Easy Food Share

An idea to allow poor people to get food for free or at minimal cost with a focus of reducing food waste

ITIS 6400/8400 Human Computer Interaction

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Problem Statement

- The idea is to help the homeless or poor people by getting them food for free or at minimal cost.
- Reducing the food waste from different restaurants or other locations by utilizing the same food.
- Establishing a community of food banks and associated people.

User Goals

- Search for free available food in near by location.
- Get the available food delivered from nearby restaurants or other locations.
- Donate any kind of good quality waste food.
- Allow to help the people in need of food and reduce waste of it.
- Enable to select from different types of food choices available.
- Provide options to see the food details and images.
- Able to provide any minimal payment options or without any cost food.

Usability Goals

Our application focus should be on...

- Simplicity
- User friendly
- Flexible
- Responsive (across device sizes)
- Accessible.
- Cross Platform (across types of devices)
- Intuitive for new users.
- Efficient for existing users.

Design Goals

- Users can quickly grab free food available with just few steps.
- Allowing the user to select the type of food from different choices.
- Enable the user to choose the delivery option for the food.
- Users can rate the food provider and its quality of food.
- Users [donators] can donate the food using few simple steps.
- Users [volunteers] can help the food community by delivering the food to poor people.

Design Concepts

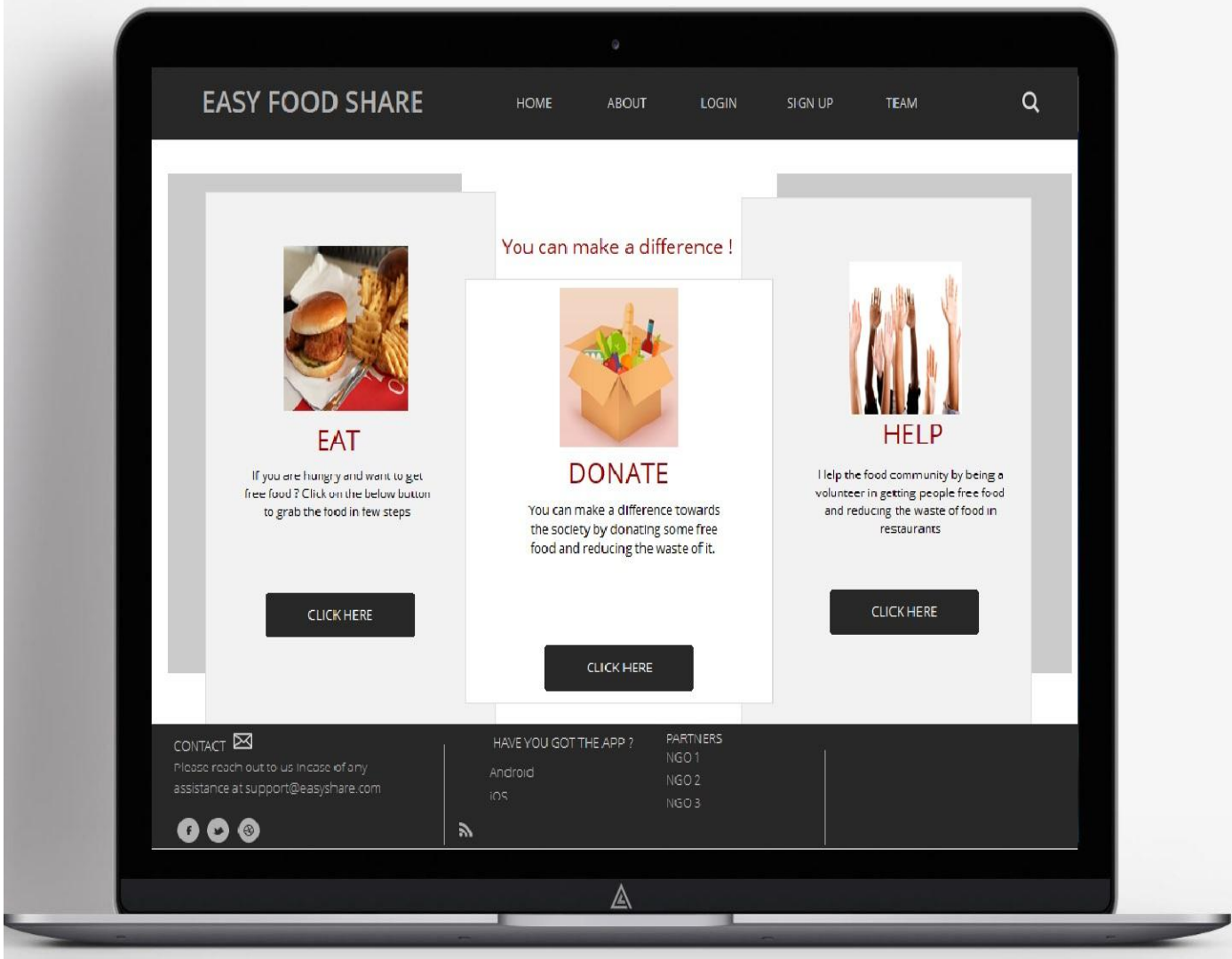
Website Application Portal

Smartphone Application

Integrated Vending Machine

Design Concept 1

Online website portal



Interface features

- Easily available interface.
- Large screens allow proper view of images.
- Most users are familiar with such type of interface.
- No need of any special instructions.
- Can easily be integrated with other type of interfaces.
- No device dependency for the interface.

Application features

- Ability to register account and user preferences
- Focused on visual actions rather than human typed input preferences.
- Allows to select different choices from available options
- User location can be selected using visual maps.
- Food options can be selected just by scrolling from different options.
- Able to view the progress status during the complete process.

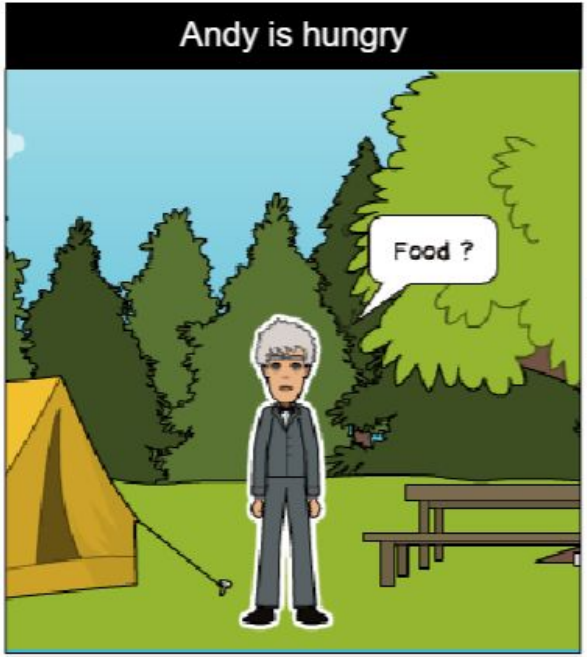
Why/ How/ When

Feature	WHY	HOW	WHEN
EAT	Allow users to get free food	By following the steps provided on the website	A homeless person does not have enough money and is hungry
DONATE	To reduce food wastage	By donating the extra food to needy people	When there is leftover food or extra food
HELP	Provide some volunteering towards community	By volunteering to help the poor people to get food delivered	When anybody needs food

Storyboard

User logs into the website and orders food for free.

Story about Andy...

