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NourishNet

Charity Based Web Application

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Abstract: Nutrition, a fundamental human need, takes precedence among the triad of essentials - food, shelter, and clothing. Its significance lies in sustaining human existence and vitality. Nevertheless, as the nation undergoes population growth and development, the issue of food wastage has reached unprecedented levels. There exists a desire among many individuals to provide nourishment to the less fortunate, yet they lack a clear path to do so effectively. Our application is dedicated to addressing this concern by facilitating a connection between NGOs, everyday citizens, and those in need. Donors will gain access to various avenues for contributing, while NGOs will receive information about potential donors through our platform. Consequently, we establish a network that links donors, those who assist in the donation process (NGOs), and the individuals in dire need of the donations. The primary aim of our application is to introduce transparency, streamline the donation process, and expedite the relief efforts, with the overarching goal of alleviating prevailing challenges wherever feasible.

I. INTRODUCTION

1.1 Introduction

In a world marred by the staggering paradox of food waste and hunger coexisting, the Food Charity Based Web Application emerges as a beacon of hope in the quest for a hunger-free society. With an astonishing 1.3 billion tons of food discarded as waste annually and one-third of all consumed food ending up as leftovers, the urgency of addressing this global crisis is undeniable. This project is not just an endeavor; it is a mission to transform this narrative by channeling excess food to those who need it the most.

At its heart, this project is dedicated to reducing food waste and ensuring that every morsel is utilized to nourish those in dire need. To achieve this vision, we have developed an innovative, Android-based web application that not only enables individuals to make a difference but also empowers charitable organizations to have their specific requirements met. The fundamental prerequisite for joining this noble cause is simple – a smartphone. In a world increasingly interconnected through technology, this Android-based web application leverages the power of mobility and accessibility. It turns each smartphone into a portal of goodwill, a tool for individuals to contribute their surplus food and an avenue for organizations to express their needs.

This introduction sets the stage for our Food Charity Based Web Application, outlining the critical issues it seeks to address and the essential role technology plays in bridging the gap between food waste and hunger. As we delve deeper into the project, you will discover the innovative features and strategies it employs to transform the way society approaches food, ultimately striving for a future where no one goes to bed hungry, and no food goes to waste.

1.2 Motivation

"Food is what keeps all species alive," a simple yet profound truth that resonates across borders and cultures. It is the cornerstone of life itself, the very essence of our existence. From the dawn of humanity, the act of sharing food has symbolized love, compassion, and the preservation of life. It is often said that we, as living entities, sustain ourselves on grains, but it goes beyond just physical sustenance. To feed someone is to do more than fill their stomach; it's an act of keeping that person alive, sustained, and nourished. In other words, it's saving a life.

What cause can be more worthy than preserving the gift of life? In our country, and indeed around the world, countless individuals find themselves in the heart-wrenching predicament of being unable to afford a single meal for themselves or their families. This dire situation is further exacerbated by the challenging socio-economic conditions of our time. However, in the face of such adversity, to be able to provide even a single meal to those in need is an exceptional act of charity that we must not let go unnoticed or unfulfilled.

The Food Charity Based Web Application embodies the spirit of compassion and the profound belief that every individual has the power to make a difference. It provides a tangible means to transform empathy into action, offering hope to those struggling with food insecurity and a lifeline to those who yearn to give. By leveraging technology, we have created a platform that unites the benevolent hearts of donors with the pressing needs of the hungry.

This project is not just about providing sustenance; it is about upholding dignity and worth of every human life. It's about fostering a society where no one goes to bed hungry, where no one's potential is wasted due to lack of nourishment. With Food Charity Based Web Application, we aim to inspire and mobilize a community of individuals who recognize the immense worth of their acts of charity. Together, we can create a world where every meal shared is a life saver, a dream nourished, and a promise of a brighter, more equitable future.

1.3 Problem Statement

In India, the staggering annual waste of over 1 million tonnes of food stands as a stark contrast to the grim reality that a significant portion of our population goes to bed with empty stomachs. This excess food wastage is not only a moral dilemma but also an enormous loss of resources. As food is needlessly discarded, many families struggle to secure their next meal. The challenge is compounded by the fact that a substantial proportion of this discarded food is perfectly fit for consumption. Amid this distressing scenario, non-governmental organizations (NGOs), which are on the front lines of addressing food insecurity, encounter a host of formidable challenges. Their fundamental struggle lies in securing the necessary funds to operate effectively. Donors, while well-intentioned, often find it challenging to identify trustworthy and reliable organizations, and navigating the complexities of the donation process can be discouraging.

