



## Assessment Submission Form

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<b>Assessment Title</b>	Group Assignment on Sustainify : Food Waste Management and Zero Hunger App
<b>Module Title</b>	IS41520 UXD: User-Centered Design
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<b>Date Submitted</b>	12-12-2024
<b>OFFICE USE ONLY Date Received</b>	
<b>OFFICE USE ONLY Grade/Mark</b>	

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I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

Sarayu Nimmakayala, Srikanth Kununuru, Samuel  
Signed Sirivella, Aarohi Milind Lankeshwar, Vaishnavi ..... Date 12-12-2024  
Kandikonda

Assessment submission form\_modular

**Refer to Appendix D for individual forms**

# **UXD PROPOSAL REPORT**

## **SUSTAINIFY: FOOD WASTE MANAGEMENT AND ZERO HUNGER APP**

### Group Members:

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# INTRODUCTION

This report proposes the application for hunger and food waste coexist globally, with millions in need while tons of food go to waste. We're creating a mobile app to help households and organizations reduce food waste, track expiry dates, use leftovers creatively, and donate surplus to nearby charities. By connecting users to zero-hunger initiatives, the app aims to foster sustainable food practices and fight hunger. Your input on managing food waste and preferred features will help shape this impactful solution.

## STEP -1 RESEARCH AND REQUIREMENT GATHERING

### IDENTIFYING THE AREA OF DEVELOPMENT

This application focuses on addressing food waste and hunger by providing practical and user-friendly tools for food management and redistribution. It will feature smart reminders for tracking expiry dates, inventory management for households and organizations, and AI-powered recipe suggestions to creatively use leftover ingredients. To further reduce waste, the app will facilitate connections with local food banks and charities, offering real-time donation hubs and scheduling options for food pickups or drop-offs, ensuring surplus food reaches those in need.

In addition to core functionality, the app emphasizes user engagement and awareness by including educational resources on sustainable practices and community initiatives to promote zero hunger. Gamification features, such as rewards for donations, will encourage active participation. Advanced technology like AI, barcode scanning, and smart kitchen device integration will enhance usability, while data analytics will provide valuable insights into food usage patterns. Designed with accessibility in mind, the app will offer an intuitive interface, multi-language support, and offline functionality, ensuring it meets the needs of a diverse user base.

## REVIEWING RELATED LITERATURE

The proposed app aligns with findings in existing literature on food waste reduction and sustainable practices. Studies highlight that a significant portion of food waste occurs at the household level due to poor planning, lack of awareness, and ineffective storage practices (Hebrok & Boks, 2017). By incorporating features such as inventory management, smart reminders, and AI-driven recipe suggestions, the app addresses these critical areas effectively. Research by Gustavsson et al. (2011) emphasizes the importance of reducing food waste through consumer-oriented solutions, which this app directly supports.

The app's integration with food banks and donation hubs aligns with recommendations from research on food recovery networks (Schneider, 2013), which advocate for collaborative redistribution systems to bridge the gap between surplus and demand. Furthermore, studies on technology adoption in sustainability highlight the role of AI and IoT in creating personalized, scalable solutions (Papargyropoulou et al., 2014). The inclusion of gamification and educational content reflects findings by Devaney and Davies (2017), who emphasize behaviour change as a critical component of waste reduction. By combining these evidence-based strategies, the app is well-positioned to address food waste and contribute to broader sustainability goals.

The major two findings based on our literature review:

**Household Food Waste Solutions:** Poor planning and lack of awareness are key drivers of household food waste. Tools like smart reminders, inventory management, and recipe suggestions are effective in reducing waste (Hebrok & Boks, 2017; Gustavsson et al., 2011).

**Redistribution and Engagement:** Connecting surplus food to charities via technology-enabled platforms and promoting community initiatives, gamification, and education are proven strategies to reduce waste and encourage sustainable practices.

## **REVIEW SIMILAR PRODUCTS/SERVICES**

Further research led us to the application named “Olio”, a free of cost, peer-to-peer basis, allowing individuals to share surplus items for free application. We have analysed the application in terms of how it’s working, user experience and all other aesthetics. Along with that we have analysed the design of the Olio app which sets the tone of benchmark for our application.

Given below the summary of our findings:

- **Peer-to-Peer Sharing:** Users can list items they no longer need or want, and others nearby can claim them.
- **Community-Driven:** Olio fosters a culture of sharing and sustainability by connecting users to their local communities for redistribution.
- **Environmental and Social Impact:** By redistributing surplus food and items, Olio reduces waste, promotes sustainability, and helps those in need within the community.
- **Business Involvement:** Businesses can also participate by donating surplus food and items to the community.

## **CONCEPTUALIZING THE FINAL PROJECT**

Based on our literature review and analysis of the Olio application, we decided the focus on Food Waste Management and Zero Hunger App would be:

- **Food Waste Reduction:** Helping households and organizations manage surplus food to minimize waste and prevent unnecessary disposal.
- **Surplus Food Donation:** Facilitating easy donation of excess food to local food banks and charities, supporting those in need.
- **Sustainable Practices:** Encouraging long-term sustainable food practices, fostering behaviour change to reduce food waste on a broader scale.
- **Expiry Date Tracking:** Offering smart reminders and notifications for food items approaching their expiry date, enabling timely usage.
- **Recipe Suggestions:** Providing creative recipe ideas based on leftover ingredients, encouraging users to make the most of their food.

## REQUIREMENT GATHERING THROUGH ONLINE SURVEY

We are mainly focussing on the Zero Hunger and Waste food management; the team has interviewed the students and other people through an online survey questionnaire. The results of the online survey are summarized below

- Zero-waste challenges and rewards to keep users motivated and engaged.
- Quick, easy-to-use features that integrate into users' daily routines.
- Customizable notifications and insights to keep the app relevant and effective.
- Smart reminders for expiry dates and easy tracking of household food inventory.
- Ability to donate surplus food to local charities and food banks.
- Simple interface with offline functionality for broader accessibility.

## USER PERSONAS

Based on the responses on the online survey, we have designed the user personas for our application.



Lakshmi Rao

**Age:** 40

**Location:** Dublin, Ireland

**Occupation:** Homemaker

### PERSONAL DETAILS

**Tech Use :** Prefers using a smartphone for convenience and learning.

**Lifestyle :** Occasionally shares leftovers; struggles with tracking food inventory, leading to waste of fresh produce like vegetables and fruits.

### GOALS :

- Save money and reduce unnecessary food purchases.
- Learn better storage techniques to preserve food longer.
- Manage household food more efficiently to support sustainable practices

### Pain Points :

- Feels overwhelmed by complex or overly detailed tools.
- Finds it challenging to remember what is expiring in the fridge or pantry.
- Waste often occurs due to a lack of planning meals based on available ingredients.

### Expectations from Sustainify :

- Simple, intuitive notifications for expiring food items.
- Tips for effective food storage to extend shelf life.
- A user-friendly interface that doesn't require significant time investment.

Figure 1 : User Persona 1 Self-Created by The Team



## Roshill Jane

**Age:** 27

**Location:** Dublin, Ireland

**Occupation:** Software Developer

### PERSONAL DETAILS

**Tech Use :** Divides time between smartphone and laptop, using apps for time management and productivity

**Lifestyle :** Cooks occasionally but often relies on takeout or pre-cooked meals due to a busy schedule.

### GOALS:

- Save money by reducing food wastage.
- Support community-driven food sharing initiatives.
- Efficiently manage limited cooking time while minimizing waste.

### Pain Points :

- Often forgets leftover food, leading to waste.
- Finds food management tools overly complicated or time-consuming.

### Expectations from Sustainify :

- Intuitive interface for tracking food inventory.
- Quick recipe suggestions tailored to leftover ingredients.
- Options for donating surplus food nearby, with clear navigation.

Figure 2 : User Persona 2 Self-Created by Team

## STEP-2 DESIGN PROCESS AND LO-FI PROTOTYPE

Based on our research, requirements gathering and user personas, we move on to sketching primary designs and creating lo-fi prototypes.

### STEP-2.1 : USER-FLOW

We started with creating user journeys for mentor and mentee respectively.

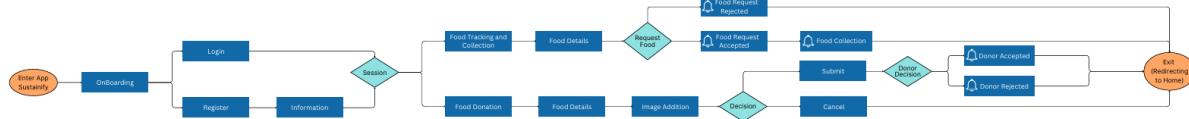


Figure 3 : Donor - Requester navigation, self-created by the team

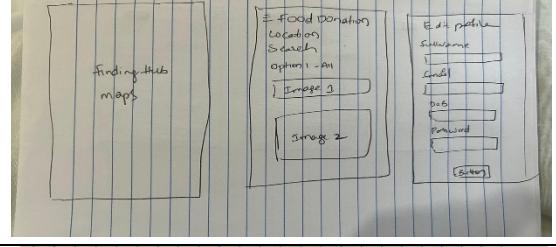
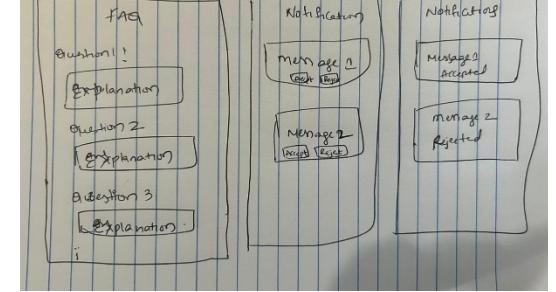
### STEP-2.2 : DESIGN IDEAS

Based on the user journey, we identified the broad key features and brainstormed two design drafts.

#### Design Draft 1 :

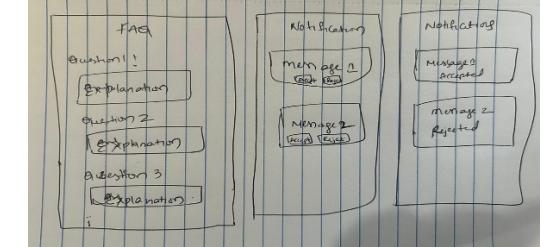
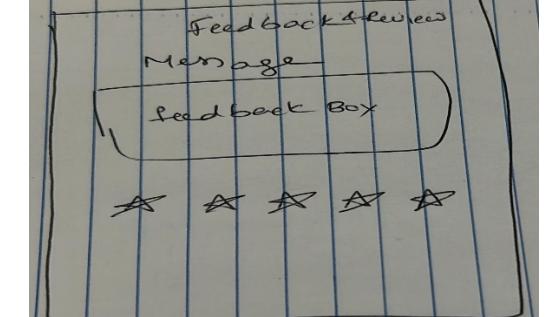
The first draft focused on broadly outlining the three key features of the app.

