and humanitarian aid.

Keywords - Food waste reduction, Humanitarian aid, Mobile Application, Food donation, Social Impact

I. INTRODUCTION

In recent years, the issue of food waste and hunger has gained significant attention globally. Despite the abundance of food resources, millions of people still go hungry every day, while a staggering amount of food is wasted. Traditional methods of food donation often face logistical challenges, leading to inefficiencies in food distribution and utilization. However, advancements in technology, particularly mobile applications, offer promising solutions to address these challenges. This paper introduces a novel approach to optimize food donation through a dedicated Android application. Through utilizing the widespread use of smartphones and the ease with which mobile platforms, the application that is being suggested aims to revolutionize the way surplus food is collected, distributed, and utilized. Through real-time connectivity and efficient logistics management, the application facilitates seamless coordination between food donors, recipients, and volunteers [3]. Furthermore, this paper highlights the pressing need to combat food waste as well as alleviate hunger, emphasizing the ecological and social benefits of effective food donation strategies. By offering a comprehensive synopsis of the functionalities and features of the suggested Android application, this research sets the stage for a deeper exploration of its impact on food sustainability, community engagement, and humanitarian aid efforts [4]. In the following sections, we will discuss the creation and execution of the food donation Android application, present an instance analysis demonstrating its effectiveness, and analyze its potential for scalability and widespread adoption. Ultimately, this paper contributes to the ongoing discourse on using technology for the benefit of society and underscores the significance of collaborative efforts in addressing global challenges related to food security and sustainability [5]. We shall review recent investigation in this paper.

II. OBJECTIVES

- To lessen the quantum of food being used and squandered to the indigent people.
- Engage original Communities in addressing food instability and fostering a sense of social responsibility.
- Educate druggies about food waste issue and encourage responsible food operation.
- Give a stoner-friendly platform to make food donations effective.

III. MOTIVATION

As we know, our world is battling high food wastage, widespread hunger and extensive food insecurity. All of these issues are ones that directly affect the basic quality of life. Moreover, higher food wastage also means which we would need to build more waste disposal facilities, which leads to an unnecessary increase energy consumption. However, by distributing these food leftovers to people who are unable to afford food on their own, we can alleviate their standard of living. So, the significance of this product is the potential for solving all the mentioned problems, without even increasing the food output.

IV. LITERATURE SURVEY

Title: Reduction of food Wastage through android application:

Yumna Sohail[3] have proposed a system within the name Reduction of Food Wastage through Android Application – Make You Smile which published from the International Journal of Scientific & Engineering Research Volume 10, 915 ISSN 2229-5518. This app mainly focus on food wastage in order to develop this app they have used Android Studio and Firebase database including java, xml there are three modules in this namely admin module, user module, driver module which have a feature of GPS tracking system.

Title: Aahar – Food Donation App:

Mr. S. Kalidass[1] has proposed a system under the name of Aahar – Food Donation App. Aahar is an Android smartphone app that, after a user has successfully logged in, offers a platform for food donations and collection to both seekers and donors. The three main modules of the system are volunteer, donor, and admin. This app will be used as the interface between food doer and the distributor, the publication “Moving Past Food Sharing: Encouraging the Elimination of Food Waste Through ICTs,” published in 2016.

Title: Reducing Food Wastage Through Donation:

J Manikandan1, Mr N Kumar [5] have proposed a system in the name REDUCING FOOD WASTAGE THROUGH DONATION. It is an Study Of cross platform mobile application, developed to prevent food insecurity, a lack of access to healthy and affordable food. The contributor is able to be either individual, or from hotels and function halls, the recent depression has increased the quantity of individuals experiencing food hardship, particularly in developed regions. At the client-side App provides a facility to provide food donations to the charity for the assistance of hungry people.

Title: Designing A Mobile Program For Food Wastage Reduction:

If anyone has wasted food, they enter their food quantity details and their address in that application, and then the admin keeps track of the dish donor's details. The donor can set up an account, and if they have leftover food, they may login and submit a request to the administrator. The admin also keeps track of the buyer's information (orphanages, destitute persons, etc.). After the admin has reviewed the donor request, he or she will send an alert message with information like the time to come and collect the food. And the admin collects food provided by donors through their local agent, which they then distribute to orphanages or impoverished individuals in the area. Admin will receive the meal from the agent and send an alert message to the donor. If a donor needs any details pertaining to the orphanage, they are able to make a request to the administrator, who will gather the information.