Consequently, many NGOs, despite their unwavering dedication and essential missions, are left underfunded, limiting their ability to make a meaningful impact. Furthermore, some donors attach specific conditions to their contributions, inadvertently creating logistical challenges for NGOs. These conditions, while rooted in noble intentions, can complicate the work of organizations already grappling with limited resources and urgent needs. Addressing these pressing issues requires innovative solutions. It is in response to these challenges that the Food Charity Based Web Application has been developed, offering a platform to connect donors directly with NGOs, streamlining the donation process, ensuring transparency, and harmonizing the intentions of donors with the practical needs of NGOs. By doing so, we aim to transform the landscape of food charity in India and make a substantial difference in the lives of those who are most in need.

1.4 Objectives

- Streamline Donations: Simplify the process for donors to contribute food and funds.
- Verify NGOs: Onboard credible and verified NGOs dedicated to addressing food insecurity.
- Transparency: Provide donors with clear information on the use and impact of their contributions.
- Matchmaking: Use algorithms to match donors with NGOs that align with their values and causes.
- Donor Engagement: Foster ongoing engagement with donors through updates and success stories.
- Feedback Mechanism: Create a channel for donors to provide feedback and suggestions.
- Support for NGOs: Offer resources, training, and guidelines to help NGOs meet donor expectations.
- Impact Measurement: Develop a system to track and measure the impact of donations.
- Data Security: Prioritize the security and confidentiality of user data and transactions.
- Accessibility: Ensure the application is user-friendly and accessible to a wide range of users.
- Education and Awareness: Raise awareness about food waste and hunger issues and educate users.
- Scalability: Design the application to accommodate a growing network of NGOs and donors.
- Feedback Integration: Continuously improve the platform based on feedback from users.

1.5 Organization of the Report

Fig1.1 Depicts the overall methodology to build the prototype of charity web application. Survey, literature reviews and charity website reviews were done to procure requirements to develop the prototype of project.

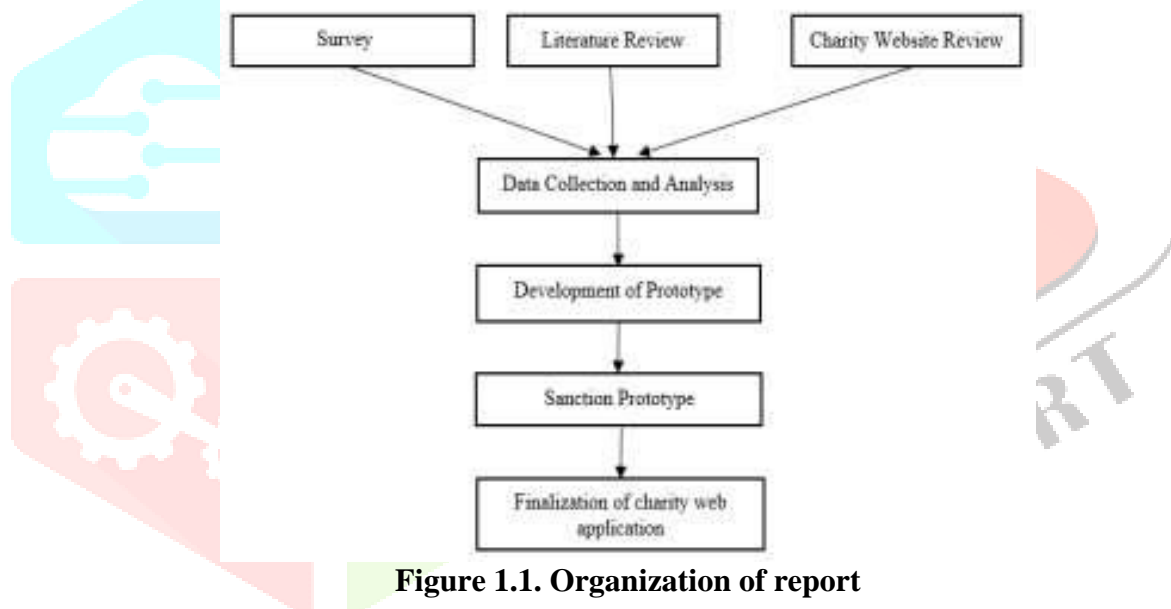


Figure 1.1. Organization of report

- A) Survey: The survey has concluded that there is feasibility to build the charity web application as imperative to provide information widespread in short notice and help poor communities efficiently and effectively.
- B) Literature review: Literature review on the poverty status was done to foresee the benefits of building charity web application in the community. Subsequently, the existing charity organizations who aim to reduce poverty in country had been completed along with the activities they do. The source of the literature review was mostly, reports, journal and online resources.
- C) Charity website review: There are websites for each non-profit organization in India. It provides information about the organizations and some static information about the charity activities. However, it is found that these websites don't provide interactive platform in the course of charity activities to be held or provided. So, the development of charity web application in India is a very new concept. This idea had been proposed with the intention to help the poor community
- D) Data Collection and analysis: Survey, literature review and charity website review had led to collection of meaningful data. It had been analyzed properly and thoroughly discussed with the project members and with the guide. Methodology of this whole project had been iteratively designed and worked upon.
- E) Prototype: The collection of data gave us the clear picture and idea on building the prototype.

