

Food2Needy – From Excess to Access

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Abstract: *In today's modern world humanity has come far ahead in terms of Technological development, yet there are millions of people all around the globe that suffer from serious hunger issues daily. Surveys have revealed that around 20 million people all over the world die each year because of hunger related issues, while at least 435 million people remain malnourished and thus suffer other complex health issues. The leading cause of this is the food being wasted by people that have direct access to it. In year 2023 Global Hunger Index, India ranks 111th out of 125 countries and has a score of 28.7 which is serious and concerning. This issue can be tackled by various methods and thus the idea of food donation through the medium of a dedicated website platform comes into play. This paper presents the review of the "Food2Needy – From Excess to Access" System*

Keywords: Food Waste Reduction, Food Donation, Online Platform, Web Application

I. INTRODUCTION

In countries like India 795 million, out of the world population of 7.6 billion people, don't have enough food to lead a healthy or they're undernourished. That's roughly one out of nine people on earth. The reasons can be; originally, that there's a space in the food produced worldwide or second, there's massive food destruction miracle being. Looking further into these reasons, moment the world is yielding one and half times further for an individual, roughly that's enough to feed close to 10 billion people. Despite this massive number, people across the globe do n't have sufficient food, to conclude we can say that the food produced for the consumption of people is being designedly or unintentionally wasted. Food waste is one of the largest issues of global scale. According to the Food and Agriculture Organization (FAO) of the United Nations, roughly one- third of all the food produced worldwide each time, for mortal consumptions is either lost or wasted. Every piece of food wasted is an occasion lost to ameliorate world hunger and global food security. To define food waste, it means food inventories (grains, vegetables, flesh, & meat) or drinks which was destined to feed people now lies in tips as scrap despite it being fit for mortal consumption. The food thrown is either putrefied or expired primarily due to profitable gesture, poor stock operation and neglect. This is passing is developed, developing and underdeveloped countries with each's donation advanced than the other.

II. MOTIVATION

The motivation behind tackling the dual challenges of food waste and hunger through initiatives like Food2Needy is deeply rooted in our collective responsibility to create a more equitable and sustainable world. At its core, this motivation stems from a profound understanding of the impact these issues have on individuals, communities, and the planet. The stark reality of hunger is an affront to our shared humanity. Millions of people go to bed hungry every night, facing the harsh consequences of a broken food distribution system. The motivation to address this issue is grounded in the fundamental belief that access to nutritious food is a basic human right. By channeling surplus resources to those in need, we contribute to the alleviation of suffering and ensure that everyone has the opportunity for a healthy and dignified life.

The scale of food waste contributes significantly to environmental degradation. As organic waste decomposes in landfills, it releases harmful greenhouse gases, exacerbating climate change. Motivated by a commitment to environmental stewardship, initiatives like Food2Needy seek to reduce the carbon footprint associated with wasted food. By redirecting surplus food to those who can use it, we actively participate in the global effort to mitigate environmental impact and build a more sustainable future. The motivation to address food waste and hunger extends to

the grassroots level. Food2Needy emphasizes community engagement and empowerment. When individuals, businesses, and organizations come together to share resources and support one another, it creates a sense of solidarity. By actively involving communities in the solution, we foster a culture of compassion and shared responsibility, reinforcing the idea that positive change starts at the local level. The motivation behind initiatives like Food2Needy transcends borders. In a world where interconnectedness defines our existence, addressing global issues requires collaborative efforts. By leveraging technology to connect surplus food providers with those in need, we contribute to a collective movement that recognizes the interdependence of nations. The motivation lies in creating a ripple effect of positive change that extends far beyond individual actions.

III. OBJECTIVES

- Provide an overview of Global Food Wastage.
- Understand the Importance of Food Donation.
- Increase the number of people Donating Food to needy people.
- Reduction of food wastage through the means of an online platform.
- Developing an online web application to spread awareness about food wastage and prevent further wastage.
- Creating a healthy community of people that come together in order to fight the global problem of Hunger.

