

Engineering Project Management

Project Idea

Group Members

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KhanaFarokht

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Introduction

KhanaFarokht- The application is designed to provide a platform where food surplus/leftovers can connect to food-insecure and allow them to consume quality and nutritious food. Restaurants, wedding halls, and other businesses with surplus food can use KhanaFarokht to sell their last-minute food waste to people in need of food at low prices. The escalating food crisis and the lack of a centralized regulatory body capable of dealing with such societal problems are the driving forces for this application project. For the sake of community service, we want to make food rescue and sharing very easy and efficient.

Objective

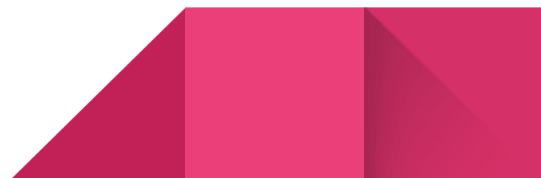
The objective of this project is to create an easy-to-use application with a simple user interface that establishes a link between any location with surplus food and a needy person. This project intends to benefit the community by encouraging people to share their food rather than wasting it. Interestingly, this concept has the potential to benefit both the food producer and the consumer as local community users eat great food and businesses get additional revenue. This point is discussed in greater detail in the later section.

With the growing food crisis and shrinking access of impoverished people to nutritious food, we believe that this application project is long overdue, as it will assist the community socially and economically. Our society has faced numerous financial hardships in the previous two to three years as a result of the pandemic. While most individuals are doing their best to adjust to the changes in society, some of us are struggling to meet basic necessities of life such as food. On a daily basis, we come across several people who have lost their jobs and are experiencing severe food shortages. Besides the employment factor, our Pakistani community is facing a steep rise in inflation which is another factor in the food crisis. On the other side of the picture, we observe that a lot of food is wasted or abandoned each year. For example, due to the busy lifestyle and pandemic situation, fewer people opt to attend social events and dine in a restaurant. This results in waste of both untouched and touched food. Instead of dumping the food, we may use it to help someone in need.

Statistical Data

According to the World Food Program, around 811 million individuals, across the globe, do not get enough food. As expressed by The World Counts, until now in 2022, around 9 million individuals have died of hunger and appetite-related illnesses, out of which 3.1 million were children. Every single day, around 25,000 people die from malnourishment and related issues. Conversely, U.N expresses that an adequate amount of food is produced to channel everybody all over the planet. The unevenness in the food produced, and starvation among a gigantic populace is the consequence of an excessive amount of food being squandered. The U.N Environment Program states "Roughly one-third of the food produced in the world for human consumption every year - approximately 1.3 billion tons - gets lost or wasted". Out of this food waste, 12% comes from the hospitality industry, including cafes, restaurants, retail stores, etc.

If we particularly refer to the effects of food shortage in Pakistan, WFP stated that around 20.5% of the total population (207.7 million) is undernourished and about 40% of children are stunted, meaning that their height does not corresponds to their weight and is below the "Child Growth Standards" defined by WHO. The key reason for the food shortage in Pakistan is similar to any other country, i.e. the huge quantity of food being wasted. According to DAWN News, around 36 million tons of food are wasted every year



Targeted Audience

In 2018, the Pakistani government vowed to eradicate hunger by the year 2030 which is the Second Sustainable Development Goal (SDG), also referred to as Zero Hunger. For the mentioned purpose, the government officials should not only focus on crop diversification or increasing crop yield by introducing innovative methods, but it should also take measures to reduce food waste. The ones suffering the most due to food disposal are the people belonging to the lower class. These people are mostly dependent on NGOs which are further reliant on donations from the government and the elite class. Therefore, the focal point of our application will be designated towards associating the hotels/restaurants with the NGOs. It would depend on the restaurant owner, either to take a small amount of money (NGOs will use the donations to pay for the food), or to donate the leftovers to the NGOs. The connected NGOs will then distribute the food items among the underprivileged. Hence, this application can serve as a one-way, as well as a two-way benefit in terms of cost-efficiency.

Solution Design/ Implementation

The high-level design of our product is an android application that will centralize the system of food donation. Our restaurants/wedding halls will select the number of items of a leftover available of a certain food item and then NGOs can reach out to the restaurant for the timely delivery of these items.

Following are the functional requirements of our product:

- Registration option for restaurants and wedding halls.
- User Registration option (NGOs and even local people)
- Once a restaurant/wedding hall has registered, everyday it can put up the quantity and type of food that can be sold/donated as leftovers.
- The NGO can then select if they want to have those food items.
- The application will provide the NGO users an option to search for specific restaurants nearest to their location so that transportation costs can be saved.

- The application will have an option to support urdu as well as English language.

Challenges

Since hotels, restaurants, wedding catering services and NGOs are an integral part of this application, one of the major challenges would be to bring them on-board and build a reliable network between them. Apart from this, transport cost may also be one of the limiting factors because as this application continues to reach a wider audience, NGOs might find it costly to collect food from the intended pickup destination.

To tackle the challenges in the initial phase, marketing would be a crucial tool to reach out to the specified target audience. The second challenge can be resolved by introducing volunteers who can sign up to act as a medium for transporting food to the NGOs. This application would then be able to build a stronger community of people determined to eliminate hunger crises and serve for humanitarian causes.