II. Literature Survey

Survey of Existing System

Further some paper titles and their reviews have been mentioned on the basis of research done.

The work in [1] suggest: The HCI concepts are considered while building the prototype to achieve overall effectiveness, efficiency of charity web application and user satisfaction.

The work in [2] suggest: It provides some insight in the technologies and work of NGO intelligence work of the past decade, and will be interesting for security practitioners with various backgrounds.

The work in [3] suggest: The objective of the study is to design user interfaces (UIs) of the web application and human centric validation of it.

The work in [4] suggest: A Seva app development uses principles from AI, and especially HCI, along with its evaluation encompassing user surveys.

Limitation Existing system or research gap

From [1]: There are certain HCL principles that should be inculcated in the prototype.

From [2]: The team recommended to avoid PHP whenever possible, since the interpreter was ever flawed in terms of security, unlike the ones of Perl or Python

From [3]: Two design concepts of a web application were developed which might sometimes not be favourable to solve the problems of the users

From [4]: For the app to be better usable, a more interactive search functionality is needed.

1.3 Advantages of voice commerce for business:

- **Efficient Giving:** Simplifies and accelerates the donation process for donors.
- **Enhanced Transparency:** Provides clear visibility into how donations are used and their impact.
- **Wider Reach:** Connects NGOs with a broader donor base, expanding their support network.
- **Personalized Matching:** Matches donors with NGOs aligned to their interests and values.
- **Real-time Updates:** Offers immediate information on ongoing initiatives, keeping donors informed.
- **Cost-effectiveness:** Reduces administrative overhead for NGOs, maximizing funds directed toward the cause.
- **Reduced Food Waste:** Food waste reduction by channeling surplus food to those in need.

III. Proposed System

3.1 Introduction

This application is going to help poor people of India as through this application we are going to distribute leftovers, clothes and books of the middle class and rich people to the poor people who need this food to fill their empty stomach and clothes to wear along with books to educate themselves. We will tie-up with some NGOs who will provide us details about these people and then first they will collect this food and then distribute it to the poor people who don't need taste in the food and just want to feed themselves in order to get the energy to survive. With approximately 195 million underweight people, India contributes one-fourth of the global hunger burden.

Nearly 47 million or 4 out of 10 children in India are not meeting their full human potential because of chronic undernutrition or stunting. Stunting has consequences such as diminished learning capacity, poor school performance, reduced earnings and increased risks of chronic diseases. The impacts are multi-generational as malnourished girls and women often give birth to low birth-weight infants. There has also been an increase in the prevalence of overweight and obesity in children and adolescents in India, which has life-long consequences of non-communicable diseases in adulthood. If we take number of people undernourished (194.4 million) as 100% then we can divide them as done in below figure [1]

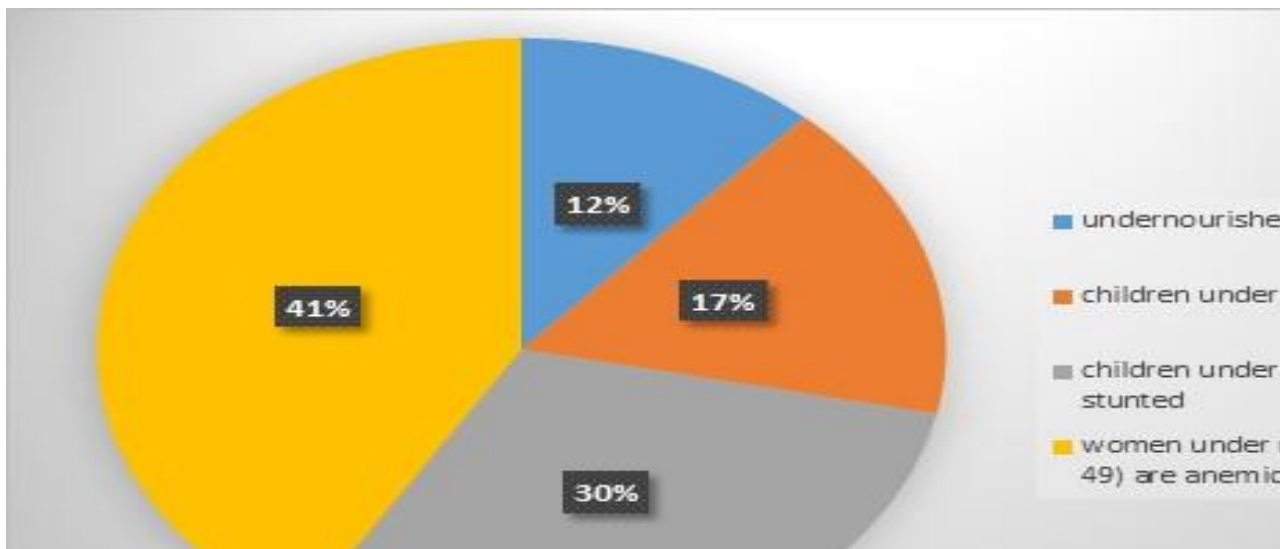


Figure 3.1. India (Population 1.3 billion)

3.2 Architecture and Framework

This system from figure [2] basically consists of four modules which are admin, NGOs, volunteer, user. User, NGO and volunteer would be registered to the application and admin has access to all their data and will be responsible for accepting and denying the requests, can give approval for login and approval to volunteer or NGO for picking the item from donator’s place and then volunteer/NGO can donate the item.