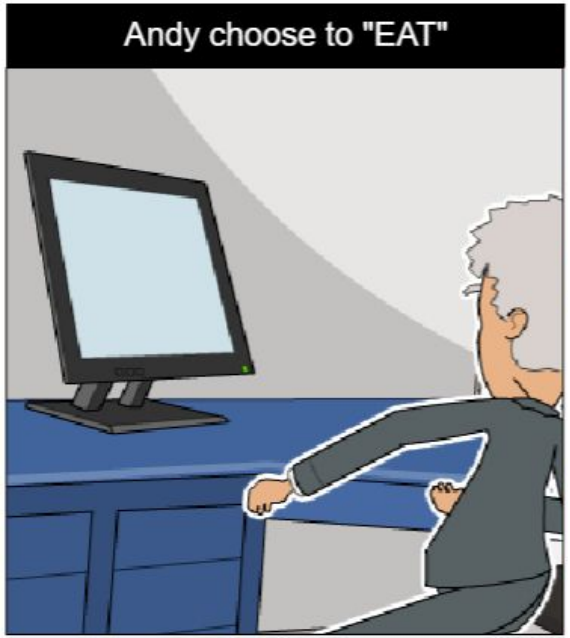


Today, Andy is hungry and he is not having enough money to buy any food.

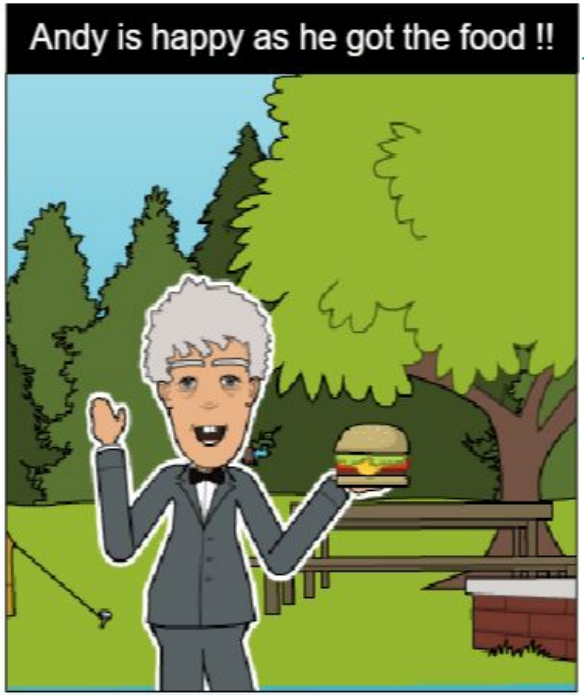
Soon, Andy reaches to a near by public libray where he can access a computer and see if he can get some free/cheap food online.

After some search, andy comes to know about "Easy food share online " and tries to explore !

Storyboard continued..



As andy is a food seeker and do not money, he takes an option of "EAT" on the online portal.



Finishing the steps quickly, andy gets the food and seems to be much happy !

Finally, Andy gets the food of free.

