Innovating Philanthropy: Aahar Food Donation App

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Abstract*: Food waste is increasing dramatically, which increases the demand for donations to charities. In the current circumstances, food is generally wasted every day at a lot of restaurants, parties, get-togethers, college canteens, and many other social events. People personally contribute food by going to each organization many times in an effort to lessen the issues associated with food waste. While several platforms have attempted to facilitate food donations, the present framework offers a new web application that gives all underprivileged individuals and groups a place for recycling excess food. Food waste is a problem that affects the impoverished worldwide and can occur in a variety of settings, including households, schools, restaurants, grocery shops, manufacturing facilities, and even transit. This application uses mobile technology to enable the underprivileged to donate food from non-profit organizations to food waste that is useful for the underprivileged. To donate food through the mobile application, users only need to log in with their user ID and password on their smartphone, select the food item they need, fill out the application, and submit their request to the donor. The "Aahar Food Donation App" is an Android application that allows users to give food and prevent food waste. It makes it simple for those in need or the impoverished to contribute food using the app. The "Aahar Food Donation App" is an application designed to improve the present state of food donation by offering users rewards in exchange for their food contribution.*

Keywords: Food donation, technology in donation, app

I. INTRODUCTION

Food waste can be a sign of a number of financial issues in addition to cravings or contamination. Food has been lost as a result of the sole expectation of living in the face of quick changes in inclinations and lifestyle. We may make use of these things by donating them to various organizations—such as homeless shelters, assisted living facilities, and so forth—instead of throwing them away. The product is an android web application with a primary focus on charitable giving. The amount of food that many people throw away every day—from ruined foods to unfinished leftovers—is often underestimated. Food giving is a long-standing custom that is based on the values of compassion and communal support in many different cultures and communities. Evidence of systematic food distribution to the poor may be found in historical documents going all the way back to prehistoric civilizations. For instance, extra food from feasts and banquets was frequently given as charity to the less fortunate in ancient Rome. Religious organizations have been instrumental in institutionalizing and formalizing food giving traditions throughout history. Religious scriptures and teachings from several religions place a strong emphasis on giving to the poor and the needy. This discusses the idea of food donation and the network that facilitates it, as well as the impact it has on cities and civilizations. Food donation initiatives have frequently increased during times of crisis, such as wars, natural catastrophes, or economic downturns, when communities band together to help needy populations. During World War II, for example, there was widespread food rationing and group attempts to guarantee fair allocation of scarce resources. Traditional food donation programs are not without difficulties, despite the fact that they have provided many people in need with vital lifelines. The distribution process's inefficiency is one of the main problems. Conventional approaches frequently include manual

coordination between a number of parties, such as food banks, charities, donors, and recipients; this causes delays and imbalances in the flow of goods and services. The absence of accountability and transparency in conventional food donation schemes presents another difficulty. Donors might not always be able to see how their gifts are being used. Likewise, recipients could encounter obstacles in obtaining donated food because of administrative or logistical limitations. Moreover, conventional food donation programs could increase reliance instead of addressing the root causes of food poverty. Donating food on its own may offer short-term relief without promoting long-term solutions in the absence of complete support structures and activities targeted at alleviating poverty, unemployment, and inequality. These difficulties have led to a review of conventional food donation procedures in recent years, as well as an increase in interest in using technology to improve the effectiveness, transparency, and impact of food donation programs. The "Aahar Food Donation App" is a highly helpful software for controlling food waste, according to the report. Food waste is a troubling issue in a country with a large population like India, according to the "Aahar Food Donation App." Food waste may be a great resource for the underprivileged and destitute, as this software makes it simple to donate food waste. The app Waste Food is quite helpful in donating food for events, schools, hotels, and food waste. Food waste is a sign of several economic issues in addition to hunger or population growth. The gadget has proven to be a productive means of sending goods to charities and other organizations via the Internet. It emphasizes the potential for preventing food waste. It provides information about the motivation for this kind of application, elucidating the current mechanism of contributions and how the product works to benefit society. With the help of this framework, hotels and restaurants will have a common communication platform, nonprofits and people, wherein nonprofits and individuals may get in direct touch with eateries that have leftover food and provide reports. displaying the amount of food each restaurant serves and awarding reward points food giver, food recipient, and third the two main modules in this architecture are Party Provider and Admin. A food donor can be any organization, institution, or college that want to make a fresh food donation request and contribute food. By linking extra food with people and communities in need, food donation applications are essential in combating food insecurity. Millions of individuals throughout the world struggle to get a sufficient and nourishing diet because of socioeconomic issues including unemployment, poverty, and other issues. Food banks, shelters, and other groups that assist needy people can receive leftover food from contributors, such as eateries, grocery stores, and homes, through the usage of food donation applications. These applications contribute to the effective and transparent distribution of excess food, so reducing hunger and guaranteeing that nourishing meals are consumed by those who require them most.

