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Food Waste Management System

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Abstract: *The main goal of this web-based application is to minimize food wastage. Food wastage is a massive problem and one of the most overlooked things in today's world. A large amount of food has been thrown out by restaurants and function halls. This food can be distributed to the people in need through NGOs. The existing systems are not aware of collecting that food and distributing it to needy people. It is the best way to deliver food to those who are starving for food. The hotels or restaurants donate food to the NGOs through this website and the NGOs donate them to needy people.*

Keywords: Food-Waste, Hotels, NGOs, Donation, Help

I. INTRODUCTION

In today's world Food waste has been increasing dramatically. According to the records, nearly 1.3 billion tons have been wasted. Most quantity is wasted due to the overestimation than needed by the hosts or food providers. Due to this food wastage, it results in limitations to the agricultural processors and processing food managers. This also leads to degradation of economic growth. According to WHO survey, major food wastage has been rendered in developing countries and that could affect the people in poverty. There are many factors that account for food wastage, which are improper storage, over preparing, poor planning, over buying, weather conditions etc.. To avoid these situations, we came up with a concept of a food waste management system. This could minimize the food by donating excess food. The concept of this web application is to collect surplus food from donors and event halls and distribute it through NGOs such as orphanages, to people suffering from food shortages.

II. PROPOSED SYSTEM

Now-a-days, we can observe much food wastage due to overestimation and poor planning at hotels, and function halls. NGOs collect these foods and distribute them to the needy people. Even though these organisations have the capability to distribute, they lack in communicating with donors. Our application builts a way to bridge the gap between the wastage and deficit. In this proposed system we have donors, NGOs, admin, and visitors. The hotels or donors, NGOs have to register with their details. The NGOs and hotels can log in to the website at any time with their credentials. The hotels make a donation request to the NGOs by adding details like type of food, name of food, quantity of food, food cooking time, food packed time, food expiry time. And they can contact the NGOs to know the details about no.of people and required quantity of food. The donors can see the status of food whether it is accepted or rejected. Interested NGOs can accept the request. And they collect the food from the specified locations. The NGOs can send feedback to the donors. The visitors can also donate to the people by choosing hunger spots in the website, they no need to register to make any donation. The admin has the ability to manage all the operations done by the users (hotels,NGOs,visitors). Admin can develop an analysis report for donors and NGOs. Admin can view the history of users. The interaction is easy between the NGOs and hotels due to this proposed system.

III. TECHNOLOGIES USED

- **Front End:** HTML, CSS and JS are used in combination to create the front-end.
- **HTML:** HTML is used to develop web pages for creating headings, text, photos, etc. For displaying the content to the users the html is used. For displaying the hotels, admin and NGO information it is used. Though it is static, we have used it for the structure of web pages.
- **CSS:** CSS is used to construct appealing, interactive websites with the help of cascading style sheets, which are flexible and accurate. Styling of web pages was done using CSS such as colors, font size, images, and so

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on.

- **JS:** Java script is used for implementing the dynamic content in the web pages. To render hunger spots and map locations of NGOs. On static HTML web pages, this event-based language is helpful for adding dynamic content. Developers can respond to server-side events and access items outside of the main HTML page.
- **Back End:** The back-end purpose is to create a functionality and responsiveness of the dynamic webpages. In this website we have used PHP and MYSQL for the backend purposes.
- **PHP:** We have used php for connecting the functionality of web pages from backend through server-side scripting. This connects the data requests between each user and relational database with NGOs, donors and admin.
- **MYSQL:** MYSQL is used for the database connectivity which stores and can also create new user details through the database. The MYSQL database is used to store the data belonging to the webpage. In this project, we store login credentials of NGOs, Hotels, Donation history, Feedback etc..
- **XAMPP:** We have used XAMPP, which is the local host to run the project.