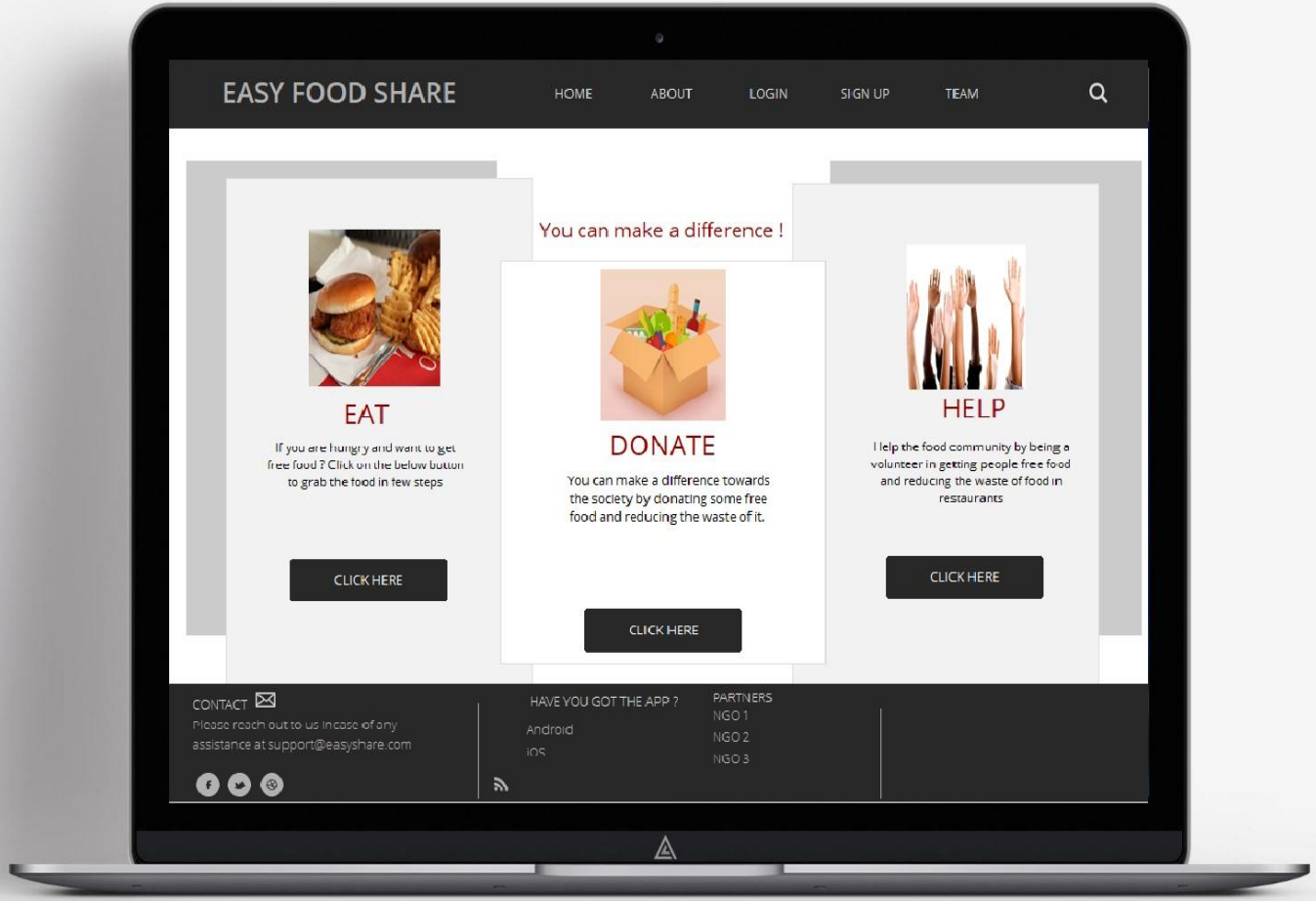
Scenario

Lee orders food...