II. LITERATURE REVIEW

With the objective of tackling food insecurity and cutting down on food waste, a number of food donation applications and platforms have emerged in recent years thanks to the widespread use of smartphones and internet access. These systems use technology to link food donors—restaurants, grocery stores, and private citizens—with charities and underprivileged people. A 2015 article titled "Food Donation Portal" gives a brief overview of food donation procedures and acts as a platform to link donors with non-governmental organizations. This medium makes it feasible to present an idea that will reduce food waste, maximize food waste, and enhance the food donation network while also having an influence on society. According to the 2016 study "Beyond Food Sharing: Promoting the Elimination of Food Waste With ICTs," preserving food security is crucial. Notable instances of current platforms and applications for food donation include:

Through the Food Rescue Hero app, volunteers may obtain excess food from grocery stores, restaurants, and other food establishments to donate to nearby groups that assist those who are food insecure. By registering, users may become "food rescue heroes" and get alerts when food donations are available nearby.

Too Good To Go: Initially introduced in Europe and currently accessible in many other nations, Too Good To Go enables customers to buy excess food from bakeries, cafés, and restaurants at a reduced cost before it is thrown away. In addition to saving food waste, this gives customers access to reasonably priced meals.

OLIO: OLIO is an app that allows users to share extra food with their neighbors and other members of the neighborhood. Users have the ability to display extra food products they have, including groceries or home-cooked meals, which can be claimed by others for free or at a minimal cost.

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Share The Meal: Created by the World Food Programme of the United Nations, this platform enables users to donate small amounts to feed hungry children worldwide. With the app, giving can be done directly and transparently, and users can see the results of their contributions in real time.

During the most recent financial crisis, a sizable portion of People have been experiencing food insecurity and poverty, particularly in areas that are developing. Despite awareness of and concern for the importance of food and the reduction of food waste and management of food excess, the contribution of ICTs to these efforts is yet unclear and inadequately documented. Under the existing system, any extra food that someone may have in their house or with potential would be wasted because it is highly unlikely to last long. If you have an abundance of food, share it with everyone. If they should seek shelter with the excess food, either as impoverished people or as individuals. Either they don't care about it or they don't have time. Thus, we have a financing proposal for more food for the underprivileged or those who are close to shelter. Technology's Effect on Increasing Transparency and Efficiency in Food Donation Procedures: Traditional food donation procedures have been completely transformed by technology, which offers numerous important advantages in terms of efficiency and transparency: Real-Time Coordination and Communication: Food donation applications make it easier for donors, receivers, and middlemen to communicate and coordinate in real-time, which streamlines the process of gathering, distributing, and redistributing food. This guarantees that excess food reaches those in need more promptly and effectively by reducing delays and mismatches in supply and demand. Enhanced Accountability and Traceability: By offering electronic records of donations, interactions, and distributes, technology makes it possible to increase accountability and traceability in food donation procedures. Donors are able to follow the path of their contributions from point of donation to point of consumption, guaranteeing accountability and transparency in the use of their resources. An online application called the Food Donation Portal Proposed Program gives all underprivileged individuals and organizations a place to donate food scraps. The product is perceived as a potent means of transferring goods to companies, etc. over the internet. A concerning problem in highly developed countries like India is food contamination.