Title: Minimizing Food Wastage Web Application:

A Novel Approach to Curb Hunger and Spread Happiness The purpose of Hunger Free is to free India from hunger. Every day over millions of Indians sleep without getting a meal. This problem can be solved by tackling the food destruction problem that occurs during big Indian weddings, Restaurants, etc. Hunger Free is a platform that provides a solution to this problem by connecting restaurants, various NGOs to the needy. Hunger Free is a web app designed and developed keeping in mind the difficulties NGOs or restaurants face to make contact with people.

Title: A Mobile Food Waste Reduction Unit Application:

Users will be able to view things, register, log in, add items, and add products to cart, take something out of the cart, then log off. This app is using the firebase storage and real-time database. Any user in need can view every dish images donated by several users, adding it to their shopping cart.

V. METHODOLOGY AND IMPLEMENTATION

System Architecture

We developed the food donation app by using the android studio in java. The pages utilizing the application may be constructed the outline. Mysql was used for the database related operations.

The Food Donation app was implemented in android studio by using java. Android studio is a free, open-source for developing applications. The instruments listed below were employed for the implementation of the Application:

1. Android Google Api 2.3.3 or higher.
2. Android Development Tool plugin.
3. Eclipse 3.4 or higher.
4. Sun JDK 1.6 or higher.

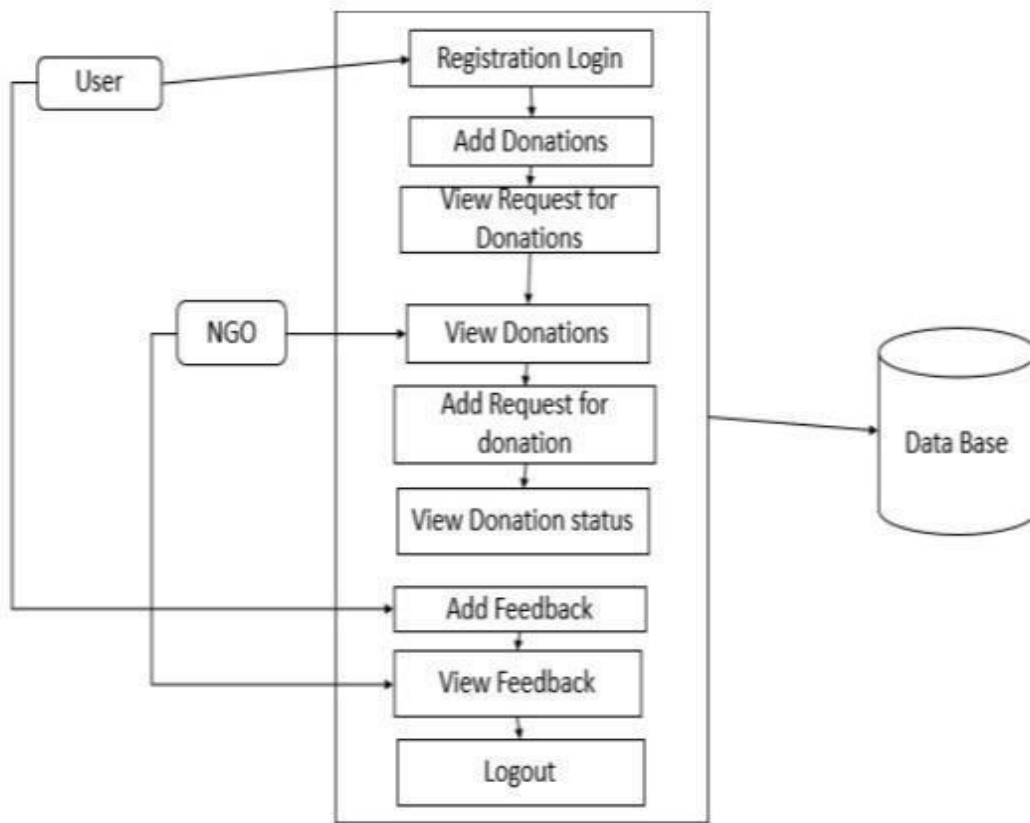


Fig 1: System Architecture

Admin Module

Use case Diagrams Below UML diagram illustrates the admin functionalities.