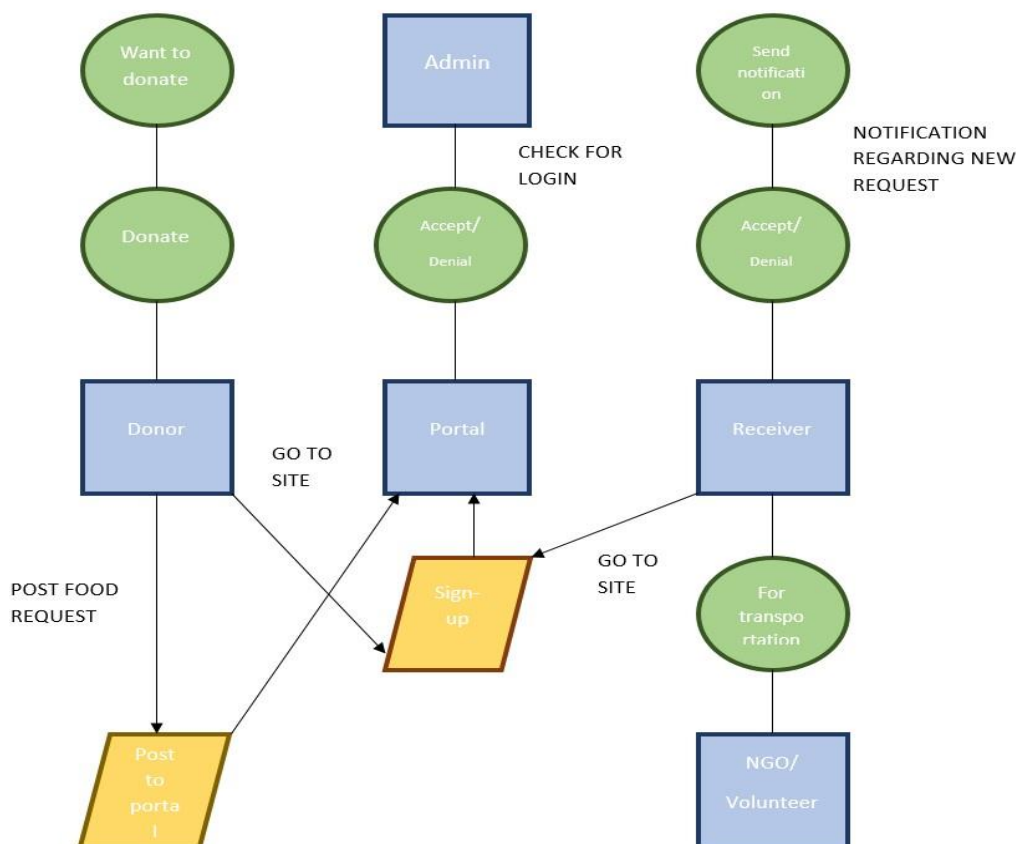


Figure 3.2. Frame work of the web application

ADMIN-: Admin from figure [3] will be responsible for accepting and denying all the request regarding donation. When someone will post a request for donation than admin can accept the donation request and grant it to a volunteer or NGO, or admin can cancel the request according to then circumstances.

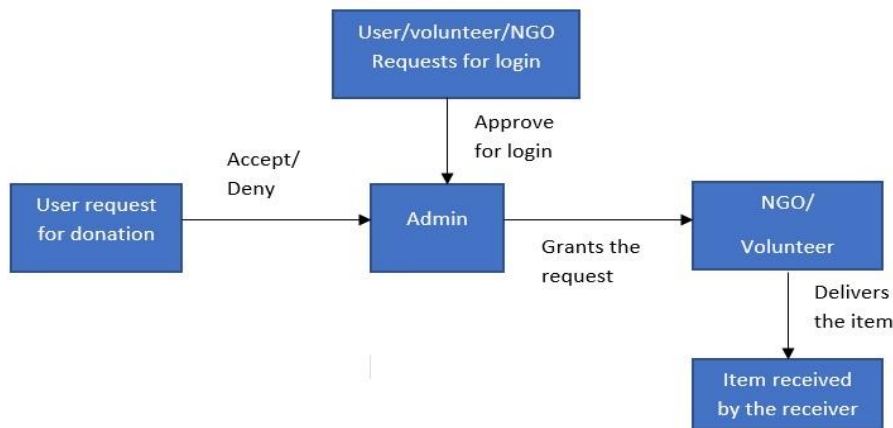


Figure 3.3. Admin module

NGO-: NGO from figure [4] will help us in distributing these items to the right places and people. They will register to our application and when admin will grant them a request of donation than they will fulfill it by delivering the item to the receiver.