At weddings, canteens, taverns, social and family gatherings, and other occasions, an excessive amount of food is thrown out. The plan will put them to use by donating these products to various organizations—orphanages, senior homes, etc.—instead of losing them. Some people and organizations like to donate goods to charities that support the underprivileged. Many organizations frequently have a tendency to ask for various things that they require, such clothes, food grains, books, cutlery, etc., The application for food donations acts as an interface. Between customers looking for a way to give without throwing away the extra food. It motivates us to Notifying local users about the available food information will enable them to give the excess food. The notice is demanded by the requested users. The machine distributes food items based on priority. Other requirements, including food products from disadvantaged organizations, are satisfied by the proposed application as it eliminates food waste. The present goal of the planned plan is to get rid of food waste, which is a major problem in India. The framework is necessary to improve and enhance the same system, which will raise the dependability and value of the program even more.

III. METHODOLOGY

After successfully logging into the system, the Android app Aahar allows NGOs and donors to come together to contribute and gather food. The three main parts of the system are admin, NGOs, and donors. The contributor fills out forms, logs in, and adds things to the donation request so that they may be viewed and donated to. The receiver performs functions including declaring donations, presenting desired things, and making requests. The manager will monitor and enhance the collection. Both the donor and the administration consider the recipient's status. The message will be kept in the backend file and the donor-donated products will be shown to other members as an alert on the donation tab. An automation comprising four modules is designed to account for the amount of food wasted. It aims to raise awareness by providing real-time data on food waste, storing the amount of food wasted daily in a database. The data is then presented in the form of graphs to motivate students to cut back on food waste. The weighing scale module weighs the food waste and uses the Wi-Fi dongle to transmit the information to the central data store. The automation components are linked to the central data store. The people counter module counts the number of individuals consuming food.

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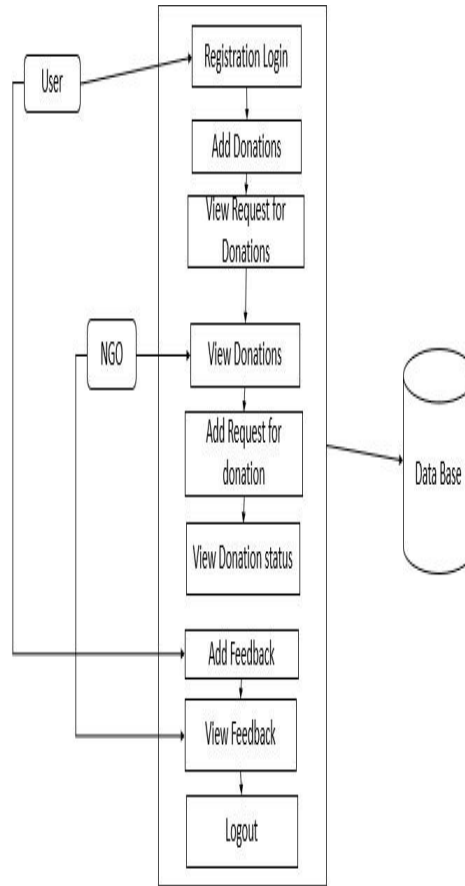**DOI: 10.48175/568**

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Fig i: System Architecture

Through the connection of food donors with hunger relief groups and those in need, the Aahar food donation app seeks to solve the problems of food waste and hunger. The app seeks to offer a venue where extra food from eateries, lodging facilities, gatherings, and private parties may be conveniently given to people experiencing food insecurity. The following might be among the particular goals of the Aahar food donation app:

1. Food Redistribution: To cut down on food waste, efficiently assist donors in redistributing extra food to groups or persons who can use it.
2. Hunger Relief: To reduce hunger and malnutrition, make sure wholesome meals are served to people and communities who are experiencing food insecurity.
3. Convenience and accessibility: Provide a platform that is easy to use so that food donors may communicate with one another.
4. Real-Time alerts: To guarantee prompt pickups, delivery, and availability of excess food, provide real-time alerts to food donors, hunger relief agencies, and receivers.
5. Social Impact: Increase public awareness of hunger-related issues and food waste, inspiring more people and organizations to donate food and lessen food insecurity.
6. Accountability and Transparency: Uphold accountability by monitoring and recording the whole food donation process, including the collection, delivery, and use of donated food.
7. Data Analysis and Insights: Gather and examine information on food donations, receivers, and effects. This information may be utilized to spot patterns, streamline processes, and reach well-informed conclusions that will increase the app's efficacy even more
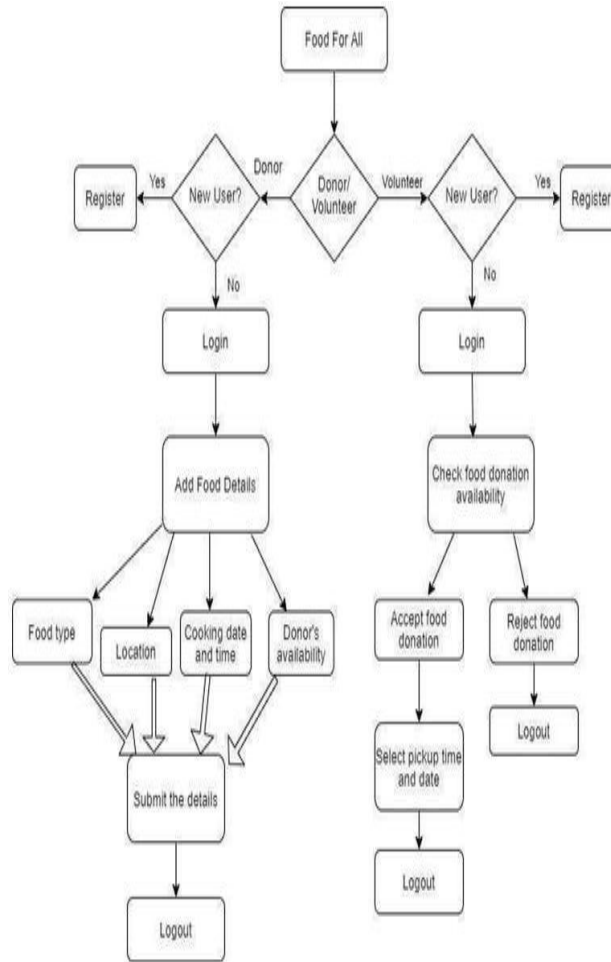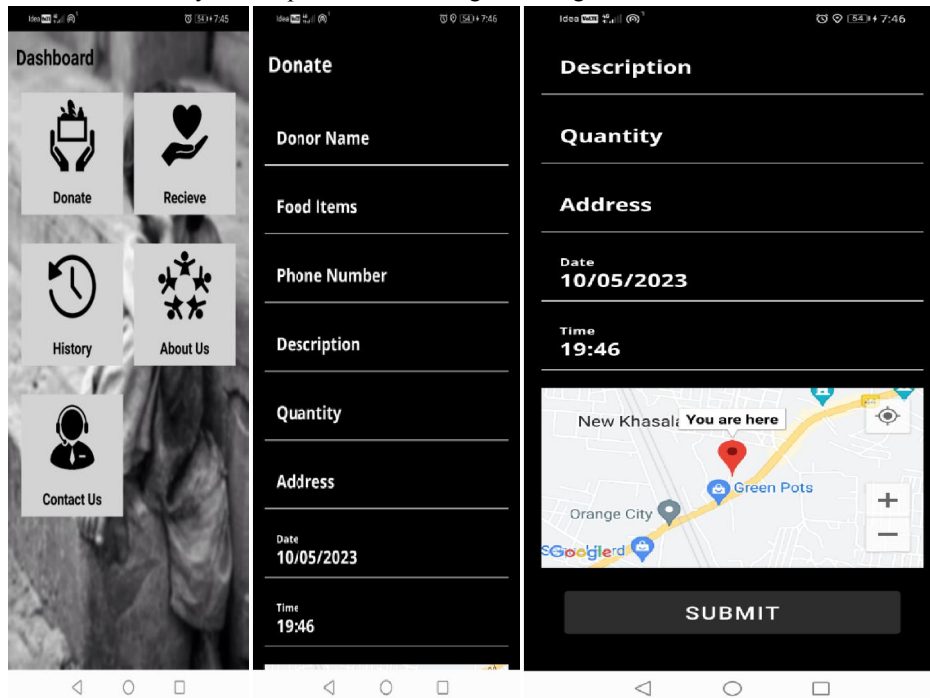
Fig ii: Flowchart of food donation app