Features	Diagrams / Sketches
User Profile: User can build a profile and login into the application	

Matching Algorithms	
<b>In App Communication</b> The user can refer to common FAQ's with the application or can get in touch with other donors or requester via in-app notifications	

### Design Draft 2 :

The second draft focused on enhancing the design based on draft one. We retained all the key features of draft one and identified three more relevant features to the app.

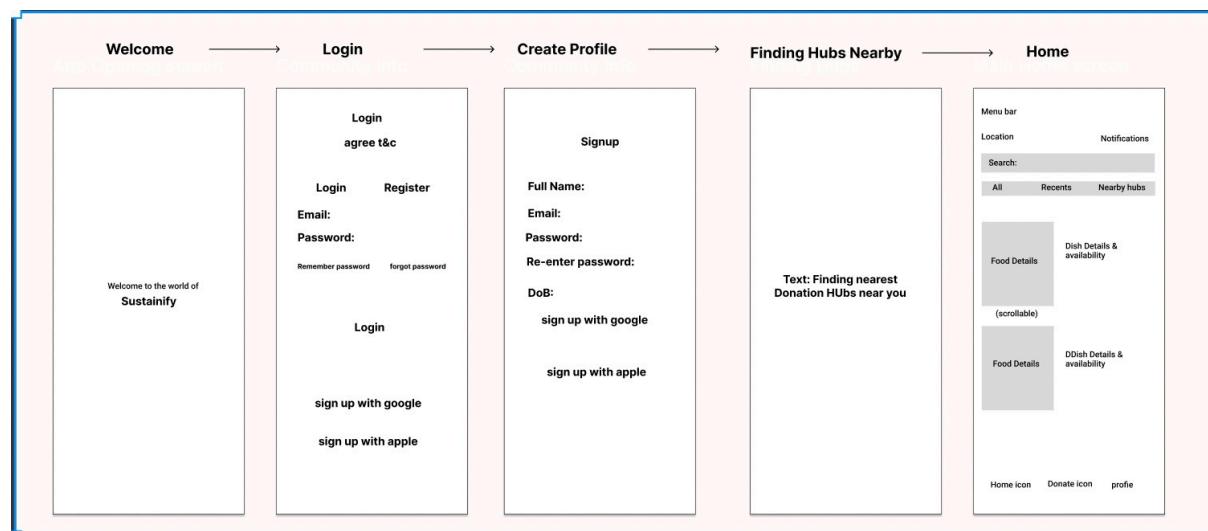
Features	Diagrams / Sketches
Goal Setting and Tracking	
Feedback and review	

## STEP-2.3 : LO-FI PROTOTYPE

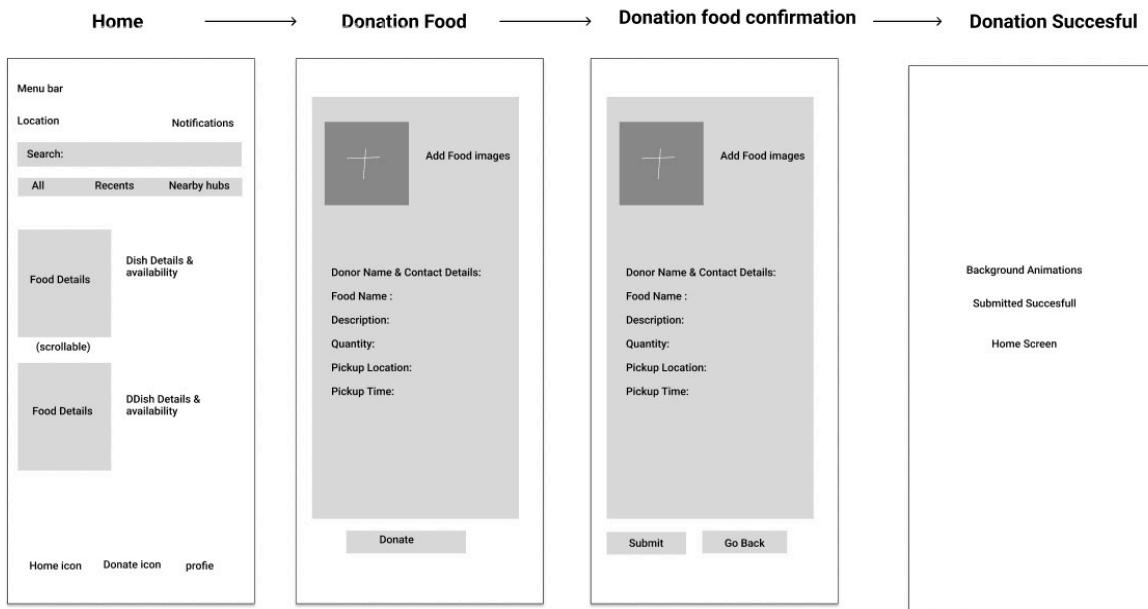
Based on the rough sketches of the interface and multiple discussions, we created a lo-fi prototype. Each prototype has two versions, one each for donation and for request for the food. The lo-fi prototype focused on the intersection of the four broad elements: user persona, user flow, key features and user interface. We also introduced additional features and defined the existing features with more layers of functionality.

### LO-FI PROTOTYPE FOR DONOR

Given below are the images of prototype 1. You can view the flow in the Figma [click here](#).



## Donator



### ANALYSIS OF LO-FI PROTOTYPE 1 WITH SCENARIO-DRIVEN DONOR USER-EXPERIENCE

Samuel Rhod's, a 21-year-old student who is an enthusiastic and enjoys sustainable living and is very passionate about community driven initiatives. Always tries to reduce food wastage, actively participate in global cause like zero hunger. And his main goal is to adopt sustainable practices in his daily life. Further he can contribute and participate through the app which we have designed which ultimately leads to food wastage reduction and steps towards zero hunger. As a young mind Samuel can explore the app very easily as it has a great user interface which meets all his needs in the contribution of donating food. Let us investigate it with the help of lo-fi prototype 1.

There are multiple features in this app and without any hurdles the user can donate the food.

**Profile creation:** This profile section consists of different columns in which the donor must fill all the basic details While creating an account and can also edit the profile details if there are any changes to be made.

**food donation uploads by donor:** Here the user can manage all the food donations which are to be uploaded. Section includes all the features of

uploading an image of the food, it also has the donor's name and contact details following with the details and description of the food item type which is available.

It has a pickup location and time which must be updated so that it will be helpful for the requester to track and collect the food items at specific location on time.

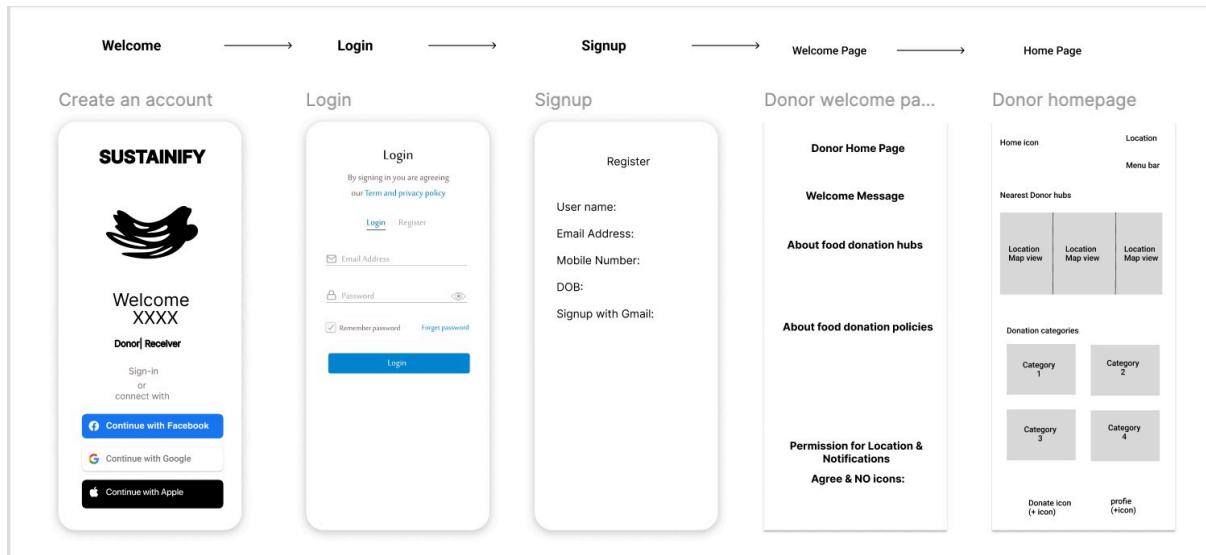
once the donor uploads the available food item with all the required details, The user can submit it. There is also another reconfirmation option which must be entered to upload an item for donation. Once the donation is successfully uploaded the user gets a notification Which shows the Successful status of the upload.

**Requests and general notifications:** here there are two features available only for the donor where the user can see two sections, one request section is to accept or decline They request initiatives made by the requester. The donor can accept or decline a request based on the availability of the food item quantity and its expiry time. The general notification section since all the notifications related to the orders which are being requested.

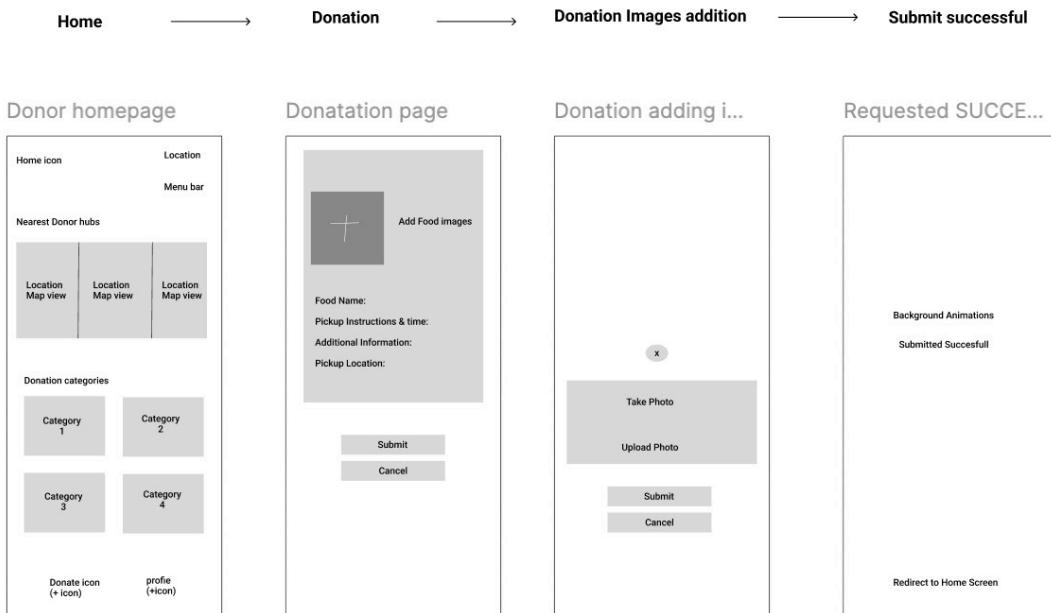
**Terms and conditions:** here are few specific terms and conditions for the donor which are mandatory to be accepted at the time of account creation. Conditions mention all the rules and regulations which are aligned with the government and food safety policies and measures which are being followed in the application. Once agreeing to all these terms and conditions the donor is subjected to follow all the Conditions.