IV. RESULTS

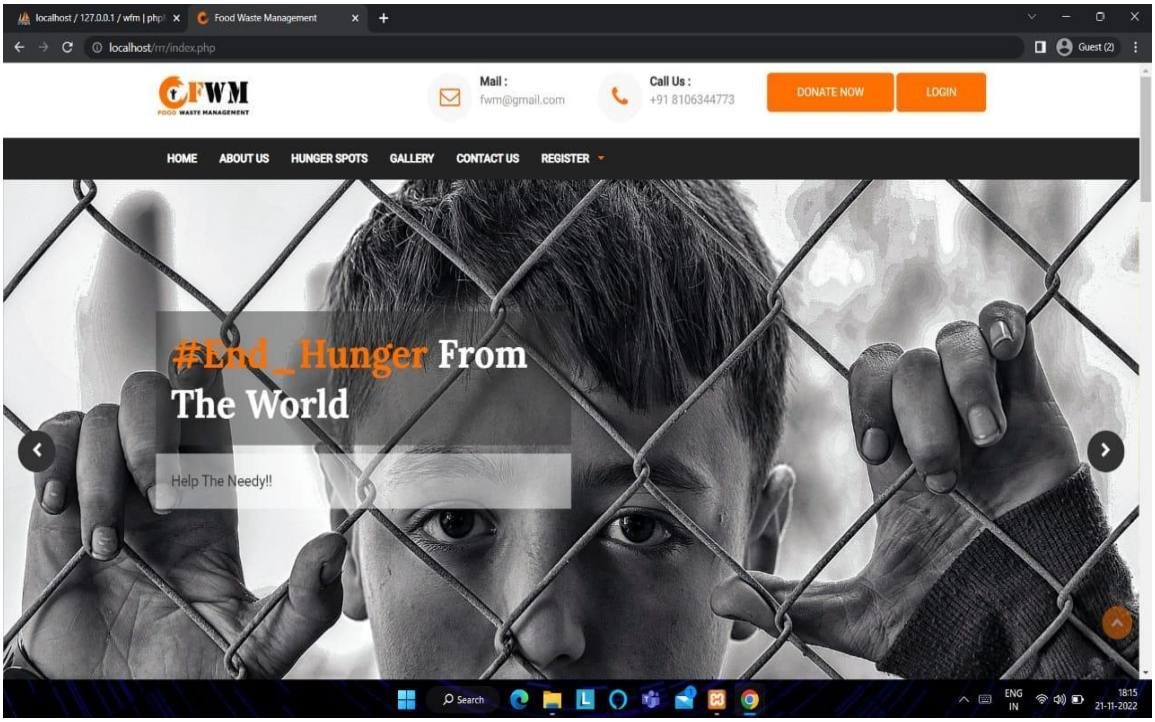

Figure 1: Home Page

It is the homepage of the website. It shows the attributes like login, register, contact us, hunger spots, gallery, about us. It also shows the contact information like phone number and email.

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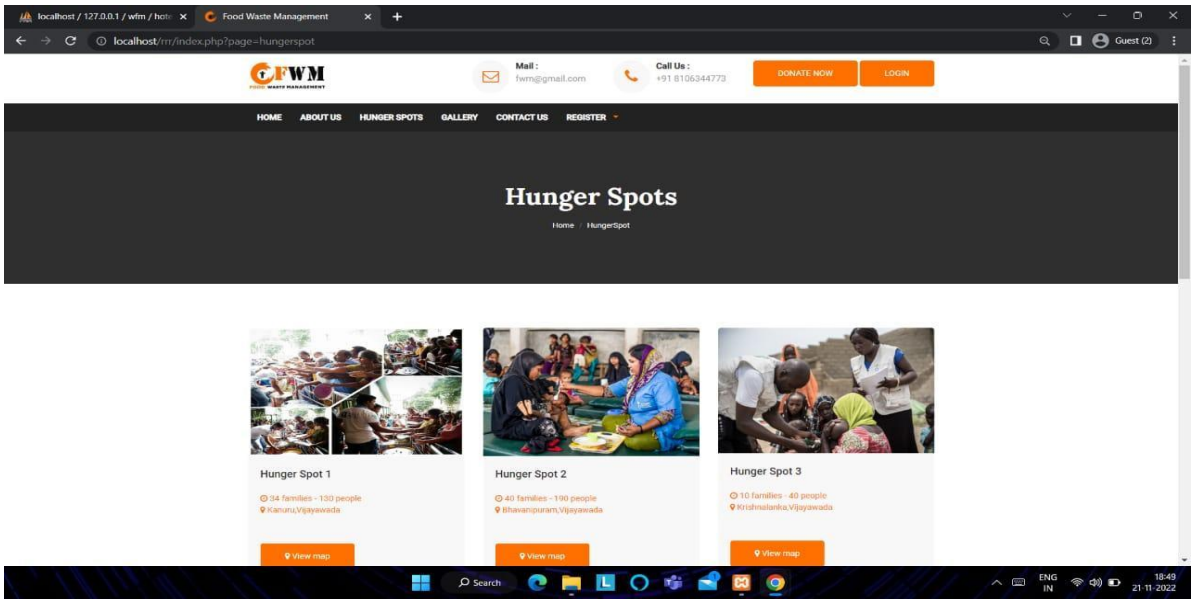

Figure 2: Hunger Spots Locations Page

It shows the hunger spots. where the visitors can directly donate food by knowing these hunger spots.

