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An Application to Track Food Wastage for Productive Usage

K. Srujan[1], B. Sathwika[2], D. Sahithi Reddy[3], V. Swarna[4], Dr. CH. Samson[5]

[1] [2] [3] BE Undergraduate, Maturi Venkata Subba Rao Engineering College

[4] Assistant Professor, Maturi Venkata Subba Rao Engineering College

[5] Professor, Maturi Venkata Subba Rao Engineering College

ABSTRACT:

People used to waste food all the time. Because of the enormous increase in food waste, there is an urgent need for charity contributions. This introduces "Helping Hands," a brand-new mobile app that offers a platform for donating extra food to anyone in need or charitable organizations. Our software is designed to avoid food insecurity, or a lack of access to nourishing, reasonably priced food. The donation may come from an individual or from a hotel or event space. The beneficiary of the donation may come from an orphanage, an elderly home, a shelter, etc. On the app, a new request for food donations will be created, and a message will be sent to the agent in charge of delivering food from the food donor to the food receiver. Here, every orphanage has an agent. If there is a need for food, the user searches for nearby food availability and can view the food's details. The agent then looks for food in the area and can obtain food from the donor to provide to the orphanage. This paper, which addresses food waste and food poverty, is a hugely effective social innovation.

Keywords: Charity contribution, Food insecurity, Orphanage, Food donor, Agent, Food waste

I. INTRODUCTION

Even more waste is generated in hotels, weddings, and festivals. Malnutrition, on the other hand, claims the lives of many youngsters every day. Numerous non- governmental organizations (NGOs) are working hard to ensure that such food reaches the needy and underprivileged. However, connecting individuals and non- governmental organizations is difficult. In India, almost 21 million TONNES of wheat are lost to waste, and 50% of all food produced worldwide experiences the same fate and never reaches those in need. Food waste is undoubtedly a major problem during weddings and banquets, but it is also a problem in restaurants and hotels, despite increased awareness in the past five years. However, there is no simple method for giving such food to the poor. Food waste hierarchy ranks treatment solutions for food waste from most favored to least preferred based on their detrimental effects on the environment when avoidance is not an option.

We dispose of almost 95% of the food we consume in landfills or burning facilities. A lot of people desire to donate goods to worthy causes. Additionally, there are numerous organizations that want to request various items from sources other than the available ones, such as food grains, utensils, etc.

One of the major problems that the modern world has yet to tackle is the issue of food waste. While people in some regions of the world discard the goods they no longer need or carelessly purchased, others go hungry and are unable to purchase any food. But society is not only affected by the issue of inequality. In addition to economic difficulties, food waste causes a variety of social and environmental issues. The remainder of this paper is organized as follows. In Section 2, a review of related work is provided. Section 3 deals with proposed system. Section 4 describes the Implementation Results and Conclusion and Future Scope is provided in Section 5.

II. RELATED WORK

The following systems have been studied and analysed:

'Aahar food donation app'

[1] a paper published in year 2021, an android smartphone app gives donors and seekers a platform to donate and collect food. Some of the features and limitations of that app, User sign-up and login. Purchase, accept, and donate facilities. Simple and clear user interface. OTP verification is time-consuming. The application is only able to offer facilities in one city. Before loading, the programme needs access to all permissions, including calls, media, and contacts.

'Food Waste Management App: Muskaan'

[2] a paper in year 2022, Muskaan, a food donating service system, attempts to feed the hungry by using food that would otherwise go to waste. The user would have the option to register as an NGO or restaurant employee with their own specialisations. Users can look up nearby eateries and dine cheaply

after business hours. The only users who can mention accessible food are those who have upgraded and validated their accounts. The donor will wait for the receiver's request before approving it.

'FOOD WASTAGE REDUCTION THROUGH DONATION' [3] paper was published in the year 2020. The user interface is very basic and android version they are using is outdated. The public will be able to upload any food-related information they'd like to contribute. The registered NGOs will be informed when the food is ready. No organisation may make a food request. Only NGOs who have registered may profit.

On top of a few minor technical issues, analysis has shown that the usability of these apps is significantly lower than average. Despite being a noble endeavour, the systems have received very little public attention, which makes them less popular.

In order for the systems to achieve their goals and assist as many people in need as possible, it is necessary for many individuals to band together to bring about this change and take an active role in it. However, studies on human psychology show that most people don't take active participation unless and until they perceive some outcome or benefits. Giving people incentives or rewards in exchange for their donations is therefore the ideal way to attract attention from the public and improve the usability of these programmes.

Limitations of space are the second area of focus for the system's poor usability. The usability of well-developed programmes is restricted to a few domains. In order to effectively manage the food distribution system and address the issue of food loss in India, a centralised system and competent administration are needed. The current systems were created with good intentions, but in order for people to actively participate, a system needs to be constructed with the aforementioned two factors in mind, with the corresponding features being added. Features should be implemented so that the system earns income on its own to aid those in need.