**privacy policy for donor:** the privacy policy ensures that the data of the donor is secure and is not subjected to any privacy breach.

Given below are the images of prototype 2. You can view the flow in the Figma [click here](#).



## Donor



## ANALYSIS OF LO-FI PROTOTYPE 2 WITH SCENARIO-DRIVEN DONOR USER-EXPERIENCE

Mark, a 35-year-old teacher passionate about reducing food waste, recently discovered the food donation app. After downloading it, he begins by signing up through the registration screen, which offers quick and easy options such as email login or using Google and Apple credentials. Once logged in, Mark explores

the home screen, where he is greeted with an intuitive interface. The app displays nearby food donation hubs on a map, community initiatives, and options to donate surplus food. The clean layout immediately makes him feel comfortable navigating the app.

A few days later, Mark hosts a dinner party and ends up with surplus home-cooked food. Rather than letting it go to waste, he decides to use the app's "Donate icon" on the home screen. Mark starts by uploading a photo of the food using the "Add Food Images" feature. He fills out the donation form with details such as the name of the dish, quantity, ingredients, and pickup instructions.

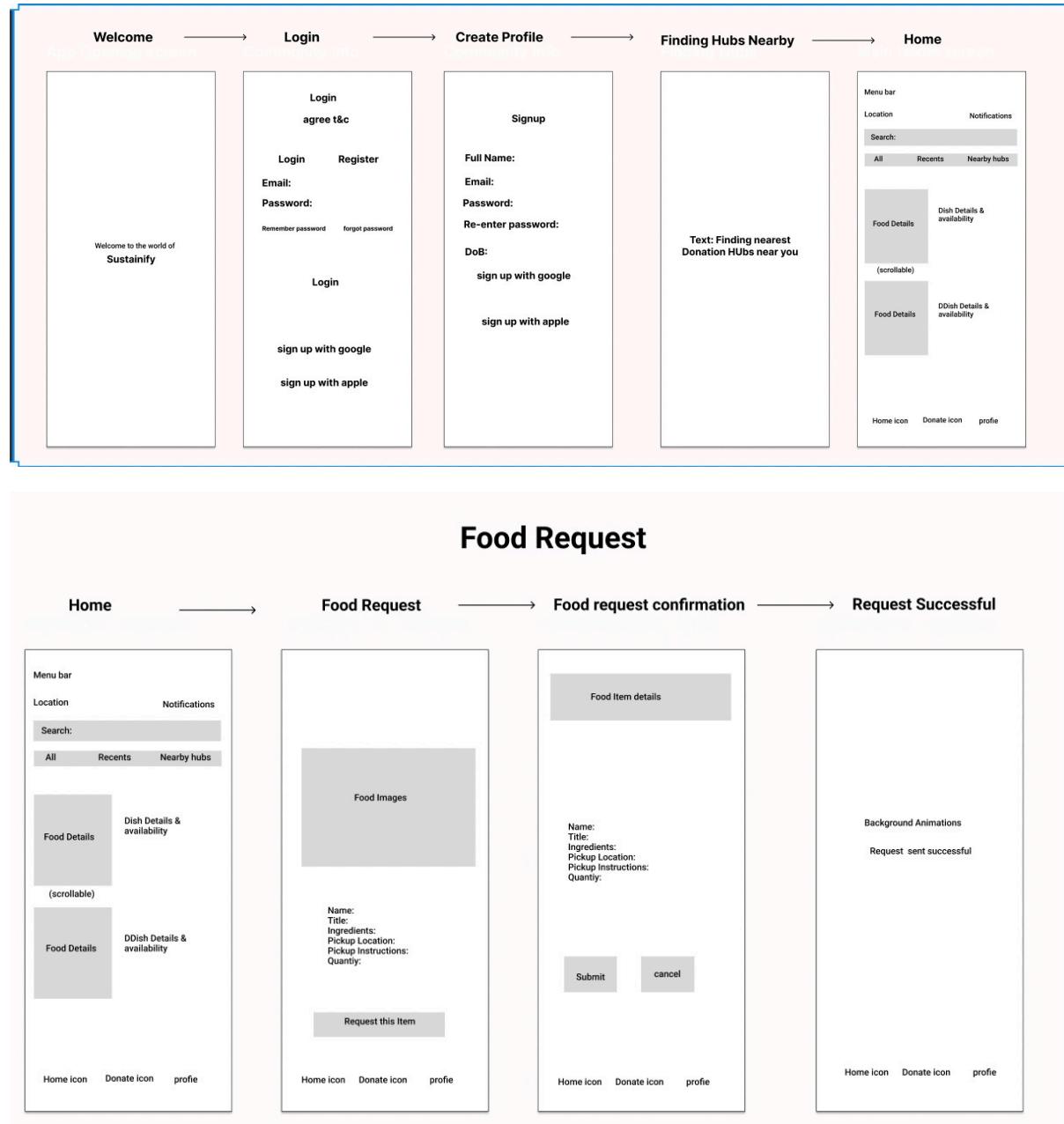
The prompts and dropdown options guide him effortlessly through the process. Before submitting, Mark reviews the details on the re-confirmation screen to ensure everything is accurate. After submission, the app displays an animated success message, confirming his donation and redirecting him to the home screen. Mark feels a sense of fulfilment seeing his donation listed in the app.

In the following days, Mark uses the app's "notifications screen" to track updates about his donation. He receives a message confirming that his donation was successfully picked up by a nearby hub. Mark also takes some time to explore other features, such as the "profile page," where he can view his donation history and edit personal details. The app also keeps him informed about community efforts and zero-waste campaigns through timely reminders and notifications, encouraging him to stay engaged with its mission.

After a week of using the app, Mark decides to leave feedback through the "feedback section." He praises the app's user-friendly interface, particularly the seamless donation process and the helpful real-time hub locator. He appreciates the attention to detail, such as the animated success message after submissions, which enhances the overall experience. However, Mark suggests adding features like scheduling recurring donations and saving frequently donated items to make the app even more efficient. Overall, he is highly satisfied and regularly recommends the app to his friends, emphasizing how it has made reducing food waste both easy and rewarding.

## LO-FI PROTOTYPE FOR REQUESTER

Given below are the images of prototype 1. You can view the flow in the Figma [click here](#).



## **ANALYSIS OF LO-FI PROTOTYPE 1 WITH SCENARIO-DRIVEN REQUESTER USER-EXPERIENCE**

This is an analysis made on the requester user experience where we mention scenario of a 32-year-old user who is not highly educated and whose lifestyle is basically dependent on the donated food. This user wants to contribute to the sustainable lifestyle by getting involved in the activities of collecting leftover foods, to save an extra amount of money which is being spent on food. This user's participation equally helps in this process of reducing food waste and hunger. This user uses our app which has a very friendly user interface in requesting the food items and accessing the location making it smoother to go and collect the food items from the nearest hubs or locations by tracking them which are available.

this this app is very easily designed for the requester to check the availability of the food items in the nearby locations and to track them in the process of collection.

it's just a click away for the user to request the available food item and once collect when the donor accepts the request that has been made.

finding nearest hubs: when the user logs into the app, the user is directed to the nearest donation hub locations. The app tracks all the nearest locations and the food availability using the user's current location.

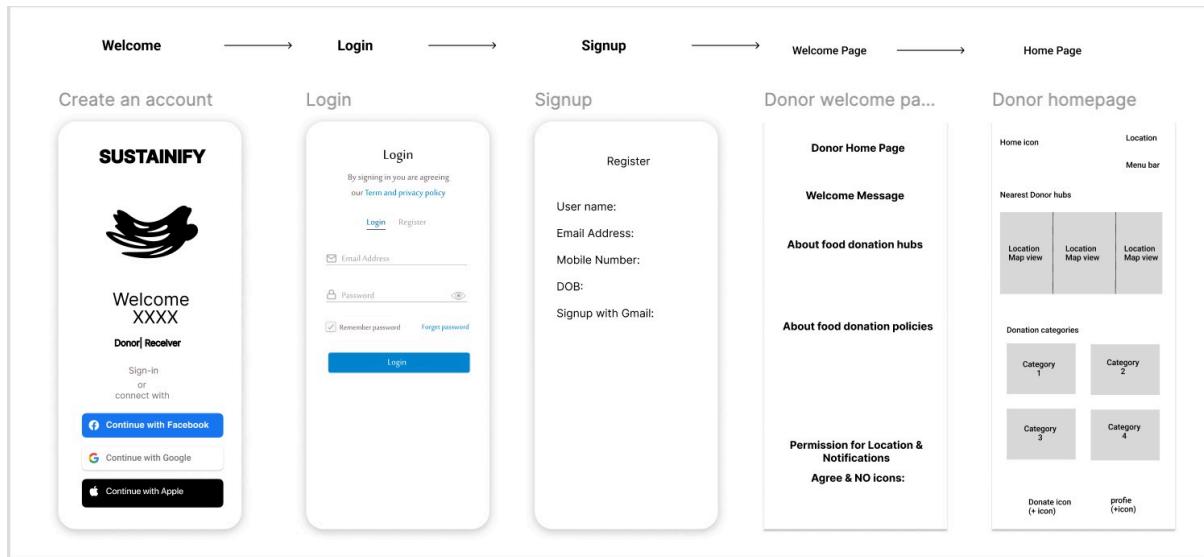
food collection requests by requester: in this section the requester can go through all the food items which are uploaded and know their availability status, the food item descriptions, the location of the available food item and the time for collection.

there are two options available for the requester one is to send a request and the other is to cancel the request which has been made.

