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Food Waste Management

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Abstract: *The paper represents the website to reduce the food wastage by providing that too those who are in need. In today's world people are wasting more food than consuming, which is a huge problem. India ranks 2nd in food wasting, about 68.8 million tons of food is wasted per year. This proposal is to overcome the food wastage problem. It will work as request and response from Restaurants and NGOs. The quantity and lifetime of the food should be mentioned by the restaurants. NGOs should collect the leftovers from Restaurants before the lifetime of food and distribute among those in need. And the restaurants can post the food donated details..*

Keywords: *NGO: Non-Government Official.*

I. INTRODUCTION

In the country where the commercial status has reached in a stage that tons of available edible food is heaved away as waste in every stage of the market. Food wastage is estimated 25% of the available amount of succulent food. The food is important energy demanding product group and resource. Every restaurant has perfectly good food that they cannot sell at the end of their day. Large amount of these food goes wasted and is thrown away in the dumping zone. How can one efficiently use this food to kill someone's hunger? What if there is a platform which connects restaurants to institutes such as NGO's. With this platform not only, NGO's can serve more hungry people additionally restaurants will also have a meaningful channel to distribute or dispose of the surplus food. It's a win-win situation where business can contribute to a sustainable environment in a meaningful way at the same time charities help fight food poverty. For this to happen both NGO's and restaurants will have to register with the platform and exchange information regarding how much food is remaining and NGO's can collect those food from the nearest restaurants.

NGOs work as food collectors, collect food and redistribute food from donor to community centers (needy people), considering the types and sources of food two main outputs:

- 1) The approach makes connection of Donors and NGO that will help them to start a program for the contraction of food waste and the improvement of unsold food.
- 2) Approach enables the matching of Donor and NGO of leftover foodstuff through internet.

A. System Analysis: Existing System

Most sustenance banks sort and reconstruct both gave and bought food utilizing a focal warehousing framework. Generally, sustenance banks accomplice with the food business to reconstruct durable leftover food itemization with the end goal of giving beneficent administration offices, for example, food storerooms with fundamental fixings and sustenance choices. Sustenance banks likewise rely on financial gifts to buy more food with an end goal to stuff the mess between sustenance gifts and interest. The significant sustenance bank procures food through an option technique, too. While Community Food Share aides diminish the measure of sustenance going to waste, palatable food still gets left behind or lost experiencing significant change. Group Food Share can and can't take restrain the food bank's capacity to gather everything produced by its contributors.

B. Proposed System

Source decrease alludes to diminishing the measure of food waste created before it happens while sustenance recuperation shows the preoccupation of produced sustenance squander far from landfills. This proposes the most favored strategy for redirection as sustaining hungry individuals, or as it were, sustenance recuperation through gifts. The restaurants, marriages, parties etc. when have the remained or leftover food can donate it to the needy, poor people to satisfy their hunger. This approach connects these NGO and Donor with a specific end goal to provide the sustenance to the poor individuals. Contributors utilizing this approach have contact with NGO of adjacent and giving about all data of sustenance waste like quantity of food, type of food, serving time (in which food ought to be taken by NGO to convey to penniless people). The Donor can track the person sent through NGO through the given details until he/she picks up the food.

The approach unite these two, in such a path, to the point that these NGOs can persuade the "sustenance to be squandered" without bother, and the inns/eateries/party-lobbies discover these food seekers with no additional exertion then it serves a more prominent reason and that will be an enormous administration to mankind. The restaurants can post about the donated details feed post. All the registered NGO's Can see the Donation Pickup request and accept if nearby available.

II. LITERATURE SURVEY

A. *Vikram, Anirudh, Bhuvaneshwaran, Praveenkumar and Suganthkumar, "A Survey on Food Waste Management System", 2021.*

Food loss or food waste is the food that is not eaten by the consumer. By properly analyze and manage the food waste makes our world to economically and environmentally healthy and make the resources available for the future generations. Everyday many students in the college wasting lots of foods. Its an initiative to develop a web application for college used to keep track and analyze the food waste and to take a better decision by knowing what went wrong and to take the essential steps to avoid the food wastage.(1)

B. *Bagherzadeh M, Inamura M, Jeong H, "Foodwaste along the food chain", 2014.*

Food waste and loss are sometimes classified into two broad categories – avoidable and unavoidable. For industry, avoidable food waste includes damaged stocks and products that have not been used. Food waste occurs for a number of reasons, including over purchasing, poor preparation, and inadequate storage, and excessive serving sizes. While avoidable food waste could be prevented (for example through better planning), unavoidable food waste consists of unsellable or inedible food. Available technology and economic efficiency also contribute to determine the distinction between avoidable and unavoidable food waste.(2)