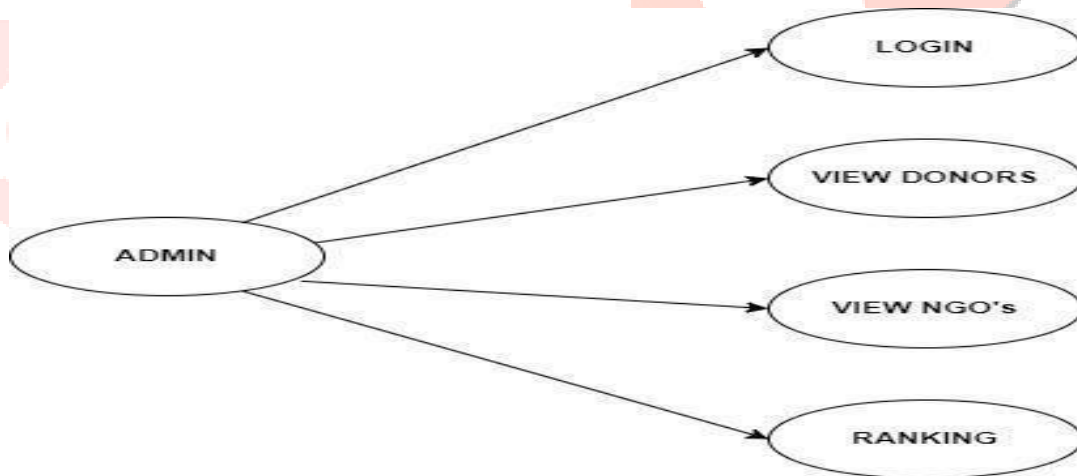


Fig 2: Admin use case module

It consists of

1. Donors: The Admin can view the donor details and their donation.
2. Receiver's: The Admin can view the NGO details and their delivery of food details.
3. Ranking: The Admin can give the ranking for both Donor and Receiver's based on their contribution.
4. Considering the ranking and feedback from the donors and concern Receiver's admin can give a rating of 1-5 star

Donor Module

Donor and his activities are displayed in the below figure.

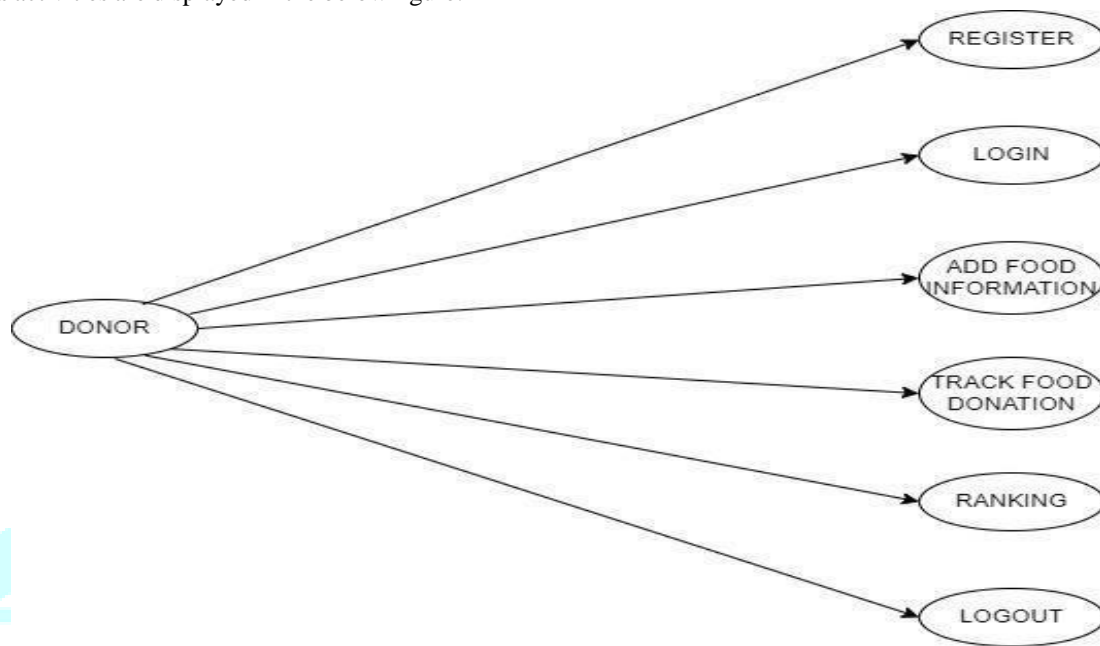


Fig 3: Donor use case module

It Consists of

- 1 Make Donation: The Donor can make a donation by uploading the relevant details regarding the food in the application.
- 2 Donation History: Donors can view the previous donations history.
- 3 View Donation: The donor can view the donation by GPS tracking the NGO whether he has successfully delivered or not.
- 4 Feedback: The donor can give the feedback on the NGO according to the donation and it will reflect as ranking to the NGO.
- 5 Leaderboard: The Donor can view the leaderboard of the NGO's.
- 6 Profile: The Donor can view his profile by using the profile button in his dashboard.