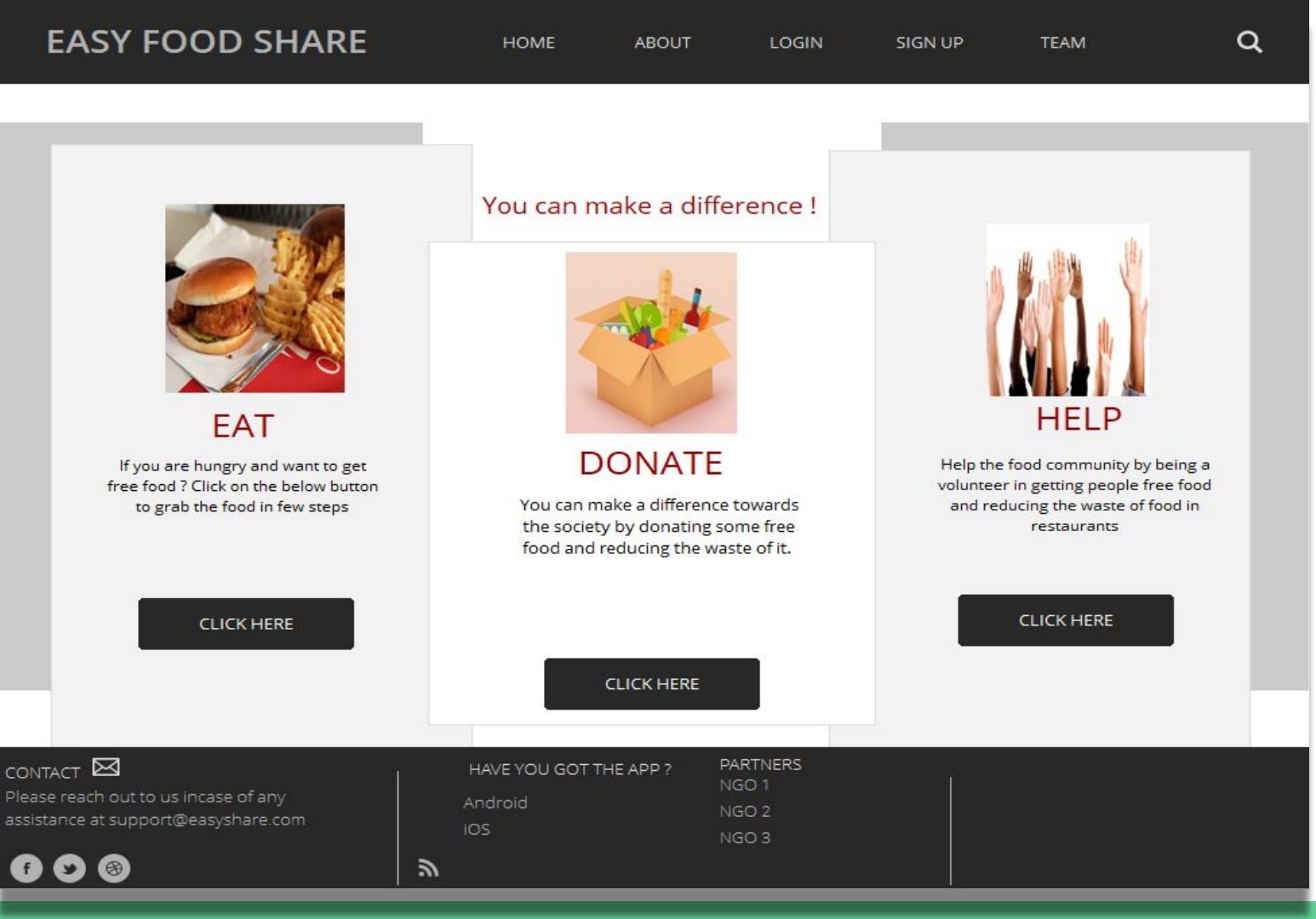
Lee

It is an evening in Charlotte and Lee has just got up from an evening nap. He is not having enough money to buy food from the shops. Since 2-3 days, Lee has been working with a construction company and haven't been received any kind of salary yet. Lee, after a hard day today is hungry and thinking to get some food. He gets to know about easy food share and tries if he can get some benefit from it. Simply, he goes to a nearby public library and grabs one computer. Browsing the website, he quickly goes through a few steps and orders the food for which he doesn't have to pay anything. Fortunately, he gets food of his choice and after ordering, is waiting for the same. Therefore, Lee seems to be happy now and enjoying the food.

Wireframes : Website Application Portal



Above is the Home Page of the website. We will see this screen and other screens in detail in coming slides..



HOMEPAGE

This home page has three options for user to proceed for next screens.