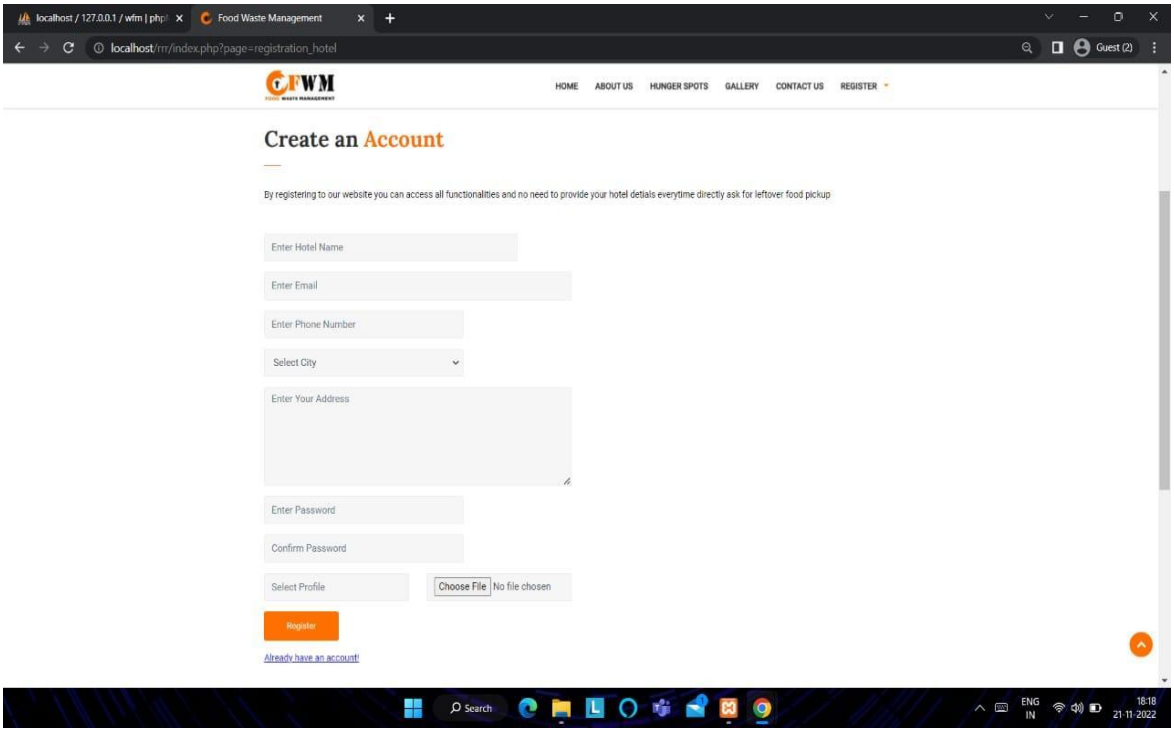

Figure 3: Hotel Registration Page

It shows the hotel registration. Where they enter their details like hotel name, mail, phone number, city etc, and they need to create their password for login purposes.