There are two parts to this application: the NGOs module and the user module. After creating an account and entering their password, the user distributes the food that was wasted.This application uses mobile technology to reduce food waste and enable hostels to donate food to the underprivileged or needy. The poor can donate food through the application for mobile devices by simply logging in with their user ID and password on their smartphone, selecting the food they want to donate, and then the application will calculate how much food waste there isitem to complete in the app, submit a request to the (donor), and the donor will be able to supply the user's location's food. Once the user receives the food from the donor, the donor can send it to the registered address. At that point, the user can stop the program, delete the food item from the application, and log out of the donor's page. This is a highly practical and effective Android mobile application that was created using Java for Android smartphones. This program would continue to be profitable if it donated food to those in need, as the impoverished are notorious for squandering food. This program transfers food waste from one site to another so that we may give our food to those in need or the underprivileged. By utilizing this program in the suggested way, we are cutting down on food waste. Relocating food is a hugely beneficial societal development that addresses both the demand for food and food waste. At that moment, the administrator uses a local expert to pick up food from the donor and delivers it to the neighboring shelters or the underprivileged. We will lessen the issue with West food when the administrator gets the food from the specialist and sends the donor a prepared letter. In the unlikely event that a client wishes to contribute something, the proposed application, which is android-based and created with Java and XML on Android Studio, will offer a platform for contributors and searchers to express themselves in the document following their successful registration in the system.Apps for food donations enable people and groups
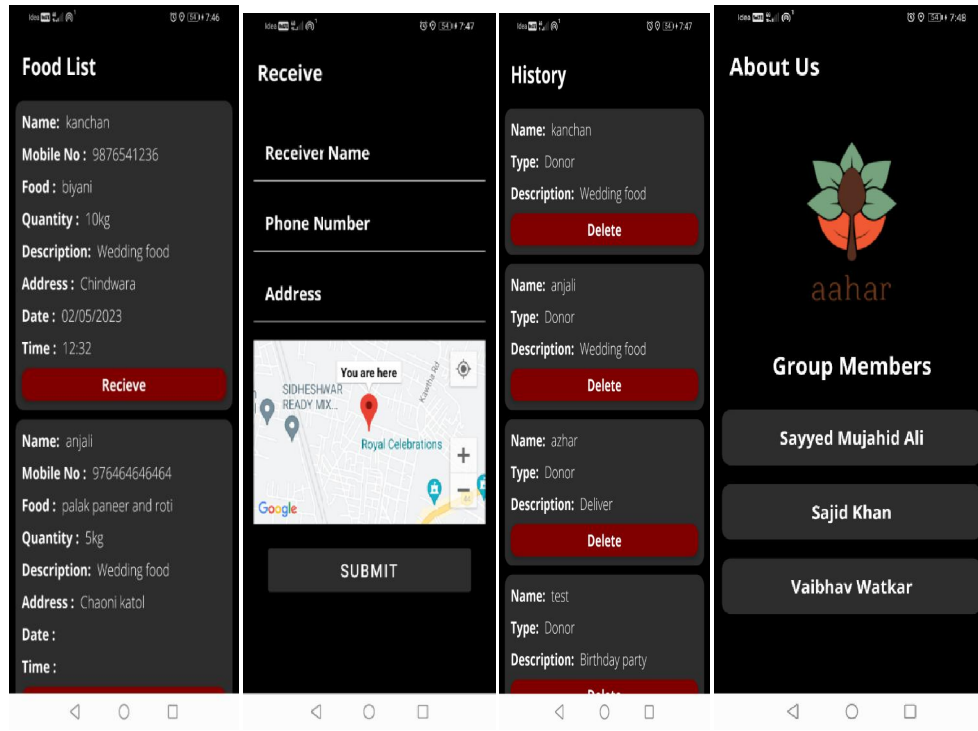
to take an active role in the fight against food insecurity and decrease food waste. These applications enhance the impact of collective action by democratizing access to food donation networks and offering chances for volunteer participation through interactive features, user-friendly interfaces, and volunteer engagement opportunities. Users may assist nonprofits pursuing goals of food security and sustainability, donate extra food, and donate their time or resources. This grassroots strategy promotes a feeling of collective ownership and solidarity within the community, propelling constructive social change both locally and globally. By urging people and companies to reconsider how they handle food surplus, food donation applications support the development of sustainable consumption and production methods. Rather than throwing away edible but unsold or unused food, contributors may utilize these applications to direct their excess funds toward humanitarian causes. This helps disadvantaged populations as well as promotes environmental stewardship and social responsibility. These applications contribute to the development of a more resilient and sustainable food system by making it simpler for donors to take part in food donation initiatives.