Receiver Module

The following diagram describes the receiver functionalities.

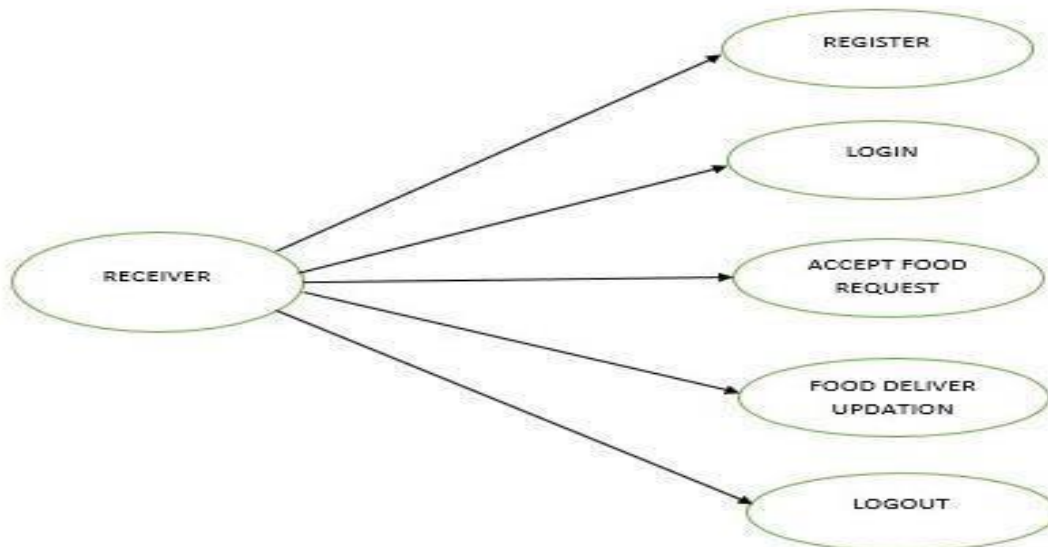


Fig 4: Receiver use case module

It consists of

- 1 Receiver can accept or not accept the donation request made by the donor.
- 2 Receiver can view his ranking which was given by the donor.
- 3 After accepting the donation NGO has to deliver the food to the required people.
- 4 After Successful donation NGO has to upload the relevant donation pictures in the application.
- 5 Receiver can get his ranking in light of this donation given by the donor.
- 6 Receiver can view donation history and the requests done by donors and his profile relevant information will be given in the dashboard.

V.RESULTS AND DISCUSSIONS

Through the Food Donation App we can minimize food waste by donating to the needy. Users can play characters in saving food waste and help the needy. Simple to employ and user friendly. Keep track of the leftover meals from eateries or any events. Since we use applications like Google maps and GPS, the cost of project construction is economically feasible.