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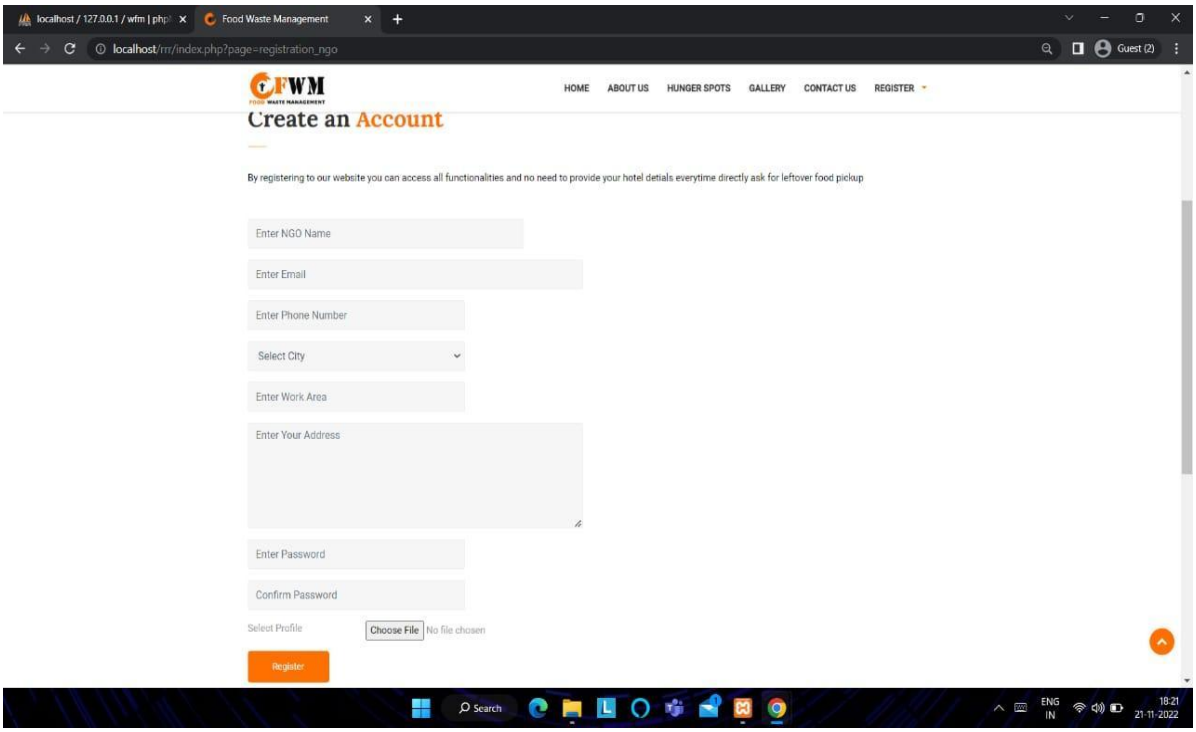

Figure 4: NGO Registration Page

It shows the NGOs registration. Where the NGOs enter their details like NGOs name, mail, phone number, city etc, and they need to create their password for login purposes.

