

Comsats University Islamabad (CUI)

Assignment-01

Project Proposal

(SCOPE DOCUMENT)

For

<Save Food Stuff>

Version 1.0

By

Maha Farooqi FA20-BCS-029

Kainat Mudassar FA20-BCS-027

BCS-4A

Supervisor

Sir Tehseen Riaz Abbasi

Bachelor of Science in Computer Science (2020-2024)

Abstract:

The proposed project “**Save Food Stuff**” is a web app through which a link is created between restaurants and charity homes/ needy people for food donation.

Tons of food is wasted throughout the world by a lot of restaurants. Fresh food goes into trash cans while millions of people die due to starvation. The targeted problems our app will be solving is distribution of extra food among the needy people. Only authentic charity homes and needy households would get registered and would get free food from restaurants.

Introduction:

The main purpose of this document is brief description about the “Save food stuff application” which is primarily developed for the distribution of extra food from restaurants to different shelter homes in order to help poor and needy people and to avoid food wastage. In last research, a drastic increase can be seen in wastage of food. As per data given by WHO, 20% of the population faces extreme food shortages. Therefore, it is important to come up with a solution that can avoid food waste and can help feed the needy.

Furthermore, such systems have been tremendously helpful in spreading awareness of the food waste issue but they also have some downsides. In addition, it has its useful features as well for example admin can track the history of the whole system, NGOS that are assisting poor communities in their fights against hunger and can use this app to request meals from restaurants. After approval of the request they deliver that food to shelter homes. In this way this save food stuff application will help the restaurant to reduce food waste and will help in feeding the needy and poor people.

Moreover, it also keeps the shelter homes, NGOs and people updated about the food availability from time to time. It also provides an opportunity to the food receiver to give reviews about the restaurants.

Problem Statement:

According to United Nations [1], almost half of the fruits and vegetables produced go into waste each year. Similarly, $\frac{1}{3}^{\text{rd}}$ of the food produced for consumption never gets eaten.

If all the food currently getting thrown into the landfill every year was instead diverted into meals for those in need, we’d be able to feed as many as 1.8 billion people. All over the world [2], more than enough food is produced to feed the world population. But still due to lack of awareness,

world hunger is on the rise affecting around 9.9 percent of the people globally. Almost 811 million people go to bed hungry each night.

This number of world hunger can be reduced if the excess food that goes into waste is delivered to the needy people instead.

Our proposed system solves the problem of distribution of extra food so that this food is utilized instead of going in trash.

Problem solution:

There is an existing mobile app named “OLIO” where anyone can login and get food and related stuff. There is no authenticity check whether the person is actually needy or not.

Our system focuses on delivering the food to shelter homes and households that are actually needy and it is done through proper registration and providing user login. Restaurants that have extra food would upload on their profile the amount of food (per person) they have and on user profile, all the restaurants in that area that currently have food available will be displayed.

Aims and Objectives.

The main objective of our application are:

- The food should be donated only to needy and poor.
- This system reduces wastage of food as well as lack of awareness in societies.
- Makes the delivery of food faster by digitizing it via our app.
- Enable easy understanding and interaction between donators and organizations.

Vision Statement:

The web app would have two logins. One for restaurants and one for user (used by shelter homes / needy households). The restaurant login would allow the restaurant to update on their profile whether they have food to donate at the moment or not. They will deliver food at the requested shelter homes / needy households with very low delivery charges (100/- or 150/-). In return, they will be given reviews by the user.

The user login will be assigned only to authentic people. The authenticity will be checked by the monthly income and monthly expense report provided by the user. On the user login, all the restaurants in the surrounding areas with food availability would appear and they can place request.