1 . EAT

2. DONATE

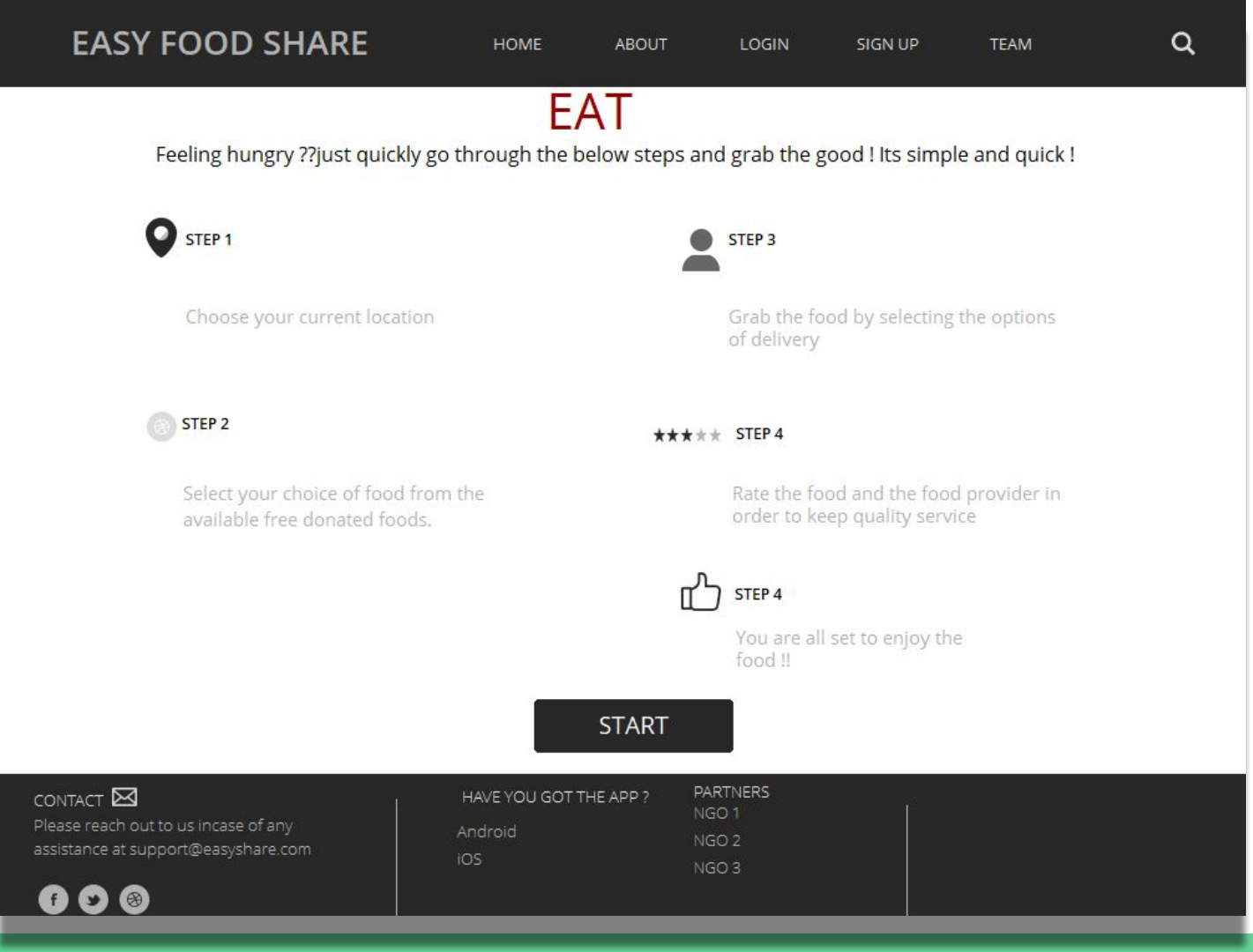
3. HELP

All the options have been explained in short

Next screens..