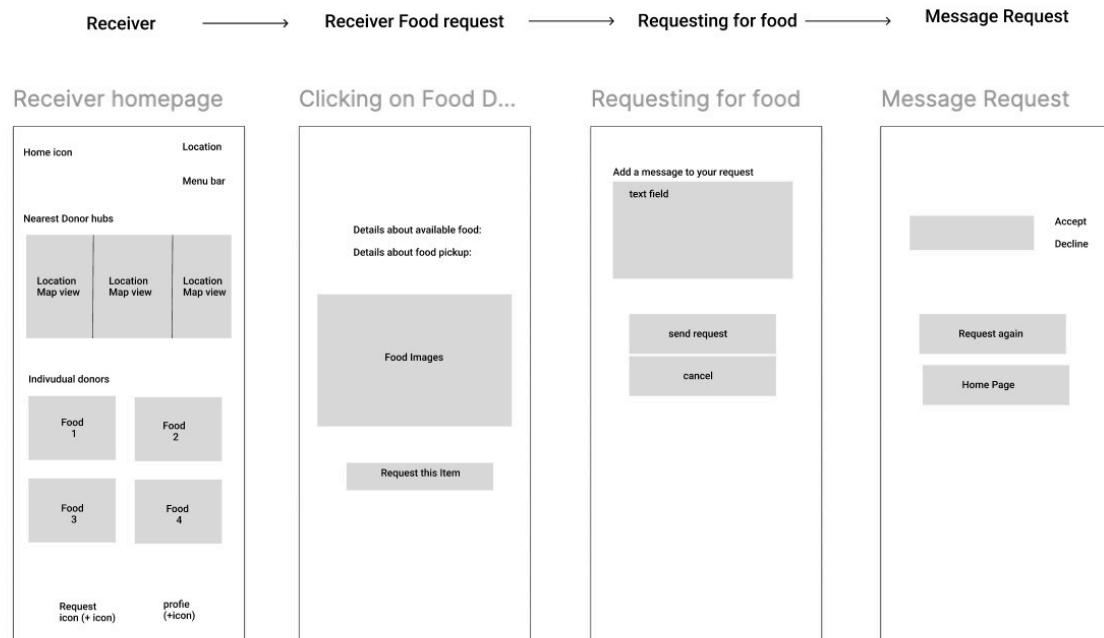
notifications section for the requester: here the user gets the updates of the request that has been placed. If a request is accepted, then there will be a notification with a text message confirming the order request.

there is also another notification which indicates the rejection of request subjected to the unavailability of the food items. Once the request is successfully accepted the user can collect from the location.

Given below are the images of prototype 2. You can view the flow in the Figma [click here](#).



## Receiver



## **ANALYSIS OF LO-FI PROTOTYPE 2 WITH SCENARIO-DRIVEN RECEIVER USER-EXPERIENCE**

The lo-fi model provides an intuitive and straightforward process for users seeking food donations from the app. Upon opening the app, the user logs in or signs up using accessible options such as email or third-party accounts (Google/Apple). Once logged in, the user is directed to the \*home screen\*, which showcases a range of donation hubs, restaurants, or community kitchens offering surplus food. The list is well-organized, with clear visuals of the food available, location details, and distance markers.

The user can explore nearby donation hubs via the \*search bar\* or by switching to the map view for a more location-focused approach. After selecting a donation hub, the user is presented with details of the available food items, such as dish descriptions, quantity, and pickup instructions. They can then request the item by clicking on it, which triggers a simple \*message request interface\* to communicate with the donor or hub.

Upon confirmation of the request, the app provides real-time notifications, guiding the user to the pickup point. A detailed map view is available to assist the user in locating the hub with ease. The final step involves a seamless confirmation process for the pickup, ensuring transparency between the donor and the receiver.

The user appreciates the app's ease of navigation, visually appealing layout, and the clear call-to-action buttons, which simplify the process of finding and requesting food. However, feedback suggests incorporating features like food quality ratings and scheduling pickups for added convenience. Overall, the lo-fi model effectively caters to users looking to access surplus food, fostering a user-friendly and impactful experience.

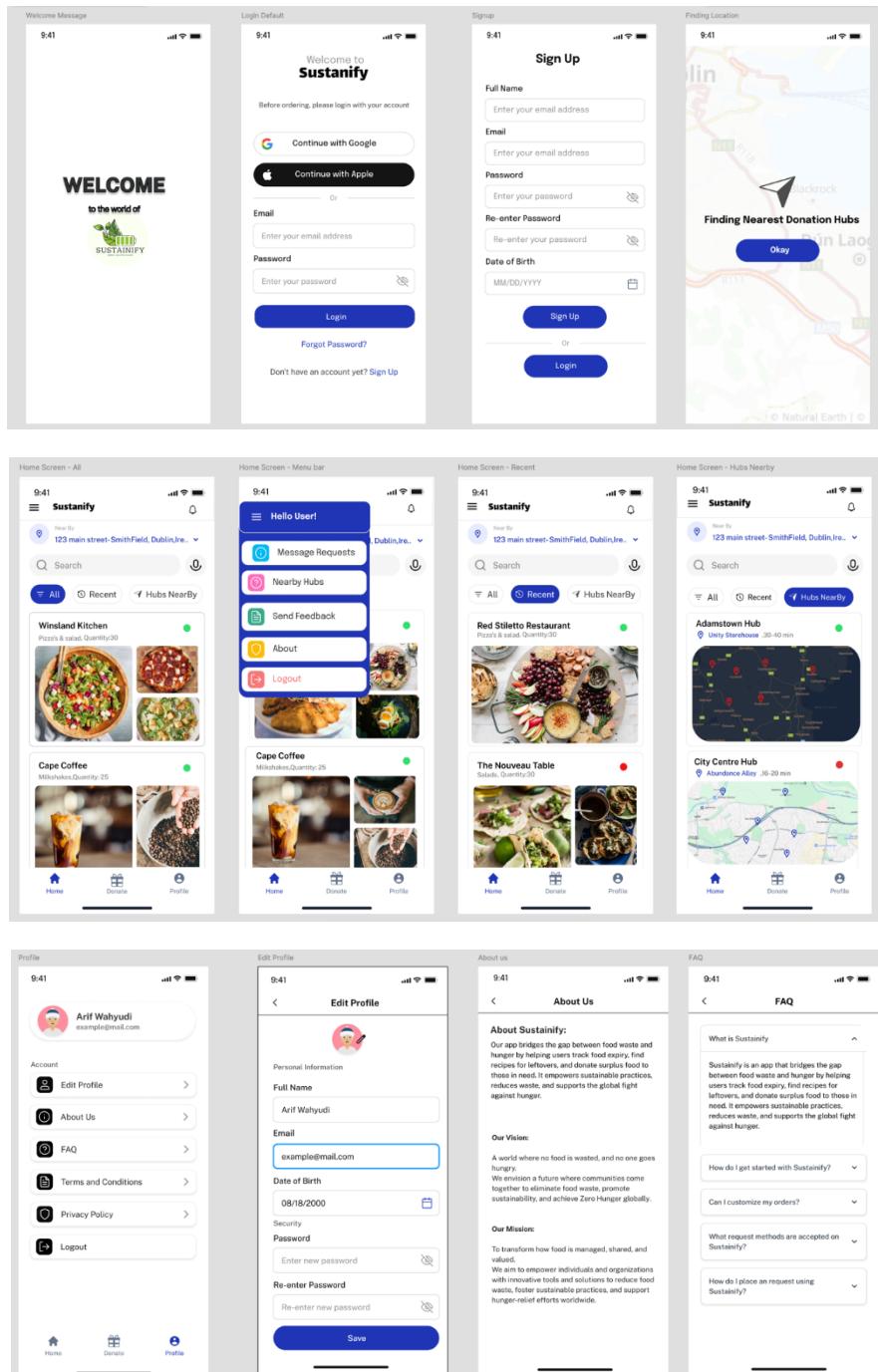
## **STEP-2.4 : COMPARATIVE ANALYSIS OF LO-FI 1 VS 2**

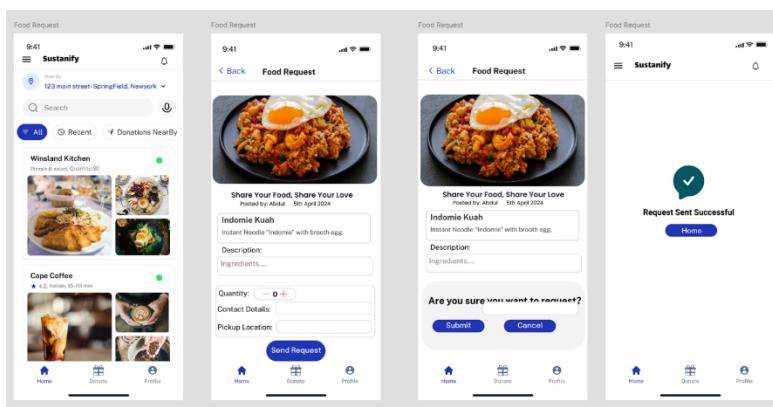
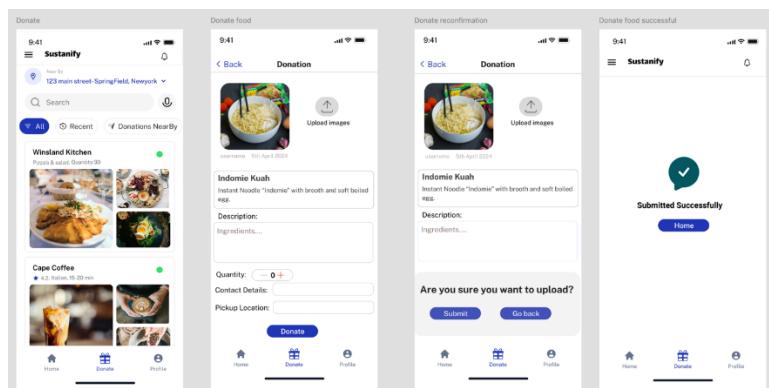
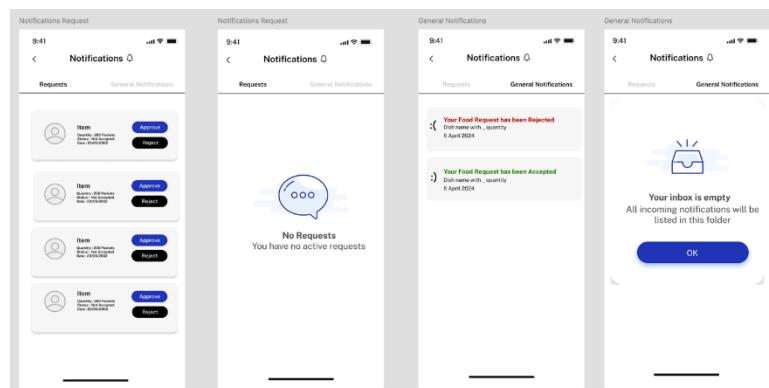
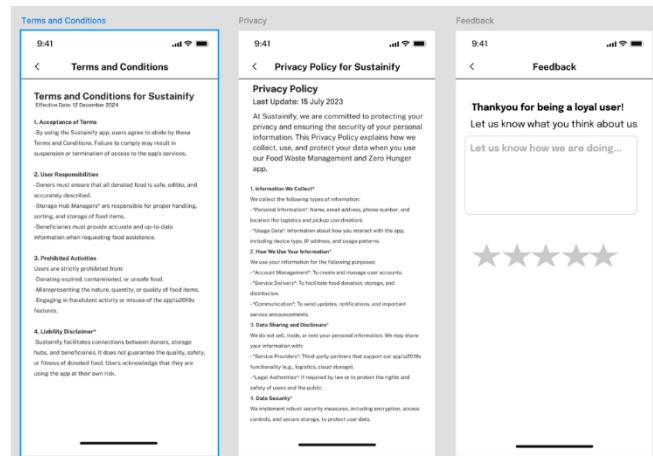
After a detail comparison between lo-fi1 and lo-fi 2, the Lo-fi 2 has a complex structure of design in the user interface and there's many options which can be only preferred by someone who is having a prior experience using similar kind of app. Whereas, the Lo-fi 1 is designed in such a way that there are only required features which can be easily understood by everyone including the first time users. It is very much user friendly and the interface can be easily operated. It only projects the required information and avoids confusion when compared to the Lo-fi 2. As the main goal of the design is to provide the users a less complex and easy to use app we proceed with the Lo-fi 1 prototype.