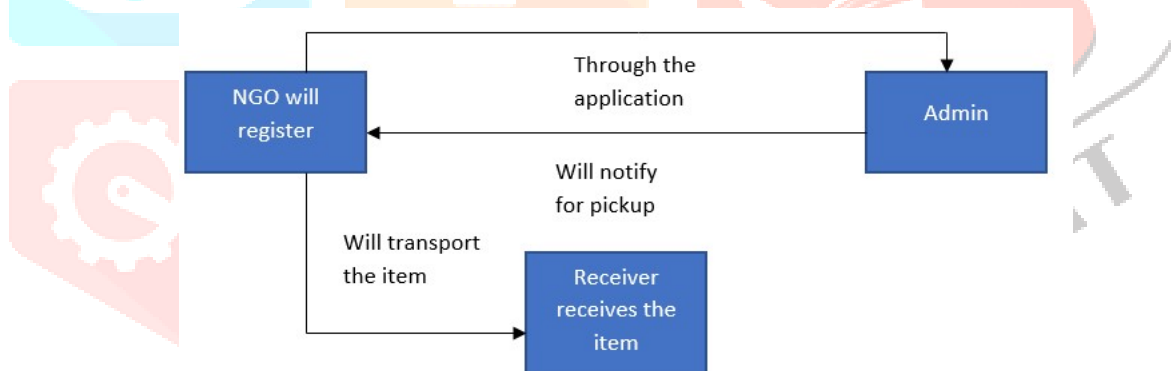


Figure 3.4.NGO module

Volunteer-: Volunteer from figure [5] will also join us by registering to the application and will volunteer for picking up the food from pickup location and donating it to the receiver.

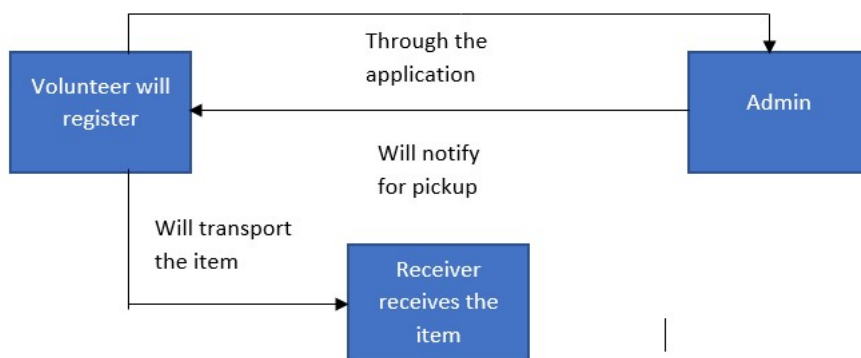


Figure 5. Volunteer module

User:- User from figure [6] will also register to the application and login to the application after which he/she will request a pick up for the item they are willing to donate and then if admin accepts the request than someone will collect the item from the user. User can check whether his request has been accepted or not.

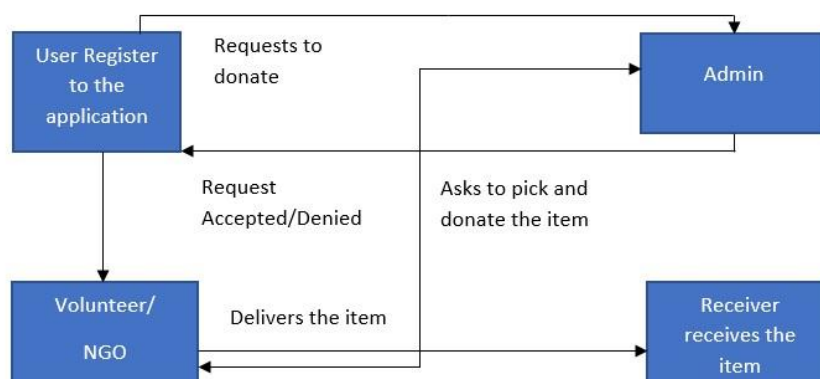


Figure 3.6. User module

3.3 Algorithm and process design

Navigation design: The Charity Web application has 4 distinctive features namely Donate Goods, Request Service, Fundraiser, and Donation as in figure [7]. Accessing these features is fast and easy. It is all grouped on the lefthand side of the application making the navigation easy and simple.