Related System Analysis:

<u>Application Name</u>	<u>Weakness</u>	<u>Proposed Project Solution</u>
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OLIO – Share more Waste less	<ul style="list-style-type: none"> • Privacy Issues • Everyone have access to open it and use it either for wrong or right intentions. 	<ul style="list-style-type: none"> • Provide proper security to its user. • Makes sure that food only reaches the needy.
SWOT- Food Waste & Recovery	<ul style="list-style-type: none"> • No centralized platform for accurate, actual and transparent data about wasted food in our region. • Complexity makes it challenging to communicate clear messages to target audience and general community 	<ul style="list-style-type: none"> • Support for new and existing value added processors that can preserve wasted food. • Less complex system.
Food Waste Management system	<ul style="list-style-type: none"> • Does not require user registration. 	<ul style="list-style-type: none"> • Only registered user can log in.

Advantages/ Benefits:

- Awareness and solution about the proper food donation will be spread.
- Keep track of the extra food available at restaurants.
- Poor and needy people will be able to get the food products which will prove to be lifesaving for them.
- Both the restaurants (reducing food wastage) and the needy people will be helped.
- Giving reviews will be helpful to monitor the overall app working and to enhance its features as well.

Project Scope:

- After downloading the application, if user is already registered then he/she will have to simply log in otherwise user will have to first sign up by entering all details including username, password along with document attachment which includes the monthly income and expenses of the user. After detail completion by the user, its request will be sent to admin displaying “your request is in process” to user. When the request is received by the admin, now its duty is to check the validation of the user’s attached document either he/she should be considered as needy or not. After that a notification will be displayed to user that “your registration has been completed” if the request was accepted.
- After the successful registration now user will be able to see multiple options on the screen which includes “Find Food”, “Go to Setting” and “Give Reviews” as well. By selecting “**Find Food**” the user will be able to select nearby restaurants which currently have food available to donate. From there he/she will able to request the desire restaurant to get food easily.

- When user select the **“Setting”** he/she can do multiple tasks which include **“How to use”** means if anyone has any problem relating to app usage then from here it can be easily solved. Secondly it has **“Profile Management”** which gives opportunity to the user to update his personal information when needed. Thirdly, it has **“Activity”** option which contains that users’ record. Lastly, after using this app user has the opportunity to easily **“Log out”** his id from here to avoid privacy and security risks.
- After that this app also has the feature of **“Giving Reviews”** by the receiver after getting the food from the restaurant to give their personal opinion about their services. User can give his reviews either by writing comments or giving stars as well.
- Along with the sign up and log in option one more option is added named **“Donation”** it will not require any sign up option simply the purpose is that if someone wanted to donate money then that will be added there easily without any problem.
- Another feature includes **“Restaurant Module”** its main purpose will be to check all incoming requests and serve them priority wise along with reducing the food from the availability list (i.e. initially food available was of 5 persons, after serving 2 of them its duty is to reduce that food from that list too that is 3 person left).
- Lastly admin feature is also present whose purpose is to keep track of all the user’s activities. Admin can view requested orders, orders to be delivered and the records of the orders that are delivered already. However recent activity can also be seen by admin along other functionality.

Modules:

Module 1: Login and Registration

This module is used to login or getting yourself registered in the app.

- **MF 1.1 Login:**
 - Login would be done by using username and password.
- **MF 1.2 Sign up:**
 - User will sign up by income/expenses verification.
- **MF 1.3 Forget Password:**
 - After authenticating, user can forget its password.

Module 2: Donation

On the same page of login, there is a donation menu where anyone can donate as much as they want to whatever restaurant/charity home they like.

- **MF 2.1 Donation to restaurants:**
 - In this option, list of all the restaurants will be mentioned.
- **MF 2.2 Donation to Charity homes/ needy households:**

- A list of all the registered charity homes/ needy households is mentioned.

Module 3: Settings

- In the settings menu, different options are available
- MF 3.1 How to use?
 - In this option, user will get complete guidance on how to use this app.
- MF 3.2 Profile management
 - User can change its user name, email and phone number.
- MF 3.3 Logout
 - User can logout from the app.
- MF 3.4 Activity
 - User can view all the recent activities of the order received/dispatched.