III. PROPOSED SYSTEM

By utilising the application in the suggested way, we are decreasing food waste. A hugely successful social development that addresses food waste and hunger is the role of food relocation. The administrator then gathers food from the donor and distributes it to neighbouring shelters or hungry people via their local specialist. We will lessen the issue of food waste by acquiring the food from the specialist by the administrator and providing the donor a ready letter.

The proposed app is android-based, developed on Android Studio using java and xml, incorporates site association, and will provide a stage for contributors and searchers after they successfully register in the system. In the odd event that a client want to give something, he or she should communicate something unique in the paper. This message will appear in the gifts page as a note to various customers. This message will be saved in the backend information base. Shelters that want to ensure the contributions can respond to the contributor and contact him or her when a note is received.

Android is the system that is being targeted because of its straightforward and user- friendly user interface. If a person wants to give something, he or she can post the meal specifics, including the number of members and the time spent preparing it, as well as photographs of the food that is accessible. The agent of a specific orphanage can get in touch with the nearby user after the donor uploads them and, if necessary, take the food from the donor. The donor updates the status of the food once it has been consumed. To display the donor's present location, all app permissions can be granted.

IV. IMPLEMENTATION RESULTS

Android apps are written in the Java programming language. The Android SDK tools compile your code—along with any data and resource files—into an APK: an Android package, which is an archive file with an .apk suffix. One APK file contains all the contents of an Android app and is the file that Android-powered devices use to install the app.

Once installed on a device, each Android app lives in its own security sandbox: The Android operating system is a multi-user Linux system in which each app is a different user. By default, the system assigns each app a unique Linux user ID (the ID is used only by the system and is unknown to the app). The system sets permissions for all the files in an app so that only the user ID assigned to that app can access them. Each process has its own virtual machine (VM), so an app's code runs in isolation from other apps.

Returning to our results. Below figures are the mobile app's user-friendly UI, suitable for anyone with even basic app-using skills.
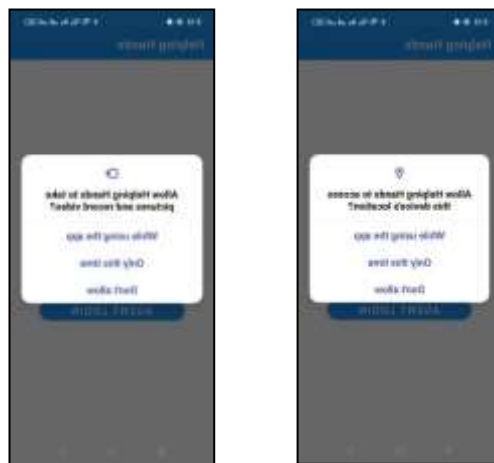
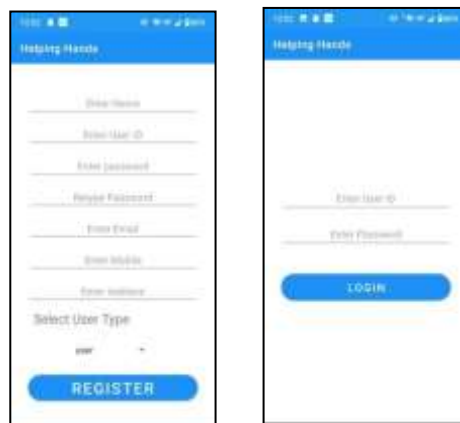*Fig: 1 Home Page*

Fig:2 Permissions for APP

Fig: 3 Registration & Login Pages

Fig: 4 Donor page

This Donor page will add the food and view the food of the respective donor and Update, delete the food details.

Fig: 5 Agent Page

This Agent page is responsible to view the nearby food, view the messages sent by the orphanage and send the messages to respective orphanage.

Fig: 6 Orphanage page

This Orphanage page is used to send the Requests or messages to their respective agents so that the agent can view that message and checks if any food is available or not. They can also view the messages.

Fig: 7 Individual user

This Individual page will just display nearby food by using Geographic location.

V. Conclusion & Future Scope

This paper presents, a new Internet-based application that provides a platform for leftover food to all needy people/ organizations. As mentioned, there is a lot of food wastage that occurs daily. Food loss and waste contribute to major problems such as food scarcity and environmental degradation. Instead of throwing away the same as trash, it can be used to feed homeless.

There will be an even distribution of food. The majority of those who are unable to consume food even once would benefit immensely from this Android software. Additionally, those who are unable to carve out time for social work can volunteer their time on this application and work towards becoming an agent.

The good initiative introduced through "Helping hands" can only be successful if it has huge active participation of people.

This application can be developed to a more standard form by adding more features helps the users to use it more efficiently. Features like adding google maps to find the location directly on maps and also avoiding the manual updating of status of the food by the donor and so on. There was no standard food information system on food packages that gives the user the information of both the name of the food, as well as its expiry date.

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