IV. SYSTEM ARCHITECTURE

4.1 System Architecture

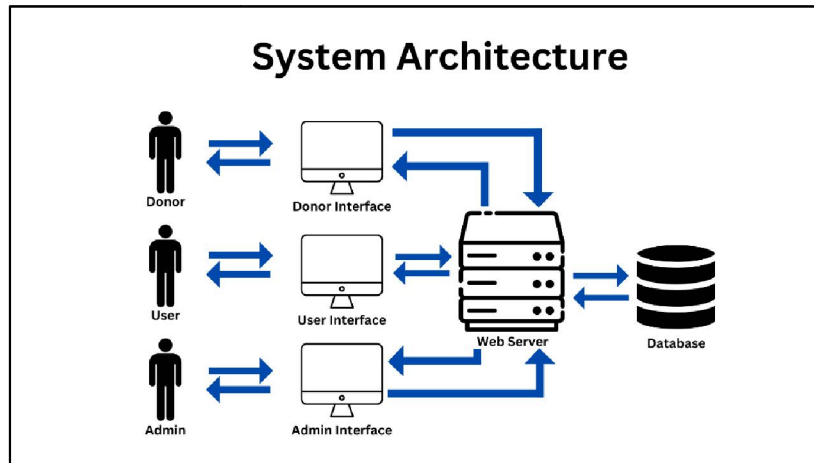


Figure 4.1.1: System Architecture

4.2 Data Flow Diagrams

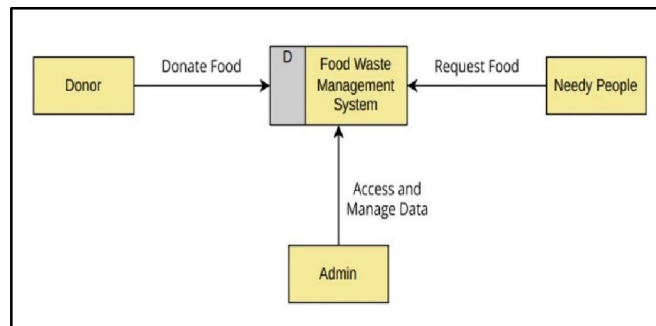


FIGURE 4.2.1:0-level Data Flow Diagram

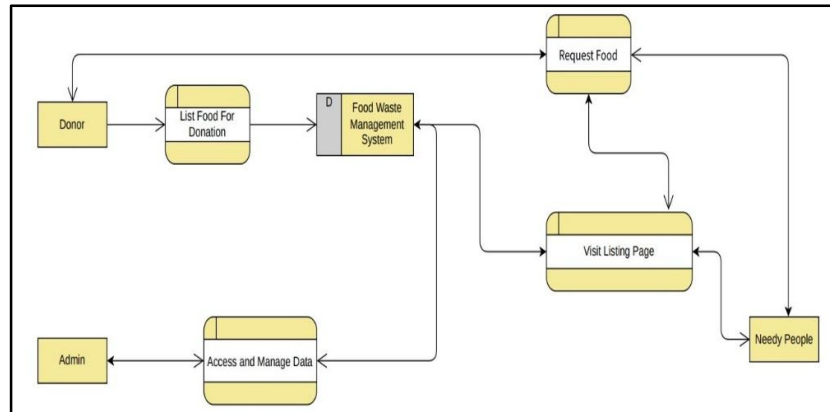


Figure 4.2.1: 1-level Data Flow Diagram

4.3 Working

The system has 3 major modules i.e., **User**, **Donor** and **Admin**. The user is a simple person that just wants to request food from the available food listings and does not need an account in the database in order to request food from the platform, the donor is a person who has registered and verified themselves as the donor and are willing to donate the extra food to needy people i.e., the users, the admin is a special person that can control, verify and see all the food listings, the history, management of the web-application to enable/disable specific areas of the cities. The admin can also see the reviews of the users for the donors and can ban the donor if the reviews are negative. The admin can also control many other features of the website by using the specially created admin panel. It is the job of the admin to keep track of the activity on the web-application and thus ensure the quality and safety of the food being donated on the platform.