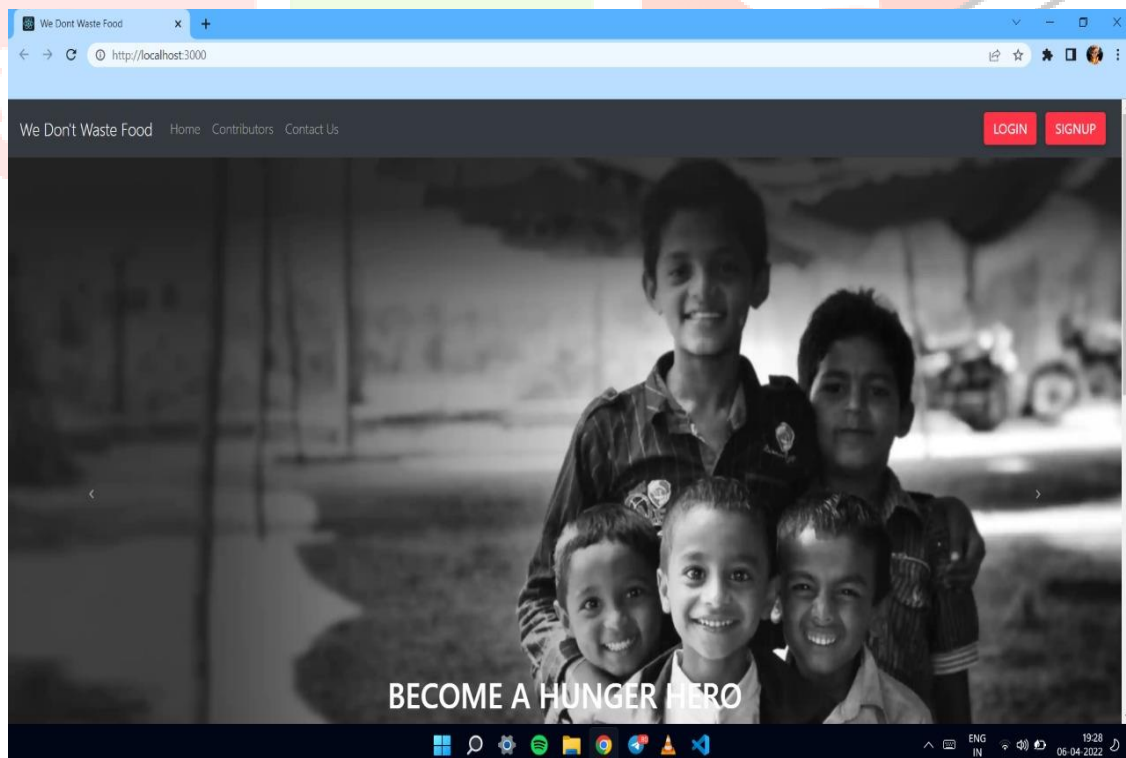


Figure 3.7. Navigation design

Visual Design: Design is fairly simple. In figure [8], features that keeps updating are grouped together. A brief information about what is charity how this application leads to zero hunger movement. An informative page which lets the user of the web page to know more about our page and how can small change make big difference to the society

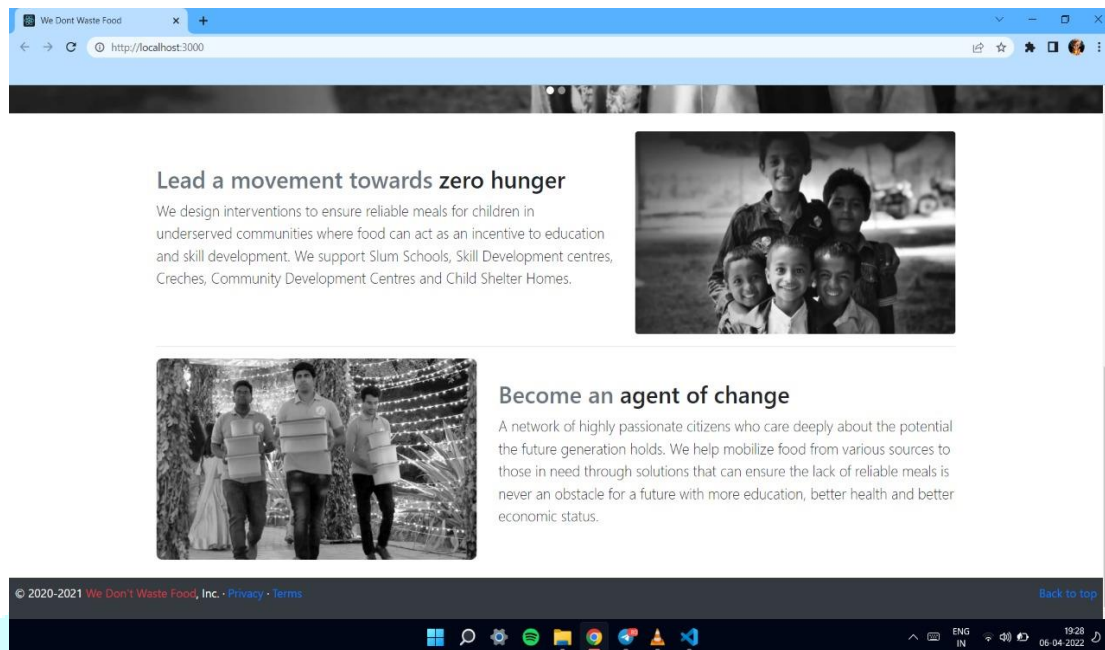


Figure 3.8. Visual design

C) Sign Up Design: If a new donor wants to sign up the page, in figure [9] he/she has to register in it provided filling all details like full name of the user, password, mobile no, gender, address and the user have to upload his/her photo. The donor is allowed to choose where to donate the food (NGO, restaurant, Team, Individuals or others) The user is then logged into the page and the information is remained into the database.

