

Food Waste Management & Donation App

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Abstract - Food wastage has increasingly become a major problem. There are restaurants and big events where tons waste excessive food. All over the world, enough food is produced to feed all citizens. But according to UNs hunger reports there are 811 million people still hungry. Poor people frequently face the hunger problem. The “Food Waste Management & Donation App” built to help the hungry people. This application will provide the leftover or excessive food to the needy people. This application contains two modules, admin module and user module. This application maintains the details of the restaurant. The main aim of the Food waste management app where NGO play the admin role and Donors will be users. Donors send the request to the NGO, NGO accepts the request and provides food to the needy.

Keywords: Donation App, NGO, UN Hunger.

they have to struggle for food. There are some social workers that work hard to reduce food wastage by collecting leftover food and distributing it to the hungry people. A plurality of food waste in India because of improper planning on quantity of food prepared and not having knowledge of exact people will join the events. As India is one of the populated countries, wasting food became a big issue. There are many NGO working to make sure that leftover food must reach the needy people. If a donor wants to donate leftover food but many times not everyone could connect to the NGO and fails to donate. However there is no straightforward way to reach the needy people. This application has features that help to connect with NGO to donors. In this proposed system, that will help to reduce food wastage by giving waste food to NGOs. Anyone who has excessive food can add requests to donate. NGOs will accept a request. The NGO Manager then goes through the request and assigns it to one of the NGO workers for takeaway particular food from a given place. The admin or NGO can track the history of donors. The main aim of the application is to help poor people to battle against hunger and malnutrition, to reduce food wastage and to make a healthy environment.

I. INTRODUCTION

Food wasting became a global problem. On the basis of a survey food and agriculture organisation (FAO) of the UN, it estimated that 40% of food production gets lost or wasted in India. There are major sources for cooked food waste places like, wedding events, restaurants, houses, hotels etc. On other hand lots of people facing poverty and not having enough food to live. Many of children die due to malnutrition and

II. LITERATURE SURVEY

[1] This project is used to manage wastage or excessive foods in an effective way. Everyday, many people are wasting lots of food. So the author came up with an idea to reduce that food wastage problem online. If one has leftover wasted food they enter their details regarding food quantity and their address in that application. Then the admin further work on the given details donor. The food donor has to create the account and whenever they find wastage food they can login and send a request to the admin. And the admin also maintains the history of the buyer (orphanage, poor people) details. After receiving the donation request admin view it and send the alert message, like to come to collect the food. The admin collects the food from donor through their agent then provides it to nearest poor, hungry people or orphanages. This project is leftover food distribution and it's a social innovation that tackles food waste and food poverty.

[2] Food losses have negative effects on the economy and pollute the environment. And it's not justifiable from an ethical point of view. On the Food input at each stage of the value added chain as the third largest rise of food waste. However many of the evaluations related with considerable uncertainty. Most of the waste is due to the damage associated with starch and vegetables are frequently wasted items. The main reasons for plate waste were 'too much of the portion given by the staff' and 'lack of appetite'. Sustainable measures need to be implemented to reduce food wastage and improve efficiency in the food service industry.

[3] This study sheds light on the damage done to the entire food chain and assesses its magnitude. Further, it identifies the causes of food spoilage and possible ways to prevent it. The results of the study indicate that approximately one third of the food produced for human consumption is lost or wasted globally, amounting to about 1.3 billion tons per year. Causes of food wastage and waste in low-income countries are mainly related to economic, managerial and technical limitations in harvesting techniques, storage and cooling facilities in difficult climates, infrastructure, packaging and marketing systems. Given that many minority farmers in developing countries live on the margins of food insecurity, reducing food losses can have an immediate and significant impact on their livelihoods.

[4] The sharp rise in food waste has led to the need for donations. In the current situation, food is often lost in numerous restaurants, parties, social gatherings, college canteens and many other social activities. People donate food by hand, visiting each organisation several times to reduce the problem of food waste. Where there are platforms that have tried to help people donate food, the current framework offers a new Internet-based application that provides a platform for all poor people/organisations to recycle extra food.

[5] Eliminating food waste by recycling food resources available in local communities is an important goal in our world today: leftovers that are becoming obsolete in restaurants, stores and food distribution centres; And no perishable items are used entirely in their intended period. This is especially significant in times of crisis, such as the Covid-19 epidemic.

[6] This report provides the latest estimates on the extent and value of food losses in the United States by the USDA's Economic Research Service (ERS).