IV. RESULT

With the use of technology, Aahar, a trailblazing app for food donations, is redefining conventional approaches to food redistribution and minimizing food waste. Aahar's user-friendly design makes it easy for food givers and receivers to connect, making it possible for excess food to effectively reach people in need. Aahar makes sure that donations are distributed on time and maximizes the effect of charity endeavors by using geolocation-based matching and real-time alerts. Additionally, the app has a rating and feedback system that encourages user trust and accountability. Through the use of mobile technology, Aahar encourages sustainable purchasing habits, cultivates a culture of social responsibility, and gives communities the ability to take part in the battle against hunger
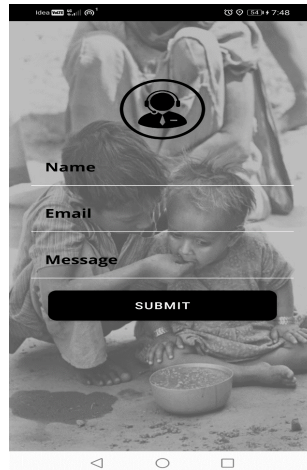

Dashboard Create Donor Request

View Donor   Request Lists,   Create Receiver Request ,   View History

V. CONCLUSION

In the field of food donation, Aahar is a shining example of innovation, providing a user-friendly platform that makes surplus food redistribution streamlined. Its open functioning, emphasis on community participation, and user-friendly features make it an effective tool for tackling the dual problems of food waste and food insecurity. Aahar has the power to revolutionize the management and distribution of excess food, resulting in a more just and sustainable food system that benefits all. This is possible as it continues to grow in scope and influence. The cutting-edge food donation software Aahar offers a number of intuitive features that make it easier for users to redistribute excess food. Donors may easily list extra food products, along with amounts and thorough descriptions, thanks to the user-friendly interface. By facilitating effective linkages between givers and receivers, Aahar's geolocation-based matching system maximizes

the distribution of charitable contributions to individuals in need. Real-time alerts also facilitate easy coordination and communication by informing users about available donations, pickup requests, and delivery updates.

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