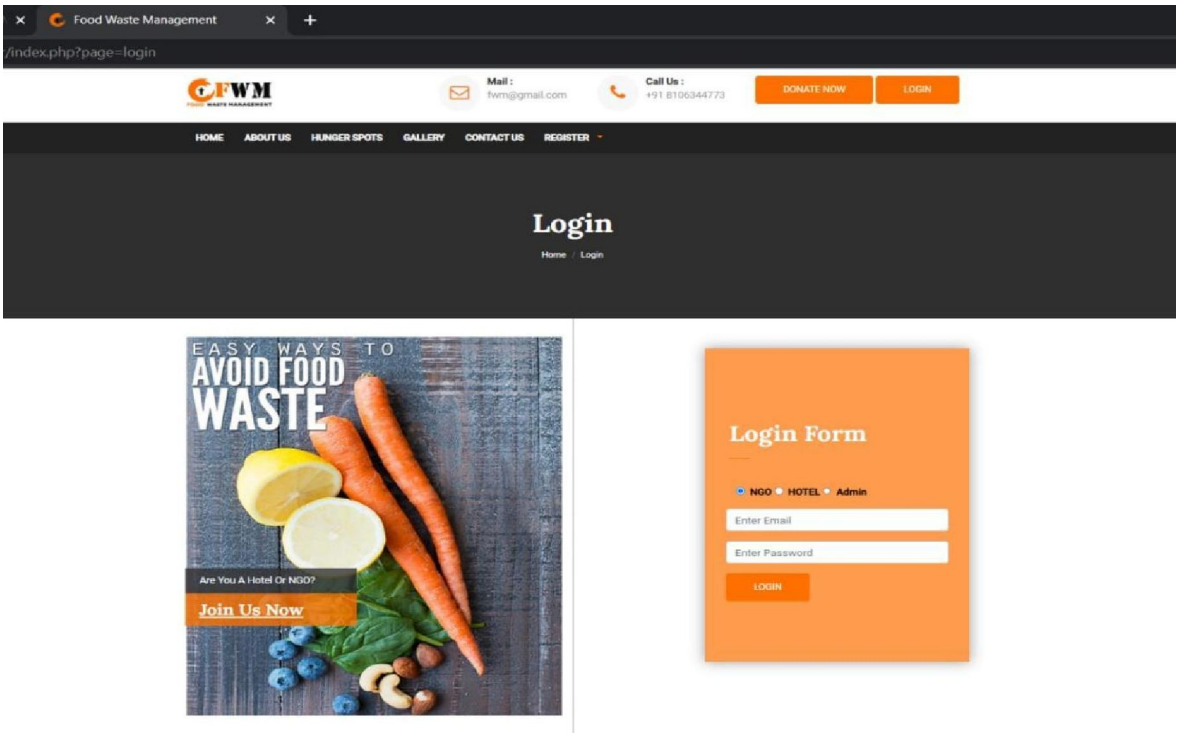

Figure 5: Login Page

It shows the login page. Where the hotels, NGOs, admin can login with their login credentials which are created before during registration.

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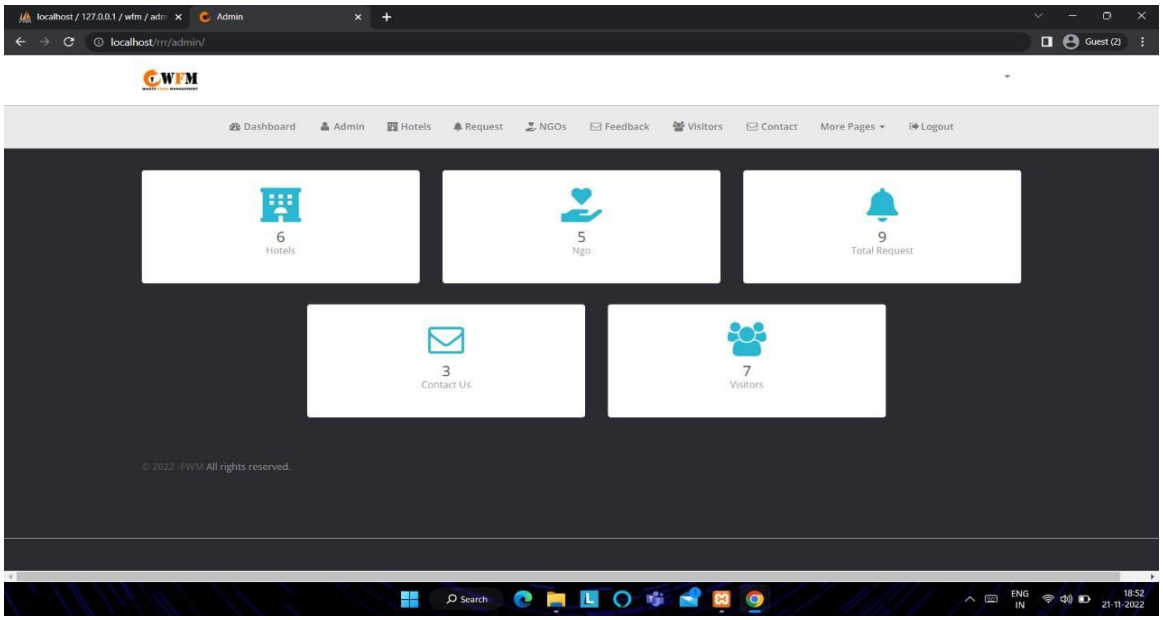

Figure 6: Admin's Dashboard

It shows the admin dashboard. Where it has all the information about hotels, NGOs and number of requests and accepts.

V. SCOPE OF FUTURE USE

This application can be further developed to track the food delivery. And to send an alert notification when there is a need for food. It can be very useful in conditions like natural disasters. By registering not only local NGOs, more no. of registrations can make it work effectively.

VI. CONCLUSION

This web-based application "Food Waste Management System" helps both donors and NGOs by minimizing food wastage. The admin has all the information about donors and NGOs. It also has a help desk to help the people if they need any information. By accepting the request from the donors the NGOs get the food from them. The visitors can donate directly by knowing the hunger spots which are mentioned in the website. It has many features which make it work effectively.

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