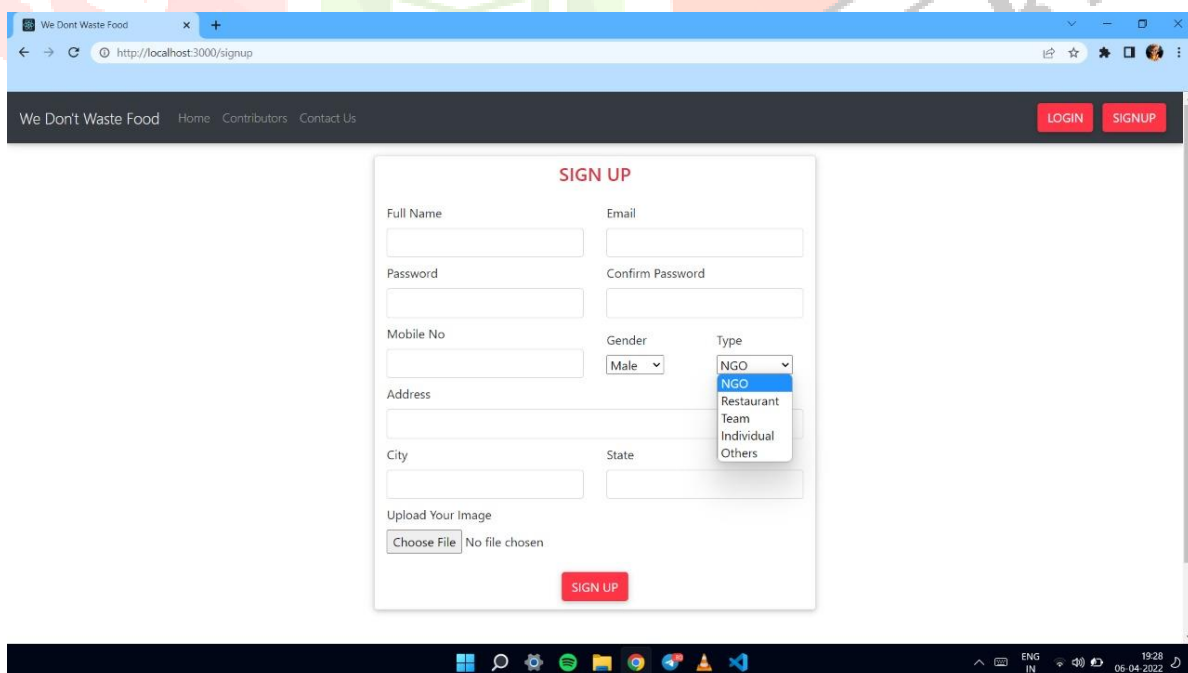


Figure 3.9 Sign up design

D)Login Design: In this process figure [10] user needs to provide login credentials like user id and password every time user wants to log in to the application. That is why all the data which user provides during registration is stored into the database of the system so that he/she can be verified whenever they try to login using that stored data. This data of the user is confidential and is not shared with anyone but user himself, as user can check this data under his/her profile. If user forgets his/her login credentials than admin will help him in login process by contacting him via email id or contact number.