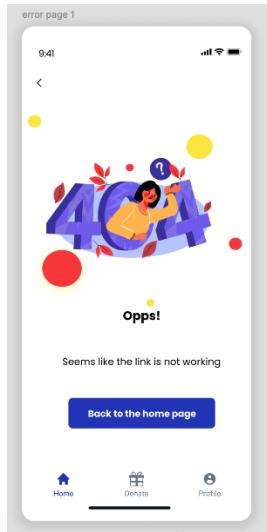
## STEP 3: DESIGN AND HI-FI PROTOTYPE

Based on the lo-fi 2, we came up with the name, logo, colour and typography (Appendix C).

Given below are the images of hi-fi prototype for application. You can view the flow in the Figma [click here](#).







## ANALYSIS OF HI-FI PROTOTYPE

After comparing both lo-fi 1 and lo-fi 2 prototypes we have progress to develop a higher fidelity prototype using Figma. The primary goal is to ensure that these are stratify app is user friendly and easy to navigate. User feedback was also critical for designing the functionality of our app.

We have created a prototype that showcased the key functionalities of our sustainify app. Further, this was presented to few of the users and asked to provide their feedback on the impressions of your apps usefulness and usability.

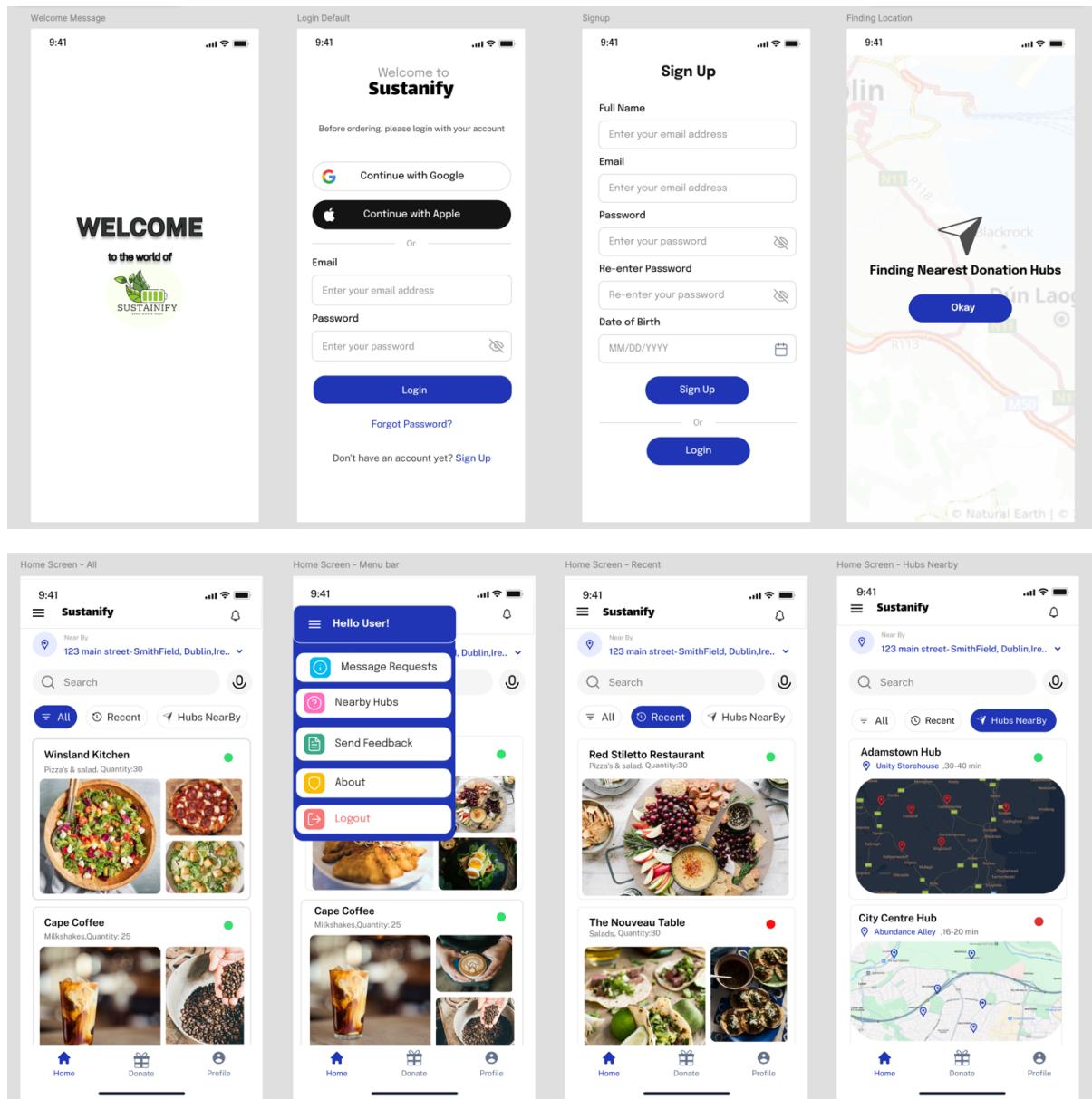
Considering all the different probabilities of scenarios we concluded in designing our final Hi-fi prototype which is found to have all home screens primary features, which includes the food available display, all the nearby food Hubs. We made it clear to ensure that both recent and hubs nearby icons are more accessible and visually distant and simplified the dropdown menu for a smoother navigation.

The distinction made between request and general notifications was very helpful. It shows a desire expressed by the user for clearer status updates on food requests and donations. The general notification page now consolidated all notifications related to user actions making it easier to track order status.

### HOME SCREENS:

this page displays main features of the application where it includes features related to the location, notifications, images of available foods and their

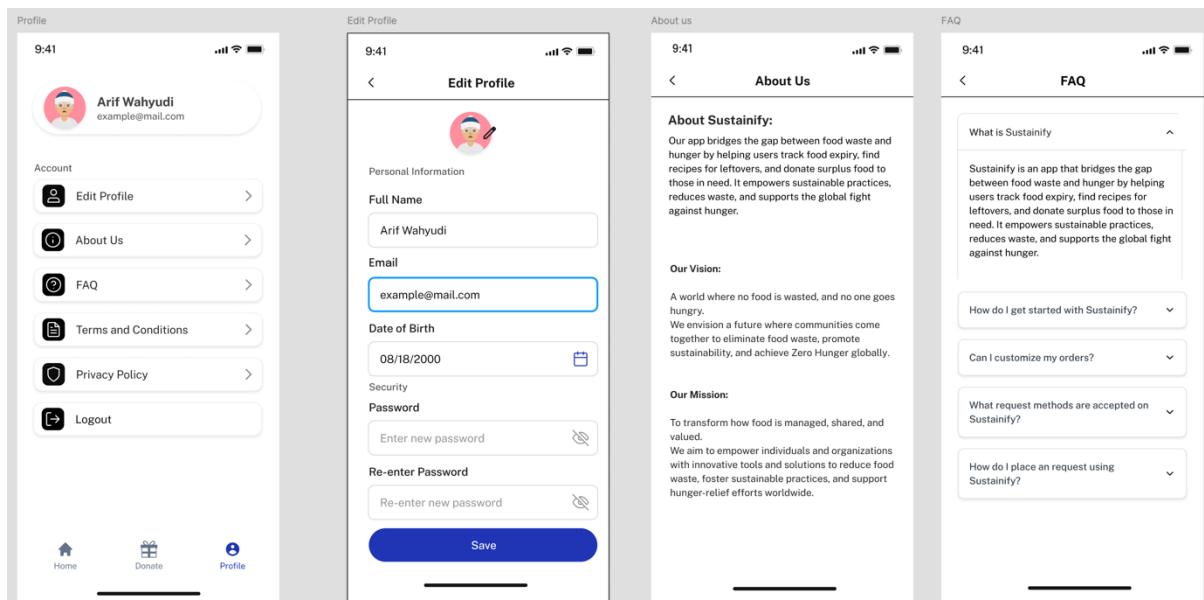
description, quantity of food. This page also has different icons of the application which are mapped to the further pages and can be accessed once clicked. If the menu bar is once clicked it shows a drop down which consists of the information regarding message requests, nearby hubs, sending feedback, details about the application send an option to log out of the application. Other options provided in the main page as seen are recent and hubs nearby. When the user clicks on the recent option icon the page scrolls and adjusts itself sorting all the recent viewed food items. Similar to that when clicked on hubs nearby the page redirects to the nearest hub locations indicating the exact location of the hub name and the distance measured from the current location and also its availability.