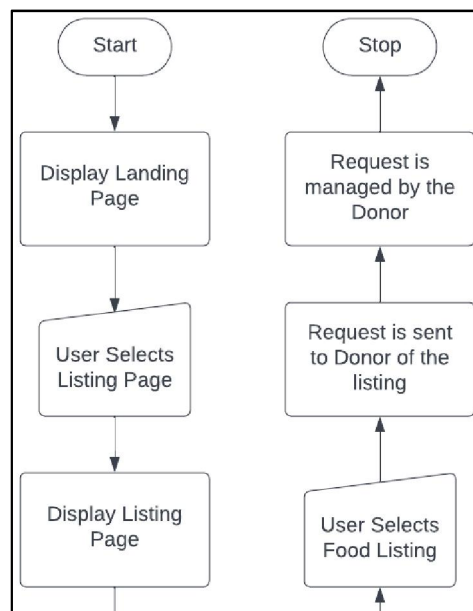


Figure 4.3.1:Flowchart for User End Food Request Procedure

When the user i.e., the person wanting to request food from the donor through the means of the web application first opens the website they land on the landing page of the application which is displayed by the system.

The user can then navigate using the user interface in front of them. If the user wants to view the available food around them, they can open the food listings page and see the listed food options. The user can then click on a specific food

listing to view more details and if they like it, they can send a request for the specific listing by entering their basic details such as name, phone number, address, etc. This request with the users' entered details will then be sent to the corresponding donor where the donor can review all details and thus make a decision if they want to approve the request or reject it. If the Donor approves the request the user will be notified through the notification panel of the website, they can then collect their food as per the details mentioned by the donor in the food listing.

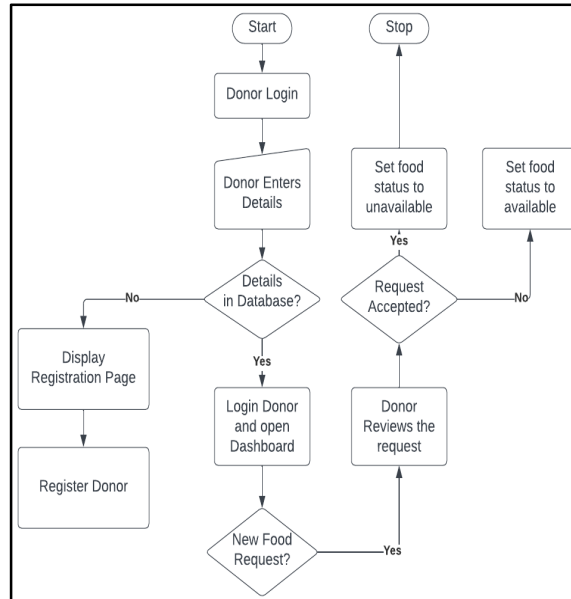


Figure 4.3.2:Flowchart for Donor End Food Request Procedure

A similar structure is followed for the Donor as well, the donor must have a valid account in the database in order to be able to donate food. Any person can easily become a donor on the web-application by following a very simple process as follows, open the login as donor page of the application, click on Register as Donor Button to open the registration menu. The person can then fill in their basic details such as name, address, id proof, etc in order to register themselves on the website database as a donor. Once someone has registered as a donor, they can start donating food using the User Interface designed by the developers in order to help the needy people around them and also reduce the overall food wastage generated.

V. CONCLUSION

The "Food2Needy – From Excess to Access" project provides a comprehensive description of the setup of a website that benefits NGOs and Donors alike. This website assists in gathering donated food leftovers and surplus and helps distribute it to those in need. This web-based application retrieves data from the database correctly and responds to users. The website also spreads awareness about the global food wastage and gives solutions to the common man to reduce food wastage around them.

VI. ACKNOWLEDGEMENT

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