Module 4: Find Food

In this menu, all the restaurants in the nearby locality will be mentioned that currently have food available.

This restaurant list is based on reviews priority. Restaurants with higher reviews will be on the top. After selecting the restaurant, user can request food per person. This request will also be accepted based on priority.

Module 5: Delivery

In this module, the requested food will be delivered by the restaurant to the requester with very less delivery charges. Moreover, the requester will also be given an option that if it can pay at least 10 to 15% for the food, it can do so. Otherwise food will be delivered for free.

Module 6: Admin

The admin will be given following options

- **MF 6.1 Active Restaurants/ Members**
 - Admin can view all restaurants and members that are currently serving the food to the needy and deserving people. All the restaurant's and user's activity will be displayed to the admin from here.
- **MF 6.2 Send Notification:**
 - Admin also has the authority of sending notification on successfully creating user's account after document validation.
- **MF 6.3 Requests**

- Admin will give rankings from 1-10 based on average document provided by the user that will tell whether the member is less or more deserving. On these basis admin will accepts the requests of the user that has currently received.
- **MF 6.4 View Rating:**
Admin can view the ratings of all the restaurants that are serving to both needy and shelter homes.

Module 7: Reviews

On the front page, with find food and settings, reviews option is also given where a member will give reviews to restaurants that boost that restaurant to top of the list of the restaurants that can be given donations.

Module 8: Restaurants module

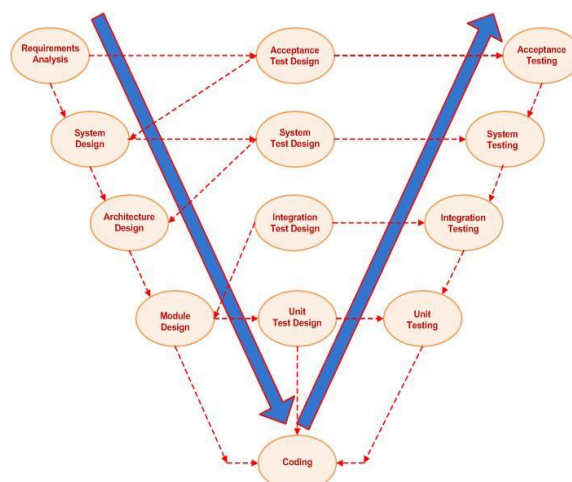
In restaurant's profile, they can add the amount of food they have (per person) and they can accept requests based on the priority basis. The members with higher ranking (i.e. more deserving) would be accepted first.

System Limitations:

- If server is down it will not work effectively.
- Proper connectivity of the internet effect it's working.
- Both parties need to have proper internet connection.
- As a lot of requests will reach to admin for verification and it is possible that admin may approve all of them without proper verification this will cause less deserving people also getting registered.

Software Process Methodology

- Different process models have been identified for designing software which includes Waterfall/Modified Waterfall model, V-Shaped model, Evolutionary process model as well. But here V-shaped Process Model will be adopted in our project because the testing and production of features will be going side by side.



Design Methodology:

Object Oriented approach will be used as the Design Methodology. Changes can be easily done in the Object Oriented, However, there are some basic concepts which are useful to this methodology which includes Inheritance, Polymorphism, Composition, Aggregation and reusability of code. These are helpful during implementation of designed software.