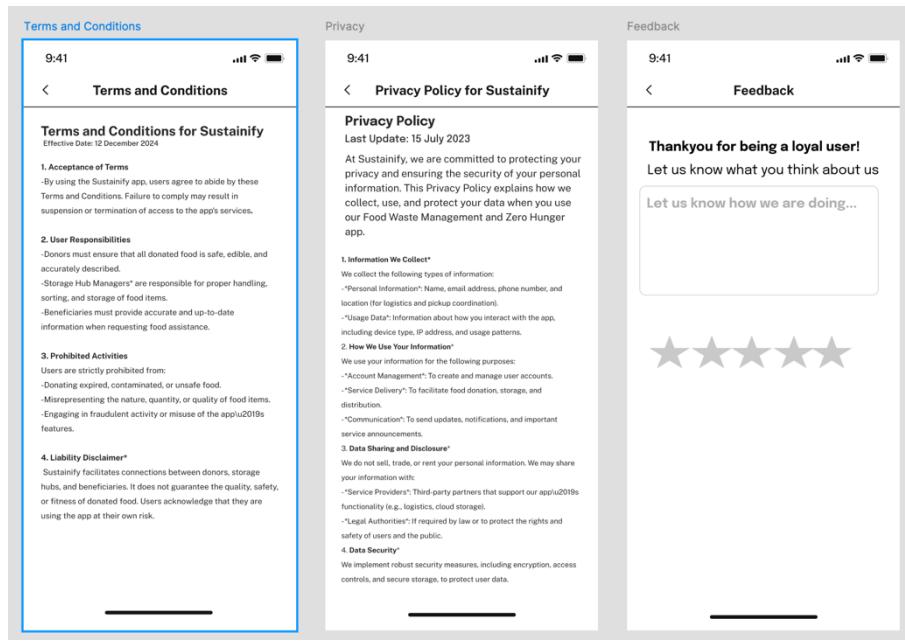


## PROFILE:

when the user clicks on the bottom right profile icon, the user profile can be seen in this page where the user can access to edit the profile and make changes. The option about us shows the specific information related to the application.

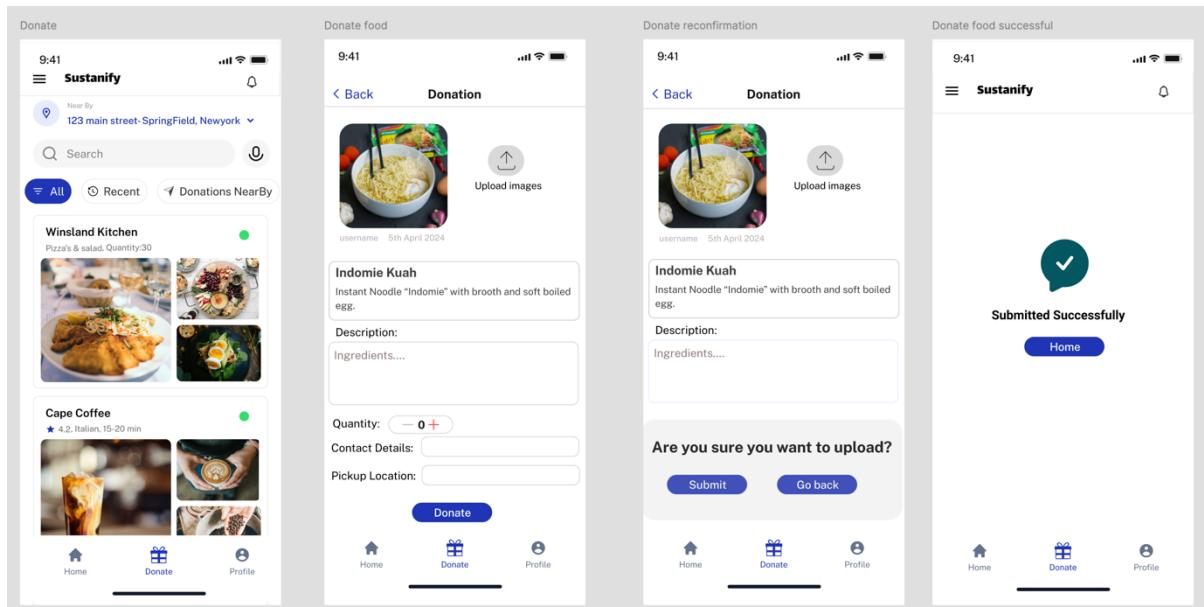
There is an FAQ which gives the drop down of all the related queries which the user can possibly inquire about. The terms and conditions set out the rules and restrictions for the users who use the sustainify application. Whereas the privacy policy has a legally binding document that outlines how sustainify application collects uses stores and shares user data. The user after clicking on the edit profile option gets redirected to the personal information section which allows the user to make changes related to name, e-mail, date of birth and the password related. Once the user makes the changes in the bottom there is a save icon which updates the information given.





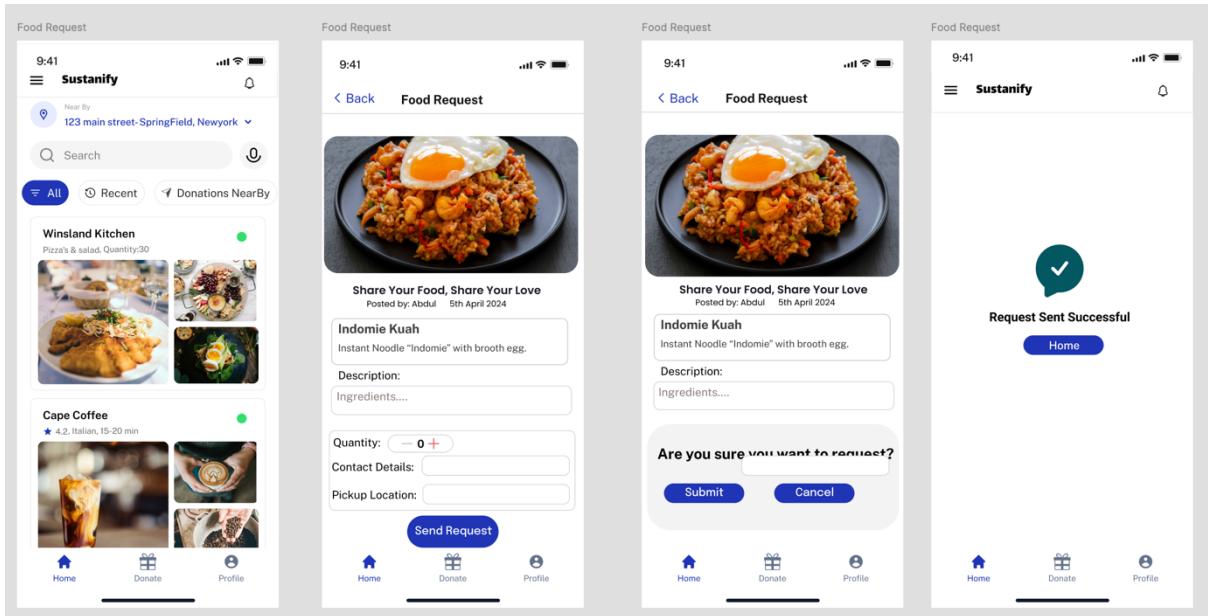
## DONATIONS :

Donate food: it includes all the details added about the food items by uploading images and specifying pickup locations. We also streamlined the process by adding a go back option at every stage of donation process. We have also improved the visibility of submit button end included the final confirmation page hence to avoid submissions which are unintentional.



## FOOD REQUEST:

the importance of clear descriptions and images when browsing available food items can be seen in our application design. The reconfirmation was not clear in the lo-fi prototype which we have updated finally in the high 5 prototype which provides a clear action button. In addition to that users can now receive a success message after the request is submitted.

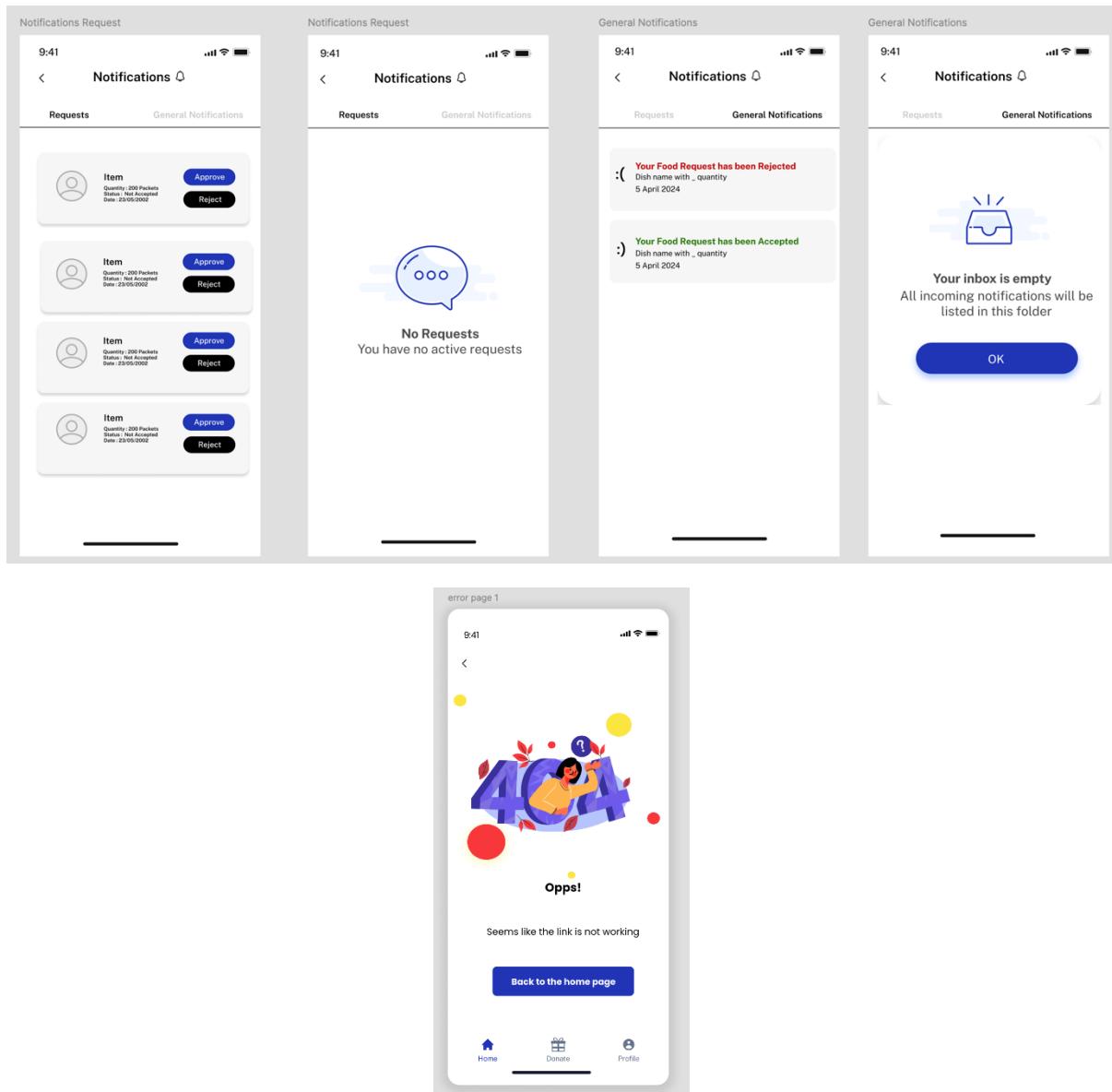


## NOTIFICATIONS:

The notification section is categorized into two categories: request and general notifications.