C. *Davis C, "Food recovery through donations as a response to food waste", 2014.*

In this work, A case study of two grocery stores participating in food recovery program in Boulder. University of Colorado, Boulder, CU Scholar. In other words, food waste represents any food that gets produced for human consumption but goes uneaten. With nearly half of all food available for consumption in the INDIA getting thrown out each year, the issue poses serious environmental, social, and financial implications. From farming to disposal, food waste emerges due to inefficient practices along the food lifecycle that misuse not only the nutritional and monetary values of the final product but also the various inputs of each step, such as energy and freshwater, while the main disposal practice of landfilling contributes to environmental degradation.(3)

D. *Nolan D, "Research for possible establishment of a food bank in Donegal", 2014.*

Food wastage is one of the major issues that need to draw the attention of society as this issue requires proper planning and steps to manage its consequences. Waste food can be managed based upon its quality. If the food is safe enough to consume then it can be donated to the NGOs which would further be donated to various hunger zones.(4)

III. METHODOLOGY

This system reduces restaurant, functions food wastage by giving leftover food to NGOs. NGOs will raise a request, in case of any leftover food restaurants have. This request is sent to the restaurant manager of that particular restaurant. The NGO Manager then approves the request and assigns it to one of the NGO employees for takeaway and responses to the restaurant. The restaurant manager can track the person sent through NGO by given information through NGO until he picks up the food. The leftover food at the restaurant can be given to NGOs at the end of the day.

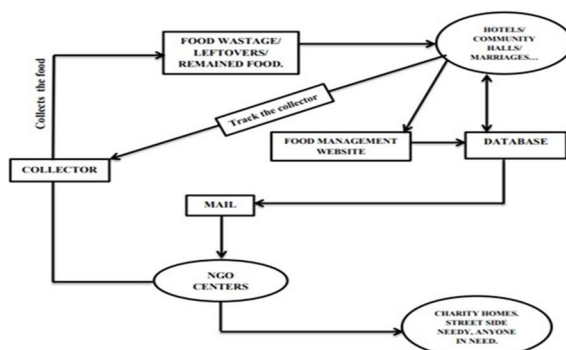
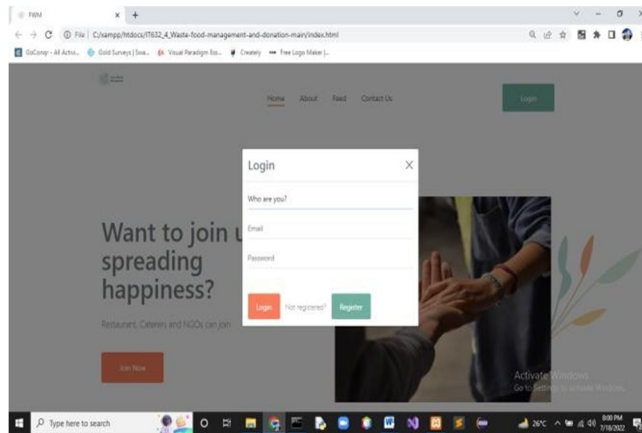
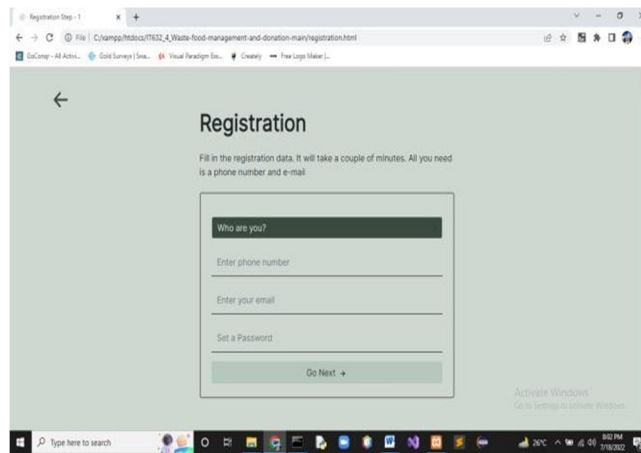