“Steps for exploring EAT options”

For example, user clicks on “EAT” option in home screen

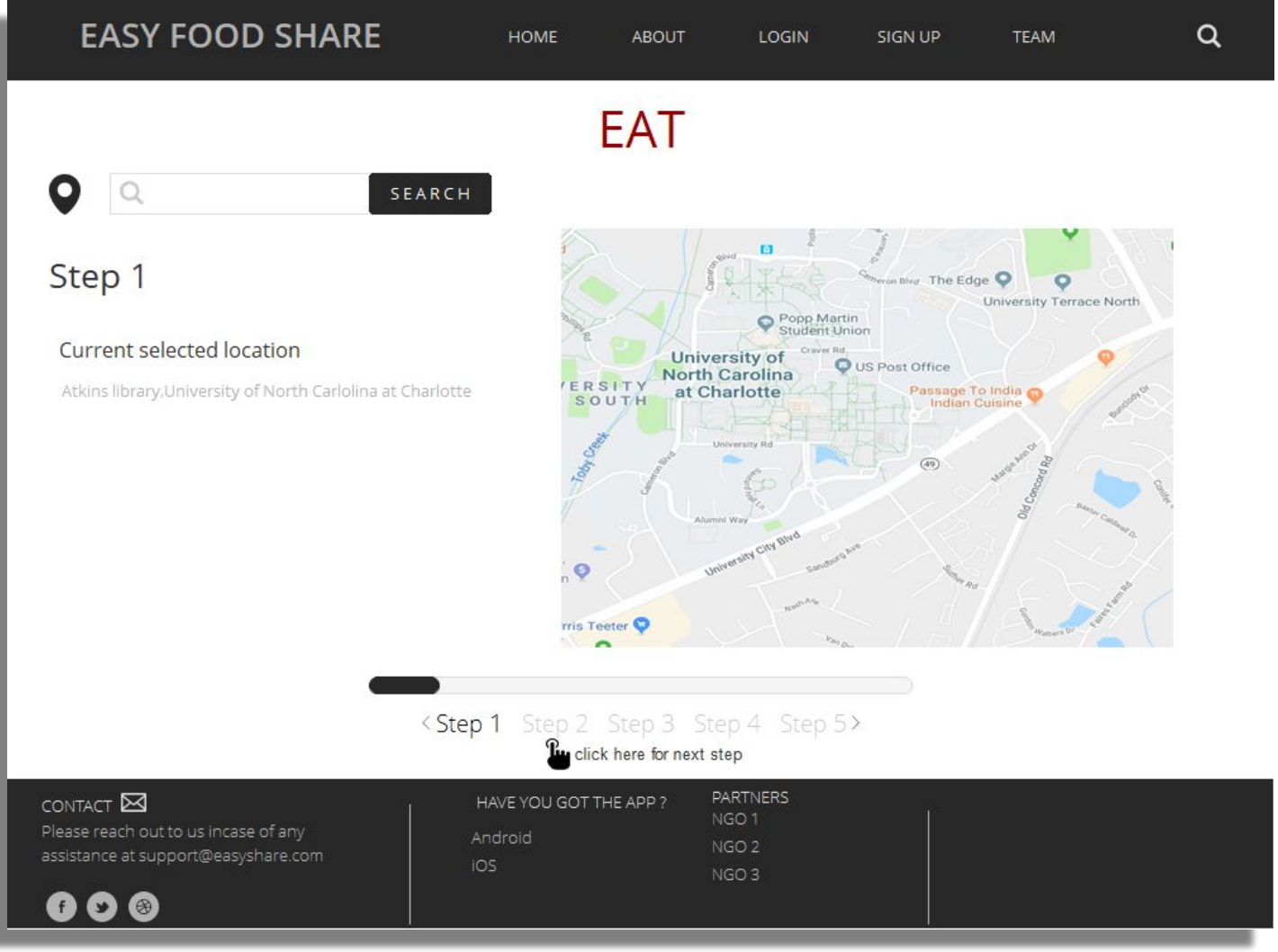


EAT

Upon selecting the “EAT” option, the user has to go through few steps in order to grab the free food.

The steps are simple and provides a single line explanation of each.

The user has to click the “START” button to proceed.