Of the 430 billion pounds of food produced in 2010, approximately 31 percent or 133 billion pounds was not available for human consumption at the retail and consumer level. The report also provides a brief overview of the economic problems behind post-harvest food losses.

[7] The problem of global food wastage and waste has been given more attention recently and given a higher visibility. According to the FAO, approximately one-third of food produced for human consumption, approximately 1.3 billion tons annually is either lost or wasted globally, their reduction is now presented as necessary to improve food security and reduce the environmental footprint of the food system. The loss and wastage of food is a consequence of the way the food system works technically, culturally and economically. This report analyzes food waste and waste from a triple perspective: a systematic approach, a sustainability approach, an environmental, social and economic dimension of sustainability, and a food security and nutrition approach, looking at how food loss and waste are related. Dimensions of food security and nutrition

[8] One third of all food produced for human consumption is never eaten. It is widely accepted that food loss and food waste have a detrimental effect on the economy, climate and society, thus increasing social and educational interest in reducing food loss and food wastage. Literature research specifically targets human behaviour in the food system.

[9] One third of the food produced for human consumption is lost or wasted globally, amounting to about 1.3 billion tons per year. A renewed review of Global Food Loss and Waste (FLW) is presented, as well as related environmental, social and economic impacts, based on existing data and co-reviewed material. By providing insights into the key concepts surrounding FLW, this article highlights the scale of the problem globally and regionally. It also reflects on the key challenges to implementing strategies to reduce FLW and the consequences on policy making.

[10] Food waste and waste consists of the total food portions of plants and animals (food) that are produced and harvested for human consumption, but ultimately not used by humans. The term 'potential food loss and waste' has also been defined to include pre-harvest damage, such as pre-harvest pest and disease problems or other reasons that the crop may be left in the field and not harvested.

III. METHODOLOGY

EXISTING SYSTEM:

In the current system, if anyone has extra food for any work or in their house, it will be wasted because if they have plenty of food, there is no way to share it with anyone. They want to give extra food to any orphanage or poor people but they do not have time or they have no idea about it. So we've created an application to sponsor extra food for poor people or for a nearby orphanage. So far, individuals have visited each association several times and provided stuff.

- Restaurant and food donation details cannot reach users living locations.
- This causes a large amount wasted.
- The report should not be clear and concise
- The use of time to create a report or crossreference can be overwhelming
- Possibility of data redundancy or data omission.

PROPOSED SYSTEM

This proposed system is based on reducing food wastage using android application. This project on food redistribution is a hugely successful social innovation that addresses food waste and food poverty. NGOs collect food from donors through their nearest agent and then deliver it to nearby orphanages or the poor people. Minimize food wastage after receiving food from an NGO agent and NGO send the feedback message to the donor. The proposed application, based on Android, is developed on Android Studio using java and xml, requires an internet connection, and provides a platform for donors and seekers to successfully register in the system.

If the user wants to donate food, he can send a request in the application. This request will be shown to other users as a notification in the Donations tab. This request will be stored in the backend in the database. The user interface of this system will be simple and user friendly. To prevent a

major catastrophe that usually occurs in India. Also, the application will be more beneficial if the donor and the seeker are close to each other.

MODULES

Donor Module:

The donor module works as a client's side. In this module, the donor can send the request to the NGO for donating food. Here donors have to add details about food and location. Donors have to wait till NGO accept the request. The donor provides the information of exceeded food, location of availability and also views the receivers (orphanage) details and agent.

NGO Module:

The NGO module works as an admin module. In this module, receives the request sent by the donor and then sends the message to the nearby agent. The NGO maintains the orphanage details. As well as maintain the donor details. The NGO has authority to view the foods ready to be donated which are posted by donors, details about the food & location of food availability. NGO can accept the request and decline the request.

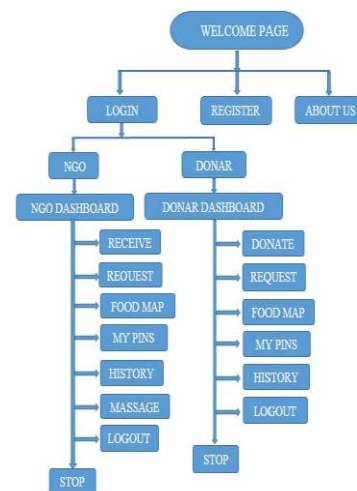


Fig. 3.1 System Block Diagram

The use case diagram shown below (figure use case diagram) describes two Panel, Donor and NGO. The Donor performs operations like Registration and Login into the System. He can also put up items for donation and view all donation requests (items

required by organisations). The Donor can view the Receiver's location. The NGO can also monitor and update the database. The NGO can view the Donor and Receivers location.

