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# Food Wastage Management System

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**ABSTRACT:** The project entitled as “**FOOD WASTAGE MANAGEMENT AND CONTROL SYSTEM**” developed to prevent food insecurity, a lack of access to healthy and affordable food. Wasting food is a common problem in our society. Food waste management is crucial since it can improve our environmental and economic sustainability. The proposed identified the use of Websites to reduce food wastage that allows restaurants and hotels to donate and share their foods and leftovers with Orphanage. In this website users also donate their leftover foods to the Orphanage during the occasion of Marriage, Engagement, and Parties etc. This website enables hotels and users to register into the system using their details like hotel name, mobile number, location etc. The hotels and users post their leftover food details like how many members can eat the food and what time it will be available etc. The Orphanage also requests the food to the available users and hotels. Once the hotel or user gets the request they may reject or accept to deliver the food to the orphanage. This way the website helps the needy and averts food wastage and hunger.

**KEYWORDS:** Food wastage management, Website, Food donation, Orphanage

## I. INTRODUCTION

Food Wastage Management System is a web-based technology which manages foods. This website provides an interface between food donor and food require. In this website food donors enter their food quantity details and addresses. The donator can create the account and whenever they are having wastage food they can login and give a request to the admin. The admin collects foods from donors through their nearby agent then provides them to nearest orphanages or poor people. After receiving the food from the agent by admin and give an alert message to that donor. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The donor details are maintained confidential because it maintains a separate account for each donor.

The donor can be either individual, or from hotels and function halls. The donation recipient can be either from orphanages, old homes, shelter etc. The users need to register into the application and can generate donation or food request. The notification will be sent to the other and one can either accept or deny the service offered. . In the same way, seekers can view the list of items put up by donors and if required, can claim the donated item by contacting the donor.

## , II. LITERATURE SURVEY

**A. Vikram, Anirudh, Bhuvaneshwaran, Praveen kumar 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 analysing and managing the food waste makes our world economically and environmentally healthy and makes the resources available for the future generations. Everyday many students in the college are wasting lots of food. Its an initiative to develop a web application for college used to keep track and analyse 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, “Food waste 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)

### **III. PROPOSED METHODOLOGY**

The algorithm that is used in Food wastage management system is First In First Out method.

When preparing meals or distributing food, the system ensures that the oldest items are used first. This means that items with the closest expiration dates or production dates are prioritized for use.

The system continuously monitors the expiration dates of food items and alerts staff when items are approaching their expiration dates. This helps in proactive management to ensure that items are used before they expire.

As new food items are received or produced, they are added to the back of the storage area or shelves, pushing older items forward. This rotation ensures that older items are consistently used first.

The system tracks the usage of each food item, including quantities used and dates of usage, to facilitate accurate inventory management and identify any patterns of wastage.

Staff members receive alerts and notifications regarding upcoming expiration dates or instances where certain items have been in stock for too long, prompting them to take appropriate actions such as incorporating those items into meal preparation or donating them before they expire.

The system maintains a detailed inventory of all food items in stock, including information such as quantity, expiration dates, and arrival dates.

Food items are sorted based on their arrival or production dates. The oldest items are placed at the front of the storage area or designated shelves.

FIFO is a common inventory management technique where the oldest items are used or sold first. FEFO is a variation of FIFO that prioritizes items based on their expiration dates, ensuring that items with the earliest expiration dates are used first to prevent spoilage. These techniques help ensure that perishable items are utilized before they expire, reducing the risk of waste.

### **IV. RESULT AND DISCUSSION**

The food wastage management and control system website is created to reduce the risk of wasting the leftover foods and donating the foods to the orphanages. There are some web applications that are currently not active and it is not responding quickly. This proposed website is easy to visit and user friendly. Everyone using the internet can visit the website and register to the site and donate food. It manages inventory and reduces food waste through better forecasting and demand planning. The implementation of the food wastage management system has resulted in a noticeable reduction in food wastage within the target community. By effectively tracking food items and their expiration dates, users were able to consume or distribute surplus food before it went to waste. The system has significantly enhanced inventory management practices among users. With features such as real-time tracking of food items, expiration date reminders, and automated inventory updates, users reported better organization and control over their food stocks. This has led to reduce over purchasing and improved utilization of available resources. Overall, the results demonstrate the effectiveness of the food wastage management system in mitigating food wastage and promoting sustainable consumption practices within the community. Continued efforts and collaboration will be essential to further enhance the system's impact and reach.

### **V. CONCLUSION**

The project titled as Food Wastage Management System was deeply studied and analyzed to design the code and implement. It was done under the guidance of the experienced project guide. In our project, we are targeting the person who wants to donate wastage food. This will create a greater impact on the cost saving as well as the food wastage management system, and there will be greater impact on the day by day food wastage. Thus it is better understood how the proposed system is better than the existing system. The excess food produced in functions gatherings are often



easily donated. Visualization of the impact of donation has a positive impact on the users. An effort focused on feeding the hunger and minimizing food Wastage at the same time.

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