Tools and Technologies:

<u>Tools</u>	<u>Version</u>	<u>Relationale</u>
MS Word	2016	Project Documentation
MS PowerPoint	2015	Project Presentation
Figma	86.1.0	Mockups Creation
Pencil	3.0	GUI Prototyping
Visual Studio	1.63	I.D.E
Adobe Photoshop	CSC 6	Design Work
Mongo DB	4.0.5	Non-Relational Database
<u>Technology</u>	<u>Version</u>	<u>Relationale</u>
SQL	2013	Query Language
Java	8.0	Programming Language
CSS	3	Designing Language
HTML	5	Web Development

Project Stakeholders and Roles

<u>Project Sponsor</u>	“COMSATS, University Islamabad
<u>Stack Holder</u>	Student Name
	Kainat Mudassar
	Maha Farooqi
	Project Supervisor Name: “Mr. Tehseen Riaz Abbasi”
	Semester Project Committee: “Evolution of Project”

Team Members Individual Tasks/Work Division

Student Name	Registration No	Responsibilities/Modules
Kainat Mudassar	FA20-BCS-027	Module 1,2,7,3
Maha Farooqi	FA20-BCS-029	Module 4,8,6,5

Data Gathering Approach:

There are many approaches which are beneficial for data gathering. But below are main methodologies that will be used for Data Gathering.

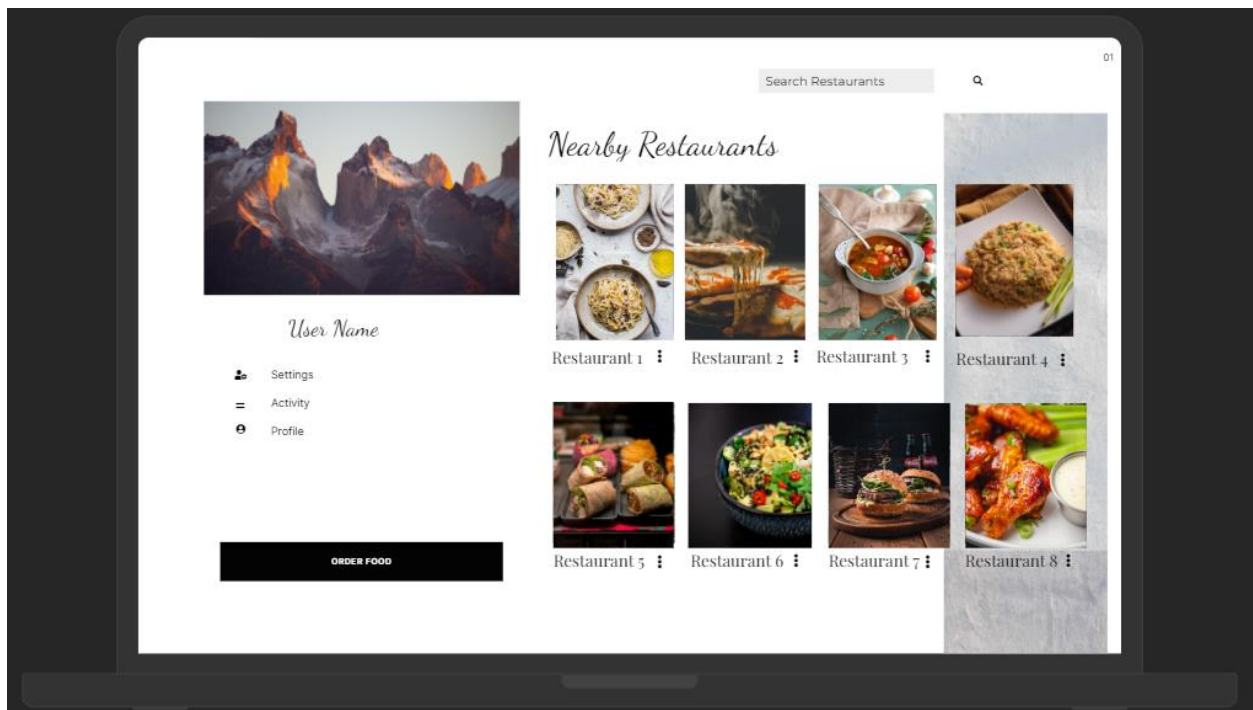
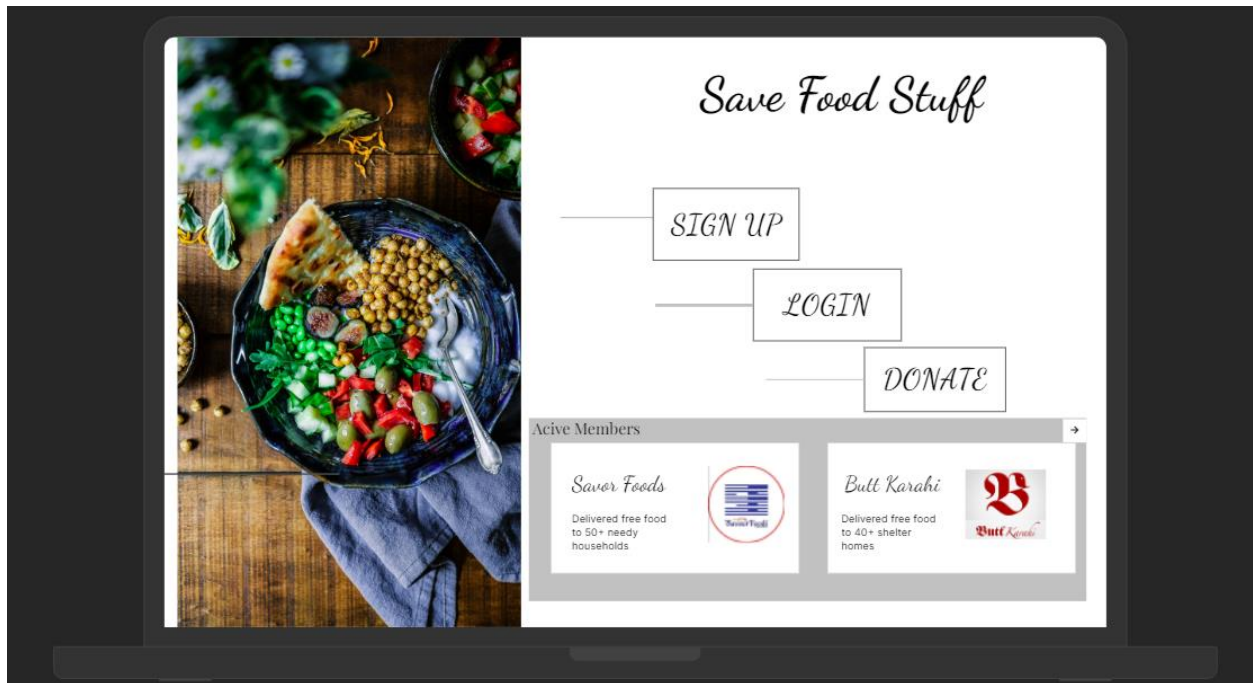
- **Documents and Records** will be seen to gather more information.
- **Questionnaires** will be the main source of gathering requirements.
- **Meeting with Restaurants & Charity homes** also important to make sure that our requirements are accurate and to avoid errors as well.

WBS and GANTT Chart:



Mockups:





Concepts:

API Injection:

APIs are predefined functions that can be used according to our requirements instead of writing the whole code. It works as a messenger that takes requests and tells the system what you want to do and then returns the response back. All interactions between data and devices are done through APIs.

Database CRUD operations:

All the members and restaurants information and records will be saved in a database.

Conclusion:

To conclude, our app is specifically designed to minimize food wastage and feeding the hunger. It solves the issue of distribution of food that usually goes into waste. We try to make sure that this food is only delivered to those who actually need it.

The app is designed in two ways, the user who is donating the food and the person/organization that is claiming the food.

References:

- [1] <https://www.unep.org/thinkeatsave/get-informed/worldwide-food-waste>
- [2] <https://www.actionagainsthunger.org/world-hunger-facts-statistics#:~:text=Around%20the%20world%2C%20more%20than,9.9%20percent%20of%20people%20globally.>

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