Figure. 3.1: Data Flow Diagram

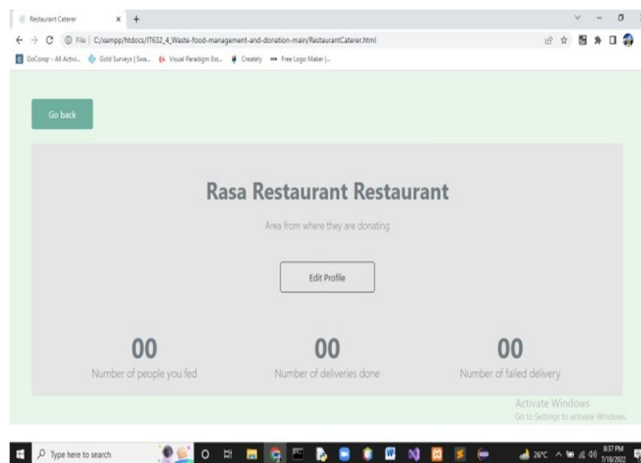
IV. IMPLEMENTATION AND RESULT



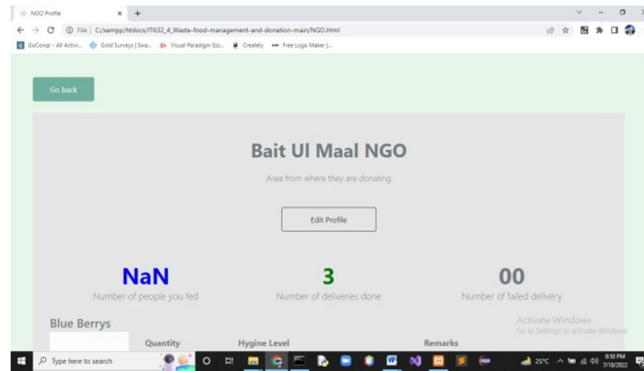
Screenshot1: Home Page & Login Page



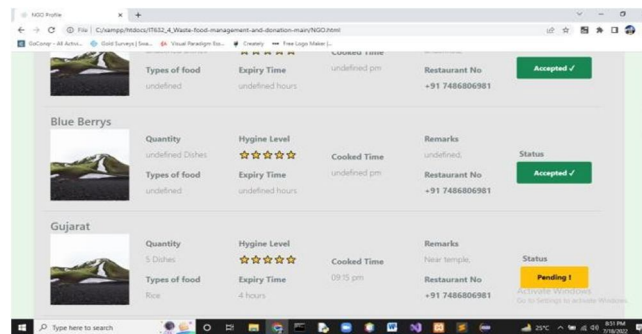
Screenshot2: Registration Page



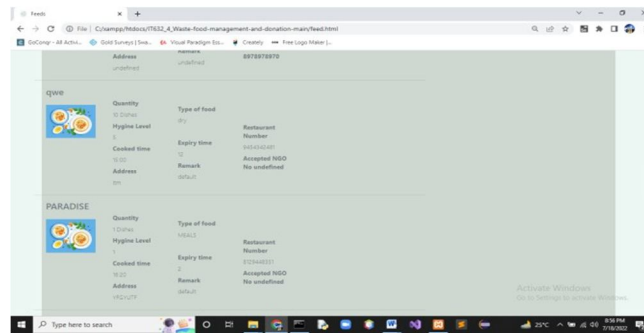
Screenshot3: Restaurant Profile



Screenshot4: NGO Profile



Screenshot5: NGO inbox



Screenshot6: Restaurant post of deliveries

V. SYSTEM REQUIREMENTS

A. Hardware Requirements

- 1) System: Pentium IV 2.4 GHz.
- 2) Hard Disk: 100 GB.
- 3) Monitor: 15 VGA Color.
- 4) RAM: 1 GB.

B. Software Requirements

- 1) Operating system : Windows XP/7/10
- 2) Coding Language: Html, JavaScript, CSS
- 3) Server: XAMPP
- 4) Database: Firebase Database



VI. CONCLUSION

The sustenance approach serves to stay away from crevice between the Ngo and Donor. The approach serves to give the sustenance waste to the penniless individuals who are battling for food. The approach unite these two, in such a route, to the point that these NGOs can persuade the "food to be squandered" without bother, and the inns/eateries/party-lobbies discover these sustenance seekers with no additional exertion then it will serve a more noteworthy cause and will be an enormous administration to mankind. This approach serves to upgrade open picture of inns, eateries who are giving sustenance and it serves to spare cash. It decrease the over buying of food and diminish ecological effects. On the distance it helps penniless individuals to get sustenance with a specific end goal to survive life.

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