The request section of the application handles all the set of requests made by the different users for the collection of food available. it gives them any description about the food item name, quantity available, status and date mentioned. The donor has the access to approve or reject the request of orders placed by the other users.

The general notification section displays all the requests with the user details and status of the order whether they're accepted or rejected. It also updates the status of the order once it is collected. Overall incoming and outgoing notifications will be listed in this folder.



overall, sustainify app's design and development process is significantly benefited from user's feedback. By discussions and clear suggestions at every stage we could create more intuitive and user-friendly experience application. The key changes which we have made include enhancement in navigation, seamless donation and request process, and the improvement in visibility of notifications.

## **STEP 4: EVALUATION**

In evaluating the usability of UI design, Jakob Nielsen's Heuristics is popularly used. Applying the following ten principles of Jakob Nielsen's Heuristics, we evaluate our Lo-fi and Hi-fi prototypes.

### **1. VISIBILITY OF SYSTEM STATUS :**

Usually a timely feedback to the users about the status of the system is highly recommended. Whereas, in our prototype there is no such icon related to loading or indicating. Also there is missing indication if there's an error while connecting to the internet. This above feature should be involved in an application for it to be potential.

### **2. MATCH BETWEEN SYSTEM AND REAL WORLD:**

In our app we have used simple and familiar terms in English as "Donate Food" and "Food Request" ensuring people from diverse backgrounds can easily understand and navigate the app. As English is widely spoken in Ireland, it makes a wide user accessibility and plain, real-world language encourages more number of people to participate in donation and collection.

### **3. USER CONTROL AND FREEDOM :**

We have given editable inputs for the users even before finally submission the requests. It enables the users to modify and update the request.

Also, full access and control is given to the users over their account information, privacy settings and preferences.

### **4. CONSISTENCY AND STANDARDS :**

Icons like Home, Donate and profile are consistent and uniformly used across most of the pages. Colours like Green is used for availability and accepted orders, and non-availability and rejected orders are highlighted with Red. This provides a familiar experience for the users.

Clear confirmation prompts like "are you sure?" are included which are very useful for the users.

## **5. ERROR PREVENTION :**

The design of app is intuitive, which reduces any confusion or chances of errors due to complex navigation. There are least chances of users selecting incorrect options.

## **6. RECOGNITION RATHER THAN RECALL :**

Usage of intuitive icons and visuals which made the users to easily recognise different categories. For an example we have used notification icon, location icon, mic icon for audio input.

## **7. FLEXIBILITY AND EFFICIENCY OF USE :**

This app is flexible and can be efficiently used by all categories of users, it may be a new user or experienced. Allowing batch actions features like logging multiple food waste entries. A clear navigation system which can help the users to quickly access the most important features without any unnecessary steps.

## **8. AESTHETIC AND MINIMALIST DESIGN:**

The app focuses on clean layout. There is minimal text and simple options available. Only three to four common primary colours simple and harmonious are used. Avoided long lengthy paragraphs instead used brief descriptions for easy understanding.

## **9. HELP USERS RECOGNIZE, DIAGNOSE, AND RECOVER FROM ERRORS:**

There is FAQ section available for diagnosing repetitive issues and help for troubleshooting issue.

Whenever there's any software error or network error the app displays an "oops" and return back to homepage. Which helps the users to and reload and reconnect.

## **10. HELP AND DOCUMENTATION:**

There's no customer support or in-depth troubleshooting for our application.

## **STEP 5: POSTER**

Here is the final summary poster which includes all the lofi design and hi-fi prototypes designs.

We tried to use vivid spectrum range of colors which symbolizes a dynamic and impactful visual identity in our application. With regular sized words having a perfect readability balance and visual appeal. We have tried to consider the inclusion of similar sized text boxes call to action boxes, buttons, and cards and mainly focusing on minimalism.

In the process of streamlining the content, we have created few user personas which helped in the research results. In our research section we have provided and overall overview of our requirement gathering Process. There are two different lo-fi designs which are compared and one of them is selected based on its user-friendly interface. We have further incorporated the lo-fi screen let's see which has a simple design. The background of our application consists of real iPhone 13 mini mobile which is used to enhance the authenticity. All this are incorporated for the best representation and innovation of our designs.

In the evaluation section it summarizes all the test case scenarios, various feedback received from the users and the complete vision of this project. All the presentations of the team members right included in the conclusion segment.

In this appendix we have included our final poster which can be considered as a visual representation of our overall project. For a better understanding of the key aspects and designs of our project a poster is created.

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## **APPENDIX**

### **APPENDIX A**

#### QUESTIONNAIRE FOR OUR DESIGN

1. What is your age range? \*
  - a) Under 18
  - b) 18-24
  - c) 25-34
  - d) 35-44
  - e) 45 or above
  
2. What is your occupation? \*
  - a) Student
  - b) Employed
  - c) Freelancer
  - d) Homemaker
  - e) Other: \_\_\_\_\_
  
3. What is your gender? \*
  - a) Male
  - b) Female
  - c) Prefer not to say
  
4. How do you currently track and manage your food inventory at home (e.g., pantry, fridge)? \*
  - a) I don't track my inventory
  - b) I manually check before purchasing
  - c) I use a shopping list
  - d) I use an app or tool
  - e) Other: \_\_\_\_\_
  
5. What steps do you take to minimize food wastage at home?
  - a) Composting

- b) Donating extra food
- c) Sharing leftovers with neighbors/friends
- d) Cooking smaller portions
- e) Storing food properly
- f) Other: \_\_\_\_\_

6. What types of food do you find yourself wasting the most?\*

- a) Fruits
- b) Vegetables
- c) Dairy products
- d) Meat
- e) Bread/grains
- f) Pre-cooked meals

7. What motivates you to reduce food wastage?\*

- a) Saving money
- b) Environmental impact
- c) Contributing to Zero Hunger goals
- d) Ethical reasons
- e) Other: \_\_\_\_\_

8. Have you used any apps or platforms to reduce food wastage before? If yes, what were their strengths and weaknesses?

Ans : \_\_\_\_\_

9. What type of device do you primarily use for managing your daily tasks?\*

- a) Smartphone
- b) Tablet
- c) Laptop/Desktop
- d) Other

10. How important is ease of use in a food management tool?\*

Ans: Linear Scale ( ranging from 1 to 5)

Not important - 1

Very Important - 5

11. Would you like the app/tool to include gamified elements (e.g., rewards for reducing food wastage)?\*

- a) Yes
- b) No
- c) Maybe

12. Are you aware of how food wastage impacts the environment and global hunger?\*

- a) Yes
- b) No
- c) Somewhat

12. Would you find it helpful if the tool provided tips or educational content about sustainable consumption?\*

- a) Yes
- b) No

13. What type of educational content would you prefer?\*

- a) Short articles
- b) Videos
- c) Infographics
- d) Interactive quizzes
- e) Other: \_\_\_\_\_

14. Would you like to connect with others in your community to share or donate excess food?\*

- a) Yes
- b) No

15. How do you feel about participating in challenges (e.g., '7-day zero food waste' challenge)?\*

- a) Very excited
- b) Somewhat interested
- c) Neutral
- d) Not interested

16. How much time would you be willing to spend daily using a tool to reduce food wastage?\*

- a) Less than 5 minutes
- b) 5-10 minutes
- c) 10-20 minutes
- d) More than 20 minutes

17. What would make you stop using a food management tool?

Ans: \_\_\_\_\_

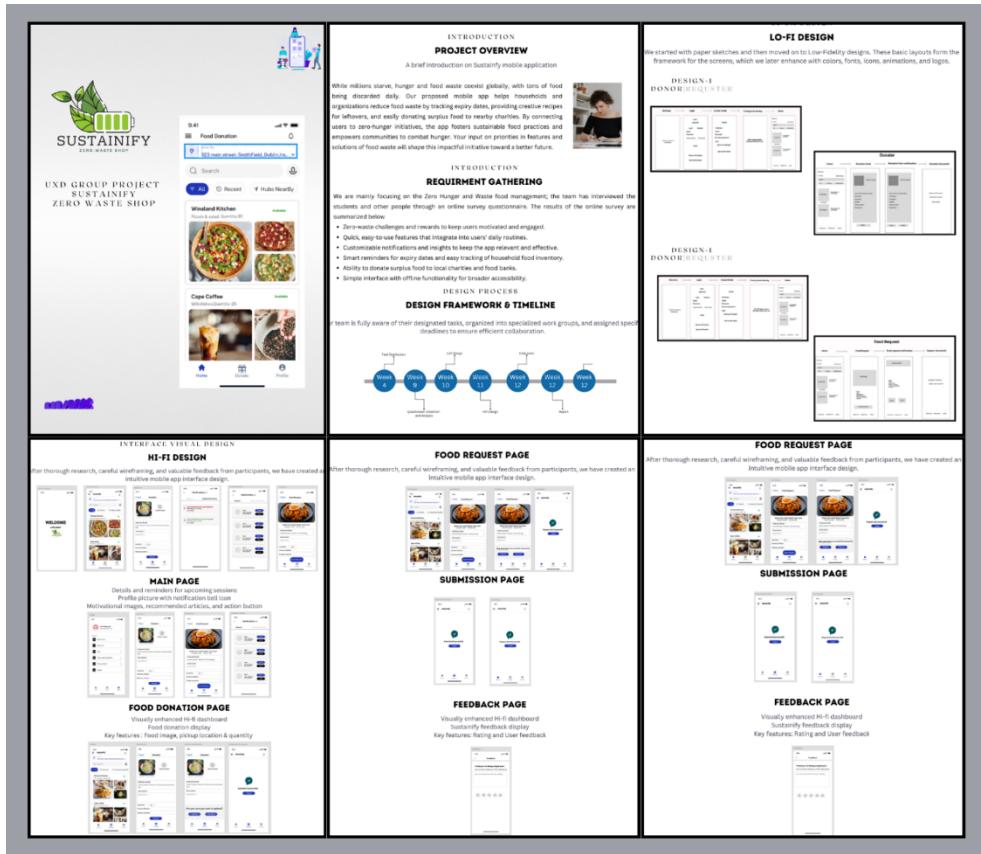
18. Do you have any specific features in mind that could make a tool like this more effective?