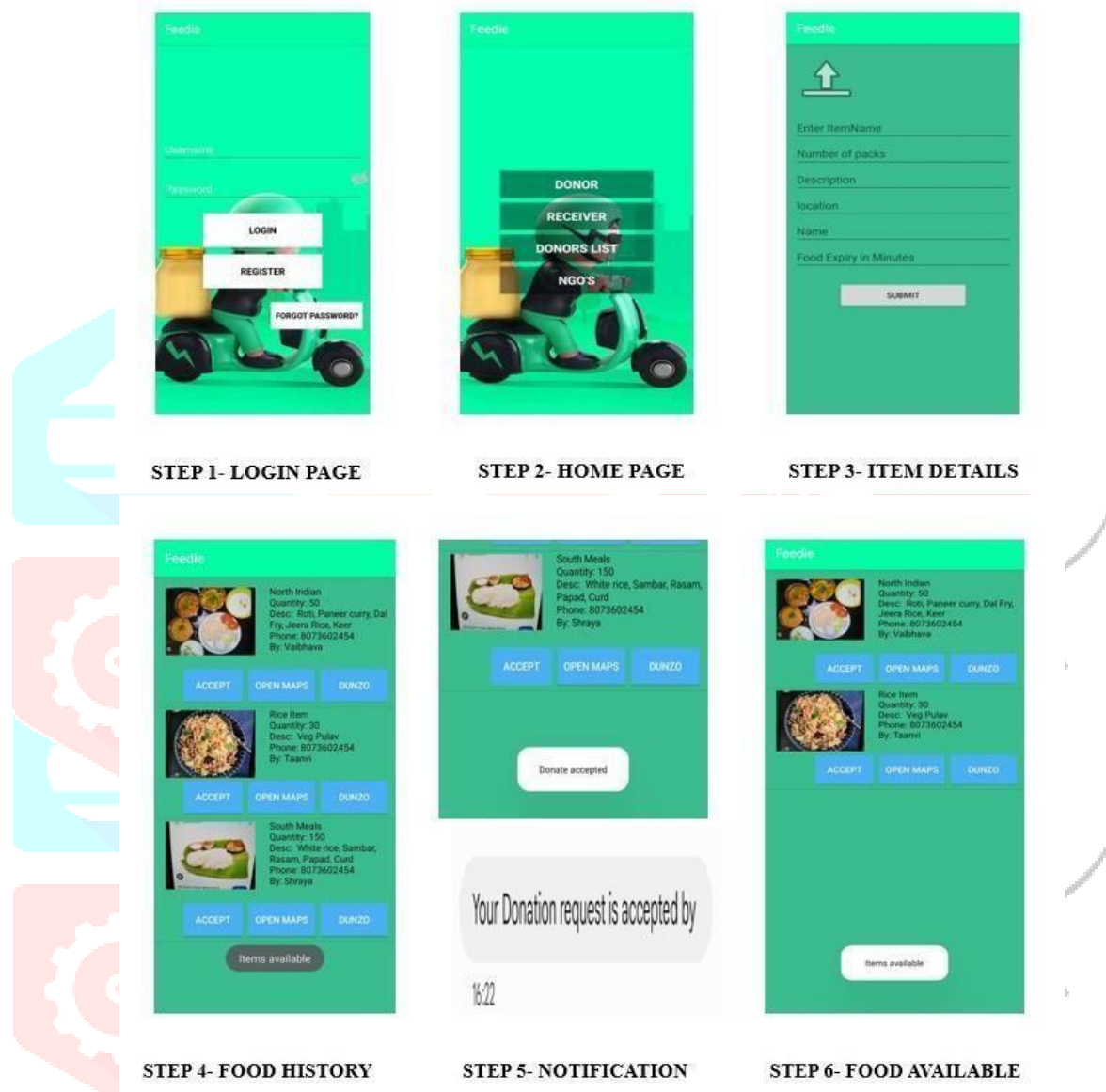


Fig 5: Results Snapshots

The results of a food donation Android application can vary depending on a range of factors, including the specific features and functionality of the application, the user base, and the efficiency of marketing and outreach efforts. However, in general, food donation Android applications have the capacity to make a noteworthy effect on reducing food waste as well as addressing food insecurity. Among the main benefits of food donation Android applications is the case that they can help to connect surplus food with people who are in need. By allowing businesses and individuals to donate surplus food items, these applications can aid in making sure that food is not wasted and is instead put to good use to feed those who are hungry. Additionally, by making things simpler for people individually and businesses to donate food, these applications can assist in increase that overall amount of nourishment donated to food banks and other charitable organizations. Another potential benefit of food donation Android applications is that they can aid in lowering food waste. By allowing businesses to sell or donate surplus food items rather than hurling them away, these applications can help to decrease food’s negative environmental effects by removing food waste from landfills.

VI. CONCLUSION

The project as an app for Food Donations is the system that deals with distributing the food from the restaurants or hotels by proper communication between the Receiver as well as the Donor by using this application for food donation. This project is successfully implemented with some features required for Donors and Receiver. The Donor can monitor the donation of food delivered by the Receiver and also the donor can give the feedback based on the delivery of food, time, Amount of food and Pictures related to delivery uploaded by the Receiver which will reflect as ranking for the Receiver. In addition, this application can be improved by adding the clothes or toys donation which can improve the utilization from the application.

- Food donation Android applications have the potential to create a significant impact on lowering the amount of food waste and addressing food insecurity.
- These applications allow users to donate surplus food items to individuals in need, and share surplus food items with others in their local community.
- Even if no task in the sphere of development is ever considered ideal, there may yet be room for even greater growth in this application.

- We acquired a great deal of expertise and learnt a great deal about the topic of development.
- We're hoping this will work out well for us.

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