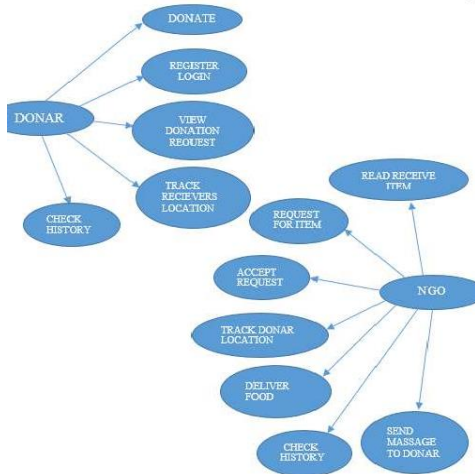
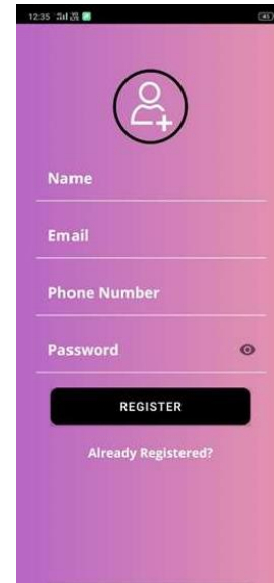


Fig. 3.2 Use Case Diagram

Figure 4.2: Login Page

For Login into the app the user must have a valid Email address and Password. If the Email address and password is correct then it will make the user login.



IV. RESULT

Figure 4.3: Registration

To use this app users need to first register through personal details and all details will be end to end secure.



Figure4.1 Home Page

Home page includes three categories: login, Register, About Us.

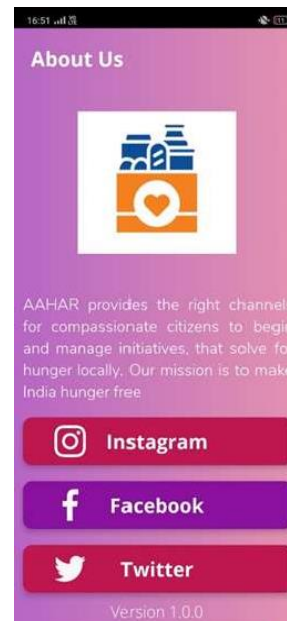


Fig 4.4 About Us

About us, give all the information regarding the Food Waste Management and Donatio app.



Figure 4.5: Main Page

Main page has two user modules: NGO andDONOR.

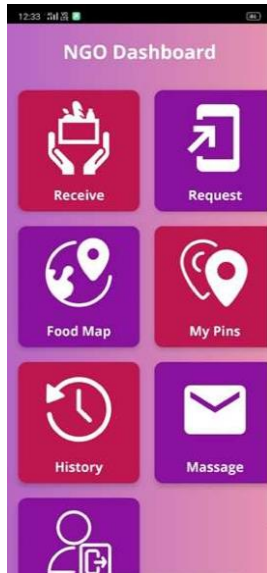
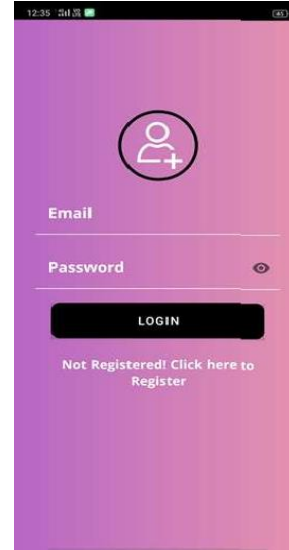


Figure 4.6:NGO Dashboard

NGO Dashboard Include, user service ortal like, f



Receive, Re quest, Food Map, Map pins, History, Massage and Logout.



Figure 4.7: DONAR Dashboard

DONOR Dashboard Include, user service portal like, Donate, Request, Food Map, My pins, History and Logout.

Conclusion:

lack of proper monitoring and evaluation, poor governance and lack of political will. Without making major policy changes and improving the effectiveness of its implementation, it is very easy for India to get food donations and donations in this regard. Avoid throwing away leftover food at parties, weddings and other such events. The main objective of the food donation project is to reduce food waste and satisfy hunger. We conclude that the creation of this application for efficient food conservation has facilitated the process for people who want to donate more food and accept that food.

V. REFERENCE

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