Ans: \_\_\_\_\_

## APPENDIX B

### SUMMARY POSTER

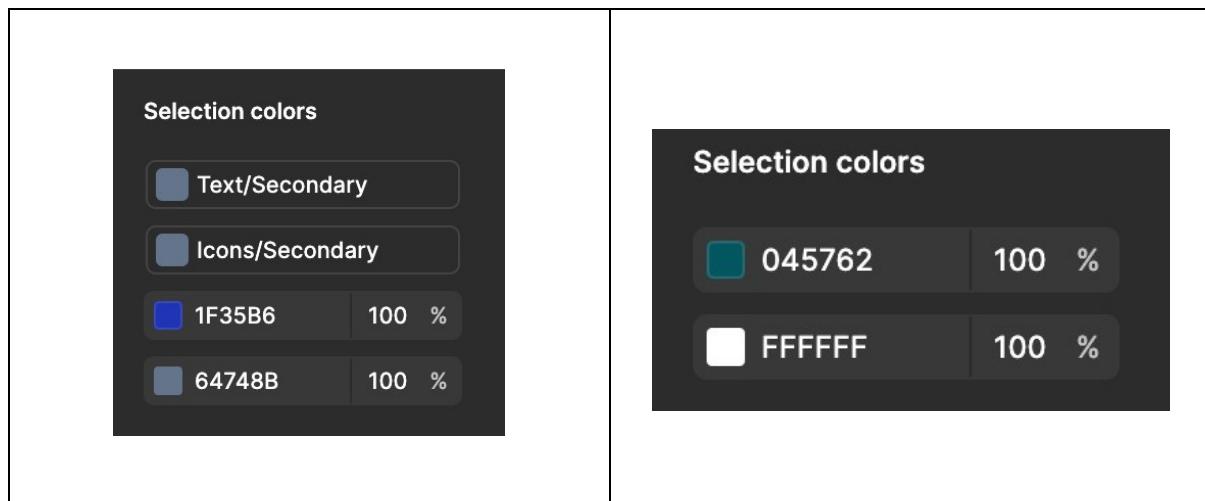
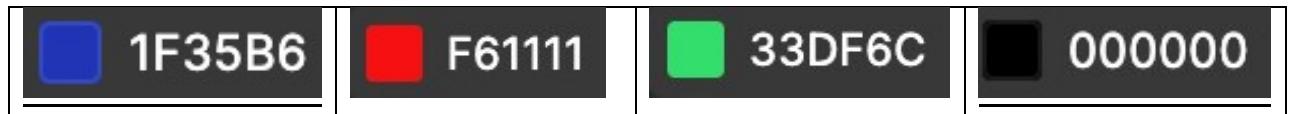
Given below are the image of poster. You can view the poster more clearly in the canva [click here](#) .



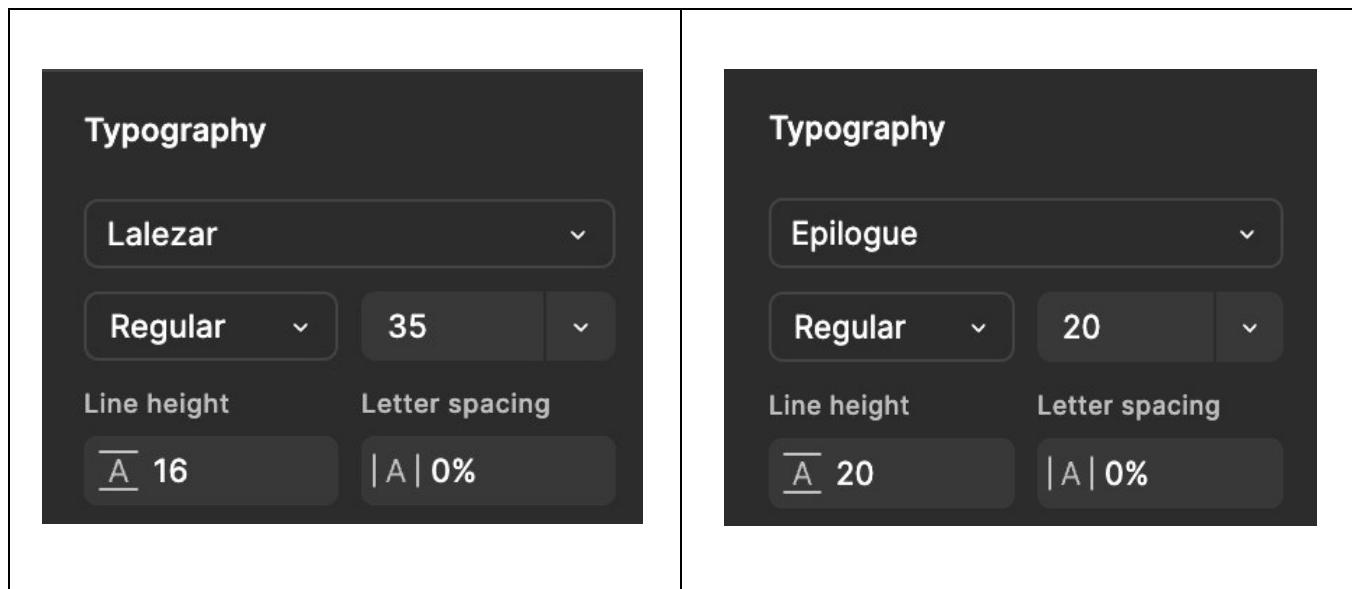
## APPENDIX C

### LOGO, COLOUR AND TYPOGRAPHY

Color scheme of the Hi-fi prototype :-



Typography of the Hi-fi prototype :-



# APPENDIX D

## INDIVIDUAL SUBMISSION FORMS



### Assessment Submission Form

<b>Student Name</b>	Sarayu Nimmakayala
<b>Student Number</b>	24216057
<b>Assessment Title</b>	Group Assignment on Sustainify : Food Waste Management and Zero Hunger App
<b>Module Title</b>	IS41520 UXD: User-Centered Design
<b>Module Co-ordinator</b>	Madeleine (Maddy) Steeds
<b>Tutor (if applicable)</b>	
<b>Date Submitted</b>	12-12-2024
<b>OFFICE USE ONLY Date Received</b>	
<b>OFFICE USE ONLY Grade/Mark</b>	

A SIGNED COPY OF THIS FORM MUST ACCOMPANY ALL SUBMISSIONS FOR ASSESSMENT.

STUDENTS SHOULD KEEP A COPY OF ALL WORK SUBMITTED.

**Procedures for Submission and Late Submission**

Ensure that you have checked the School's procedures for the submission of assessments.

**Note:** There are penalties for the late submission of assessments. For further information please see the University's **Policy on Late Submission of Coursework**, (<http://www.ucd.ie/registrar/>)

**Plagiarism:** the unacknowledged inclusion of another person's writings or ideas or works, in any formally presented work (including essays, examinations, projects, laboratory reports or presentations). The penalties associated with plagiarism designed to impose sanctions that reflect the seriousness of University's commitment to academic integrity. Ensure that you have read the University's **Briefing for Students on Academic Integrity and Plagiarism** and the UCD **Plagiarism Statement, Plagiarism Policy and Procedures**, (<http://www.ucd.ie/registrar/>)

**Declaration of Authorship**

I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

Signed. Sarayu Nimmakayala..... Date 12-12-2024.....



## Assessment Submission Form

<b>Student Name</b>	Srikanth Kunnunuru
<b>Student Number</b>	24237464
<b>Assessment Title</b>	Group Assignment on Sustainify : Food Waste Management and Zero Hunger App
<b>Module Title</b>	IS41520 UXD: User-Centered Design
<b>Module Co-ordinator</b>	Madeleine (Maddy) Steeds
<b>Tutor (if applicable)</b>	
<b>Date Submitted</b>	12-12-2024
<b>OFFICE USE ONLY Date Received</b>	
<b>OFFICE USE ONLY Grade/Mark</b>	

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**Declaration of Authorship**

I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

Signed Srikanth Kunnunuru..... Date 12-12-2024.....



## Assessment Submission Form

<b>Student Name</b>	Aarohi Milind Lankeshwar
<b>Student Number</b>	24211954
<b>Assessment Title</b>	Group Assignment on Sustainify : Food Waste Management and Zero Hunger App
<b>Module Title</b>	IS41520 UXD: User-Centered Design
<b>Module Co-ordinator</b>	Madeleine (Maddy) Steeds
<b>Tutor (if applicable)</b>	
<b>Date Submitted</b>	12-12-2024
<b>OFFICE USE ONLY Date Received</b>	
<b>OFFICE USE ONLY Grade/Mark</b>	

**A SIGNED COPY OF THIS FORM MUST ACCOMPANY ALL SUBMISSIONS FOR ASSESSMENT.**

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**Declaration of Authorship**

I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

Signed Aarohi Milind Lankeshwar..... Date 12-12-2024.....



## Assessment Submission Form

<b>Student Name</b>	Vaishnavi Kandikonda
<b>Student Number</b>	24216940
<b>Assessment Title</b>	Group Assignment on Sustainify : Food Waste Management and Zero Hunger App
<b>Module Title</b>	IS41520 UXD: User-Centered Design
<b>Module Co-ordinator</b>	Madeleine (Maddy) Steeds
<b>Tutor (if applicable)</b>	
<b>Date Submitted</b>	12-12-2024
<b>OFFICE USE ONLY Date Received</b>	
<b>OFFICE USE ONLY Grade/Mark</b>	

A SIGNED COPY OF THIS FORM MUST ACCOMPANY ALL SUBMISSIONS FOR ASSESSMENT.

STUDENTS SHOULD KEEP A COPY OF ALL WORK SUBMITTED.

**Procedures for Submission and Late Submission**

Ensure that you have checked the School's procedures for the submission of assessments.

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**Declaration of Authorship**

I declare that all material in this assessment is my own work except where there is clear acknowledgement and appropriate reference to the work of others.

Signed, Vaishnavi Kandikonda..... Date 12-12-2024.....