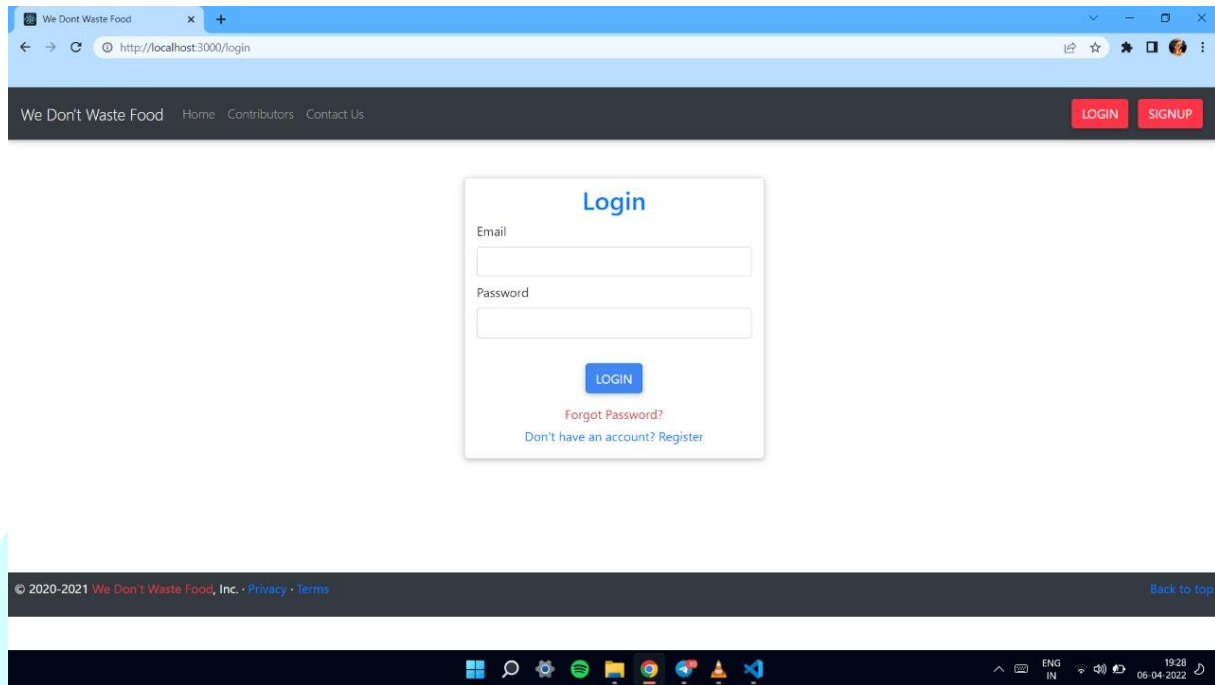


Figure 3.10 Login up design

3.4 Details of Hardware and Software

Project is divided into following three section-:

- 1) UI Design-: This phase consists of the user interface through which people other than admin are going to interact with the admin using the application. The technology used for designing the front end of the applications are html5, CSS, bootstrap, jQuery, JavaScript.
- 2) Database design-: This phase consists of all the login id details of user, NGO, volunteer and all the other data that needs to be stored. Database is a necessary component of any application as it is used to store the all the data. It will store the data like how much item is donated by which user, the date and time of donation etc. in the forms of tables. The technology used to create database is MySQL.
- 3) System design -: The system is divided into four modules which are Admin, NGO, Volunteer, and User.

3.5 Experiment and results

Though there are many non-profit organizations working to alleviate poverty in country, their aids are not reached to all poor communities. Internet is one of the powerful technologies that can effectively and efficiently convey the information in the community. Therefore, building a charity web application mainly to bring all the benefactors, organizations and beneficiaries all in one common platform can help to collaborate and work towards helping poor communities or even the victims of some calamities. Through this research, it is found that ease of navigation should be provided in the application in order to avoid users' frustration. The good visual design which includes appropriate graphics, text style, space and colors can attract users to use the application more. The charity web application needs to be built for the users to interact in more efficient way. The application designed will provide better navigability, visual and accessibility or text design as described in the literature review.

3.6 Conclusion and Future work

This application has a wide scope in future as India is a developing country which consist of rich as well as poor people. Some people have access to a lot of things whereas some people can't even afford a basic lifestyle. If this donation business will be put online than people can donate their extra stuff without any discomfort and those who really need this stuff can have these items. Moreover, this application will be of great use in case of a natural calamity like an epidemic break where people would be able to donate food and clothes in time of need to their fellow citizens of India. Hundreds and thousands of food is wasted in celebrations like a wedding or a party just because nobody wants to spend their time in finding people for donating their food so our application will ease their work as they don't have to take do anything but just register to this application and someone will pick up the items they want to donate from their doorstep.

This application can bring a great revolution in solving the food crisis problem of India. It can be said that if this application will reach to all the people of India than it is going to bring joy in life of many people as some will feel happy by donating food, clothes and books and the people who will receive these items will also feel euphoriated. This application can play a major role to help India become more developed in coming future by making all the citizen of India happy and prosperous. This application will help those people who suffers from malnutrition and salvation, people who can't get books to educate themselves, and people who have to wear same torn old clothes in their daily life. This is an initiative taken by us to help the citizen of our country by making their life easier.

IV. Acknowledgement

I would like to express my thanks to the people who have helped us the most throughout the project. Grateful to my guide (Mrs. Kalyani Pampattiwar) and coordinator (Dr. Rizwana Shaikh) for nonstop support for the project. A special thanks goes to each other who worked together as a team in completing the project, where we all exchanged our own interesting ideas, thoughts and made it possible to complete our project with all accurate information. I also wish to thank our parents for their personal support and attention who inspired me to go my own way. I would also like to extend our sincere gratitude to our Principal (Dr. Atul Kemkar) and our Head of the Department (Dr. Aparna Bannore) for their continuous support and encouragement. I also would like to thank our other faculty members for providing us with all the required resources and references for the project.

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