**SYNOPSIS**

**Report on**

### ZERO HUNGER

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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 todays 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 works 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..

To develop a Web Based application that reduces the amount of food wastage produced in restaurants, functions and mess. The current system only provides information on amount of food wasted and does not provide an interface to donate and provide data analysis. Using data analysis, to visualize the impact. Donating the excess food that consists of the following details, first, providing the location of where excess food is available & details of the food quantity available. Immediate Alerts to nearby NGO's, orphanage, volunteers to collect them. According to a recent survey, 1.3 billion tons of food is being wasted each year and one third of food consumed are leftover. To produce a system that reduces the amount of food being wasted the focus of the project is to develop a web application that uses data analysis to visualize the impact of excess food, thus reducing food wastage. It also enables to give away the excess food produced by notifying the nearby users (NGO’s, Volunteers) with details of the food available.

**keywords:** Web Based Application, Food Donation, Excess Food, NGO, Analysis

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

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.

Approach enables the matching of Donor and NGO of leftover foodstuff through internet.

# Literature Review

Food waste is an important concern because it threatens the environment and sustainability. In fact, it is a serious concern in the hospitality and tourism domain (Okumus et al., 2020). Close to 1.3 billion tonnes of edible food is wasted annually, leading to severe financial, environmental and health outcomes (Gustavsson, 2011). Past research has identified several adverse outcomes of food waste, such as threats to food security (Wang et al., 2018), climate change and greenhouse gas emissions (Kallbekken and Sælen, 2013; Katajajuuri et al., 2014) and monetary loss (Hennchen, 2019). For instance, the annual emissions because of food waste in Finland constitute more than 1% of the country’s yearly greenhouse gas emissions (Katajajuuri et al., 2014). Similarly, scientists found the ecological impact of food waste in hotels, cafés and restaurants nearly twice the size of the arable land in Lhasa (Wang et al., 2018). Notably, sustainability has come under intense focus in the hospitality industry in the wake of the COVID-19 pandemic (Jones and Comfort, 2020). In addition, studies have underscored the nutritional loss associated with food waste. For instance, Blondin et al. (2017) revealed that, in the USA, fluid milk waste results in 27% and 41% losses, respectively, of the vitamin D and calcium required under school breakfast programme meals. Consequently, scholars argue that reducing food waste is critical from financial (e.g. food cost) and non-financial (e.g. sustainability) standpoints (Okumus, 2019). In fact, research reports suggest that, by saving one-fourth of the food being wasted, we can feed 870 million hungry people (Khadka, 2017). Similarly, the sustainable development goals of the United Nations (UN) have also emphasized responsible production and consumption, underscoring the importance of mitigating food waste (Gustavsson, 2011). Regarding food waste generation, prior studies have indicated that a large amount of food waste is generated at the consumption stage, which includes both out-of-home and at-home dining (Martin-Rios et al., 2018). Households represent at-home dining, whereas the food service sector represents out-of-home dining. The food service sector includes both non-commercial and commercial establishments (Betz et al., 2015), such as restaurants, hotels, health-care companies, educational institutions and staff catering. An important subdomain where out-of-home dining takes place is food service establishments at educational institutions. In this context, prior studies have observed that school cafeterias are a major source of unconsumed food (Smith and CunninghamSabo, 2014; Adams et al., 2016). For instance, in the National School Lunch Program (NSLP) in the USA, more than 30% of the food served is wasted (Byker Shanks et al., 2017). In fact, food waste in educational settings is a significant issue (Yui and Biltekoff, 2020). What is most worrying in this context is that, in spite of the acknowledgement of such a high quantity of waste generated, the authorities in educational institutions, food service managers in schools and university food service companies’ staff are not intent on reducing food waste (Wilkie et al., 2015). Furthermore, the academic research in this area is limited, with most studies in educational settings (particularly in the context of schools) skewed towards using food waste as a measure to estimate the amount of nutrients lost. Food waste does not hold a central place in the existing debate. Other studies have focused on aspects such as the composition of waste generated in the food service operations in schools (Hollingsworth et al., 1995) and the monetary implications of various waste disposal strategies.

# Project Objective

All the information of the students can be managed as the main objective of a student

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* Environmental Impact: Food waste has a substantial environmental impact. When food is wasted, all the resources that went into producing it, such as water, energy, and land, are also wasted.
* Resource Conservation: Reducing food waste helps conserve natural resources.
* Social and Humanitarian Concerns: While food is wasted, millions of people around the world suffer from hunger and malnutrition. A
* Economic Impact: Food waste represents a significant loss of economic value. For businesses, reducing food waste can lead to cost savings and increased profitability.
* Sustainable Food Systems: Encouraging responsible food consumption and production is a crucial aspect of building sustainable food systems.
* Stakeholder Expectations: In recent years, stakeholders, including investors, consumers, and employees, have become more concern about company’s environmental and social impact.

# Research Methodology

1. **Research Design:**

Experimental Development:

This research employs an experimental development approach to design, develop, and implement the Student Management System. The project involves iterative phases of design, coding, testing, and refinement.

1. **Data Collection:**

User Data:

Data collection involves gathering engage with stakeholders, such as students, teachers

And administrators, to gather detailed information.

1. **Technology Stack:**

Front-end Development:

The system's user interface is developed using HTML, CSS.

Back-end Development:

The system user’s interface is developed using PHP.

1. **System Architecture:**

Front-end: The HTML, CSS-based front-end will communicate with the back end for user interactions and data handling.

Back-end: The back end will manage user data with help of PHP.

1. **Development Phases:**

Phase 1: Requirements Gathering: In this phase, we identify user requirements, including customization options and desired features.

Phase 2: System Design: We design the system architecture, database structure, and user interfaces based on gathered requirements.

Phase 3: Development: Development includes front-end development using HTML, CSS.

Phase 4: Testing: Rigorous testing is conducted to ensure system functionality.

Phase 5: User Feedback and Iteration: After an initial release, user feedback is gathered and used to iterate and improve the system.

# Project Outcome

1) Food can be reused; it will reduce the Food resources and it will be saved for future generations.

2) The wasted food also used for Bio-degradable fertilization in Agriculture.

3) By this process, we will help for Nation’s growth.

4) Also, it will avoid poverty in Orphanage.

5) Food waste can be reduced..

# Proposed time duration

|  |  |
| --- | --- |
| **Week Number** | **Tasks** |
| **Week 1-2:**  **Project Initiation and Planning** | 1. Define project objectives and goals. 2. Assemble the project team. 3. Establish communication and collaboration tools. 4. Identify user requirements and technical specifications. |
| **Week 3-4:**  **System Design and Front-end Development** | 1. Develop the system architecture. 2. Design the database structure. 3. Build the user interface using HTML, CSS |
| **Week 5-6:**  Back-end and Database | 1. Database connection using PHP 2. Ensure seamless data flow between the front-end and back-end. 3. Create database of students and admin. |
| **Week 7-8:**  **Testing, Refinement, and Deployment** | 1. Conduct thorough system testing. 2. Gather initial user feedback. 3. Identify and address issues and bugs. 4. Continue testing and refinement based on user feedback. 5. Finalize the project codebase and configurations. 6. Prepare a presentation and demonstration for the project's final submission. |

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