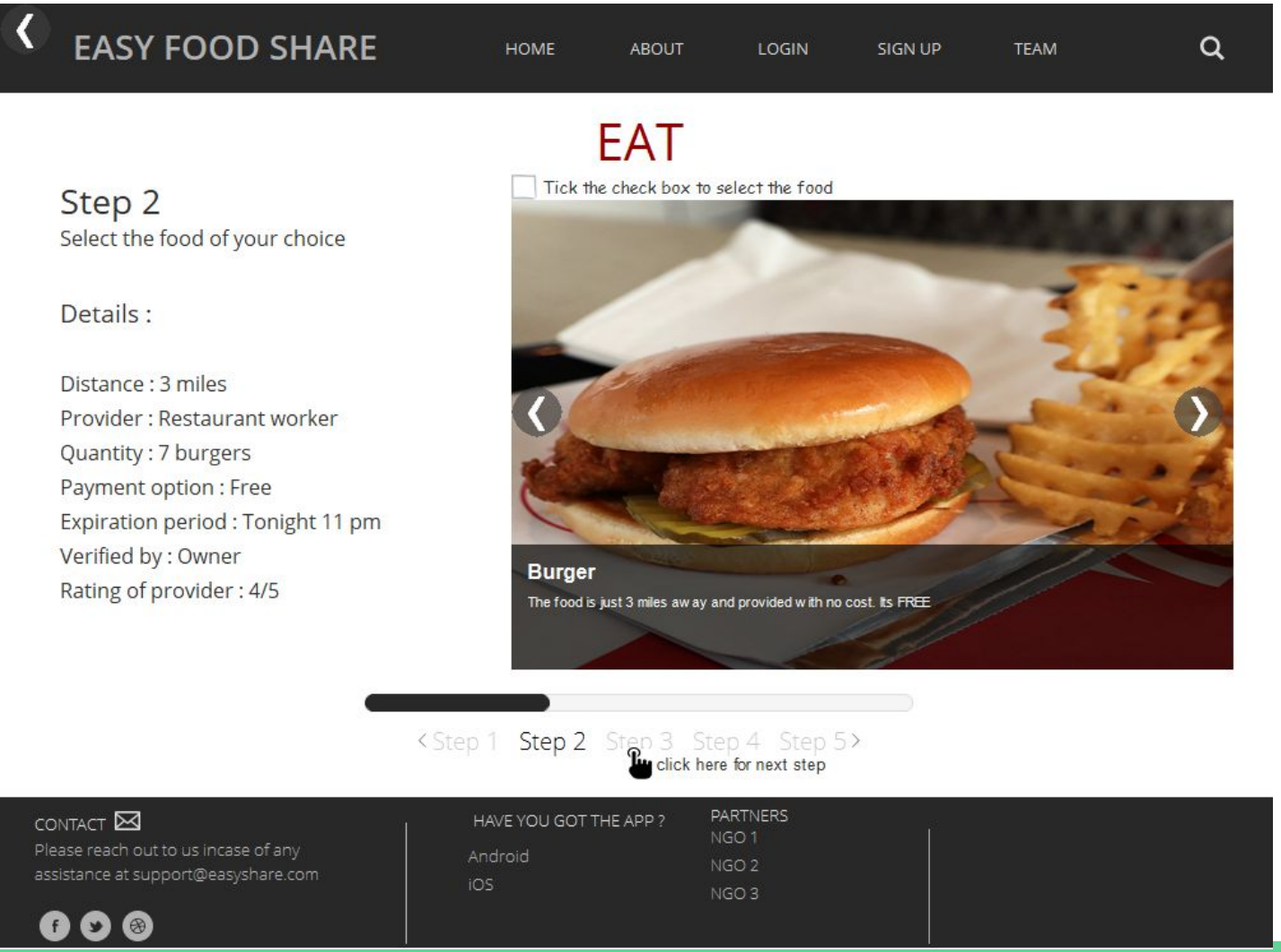


STEP 1 :

This is the screen for step 1 in the “EAT” section.

The user needs to select the location in order to get the food packages available in the nearby area.

The user can also see in the below progress bar about the steps and progress

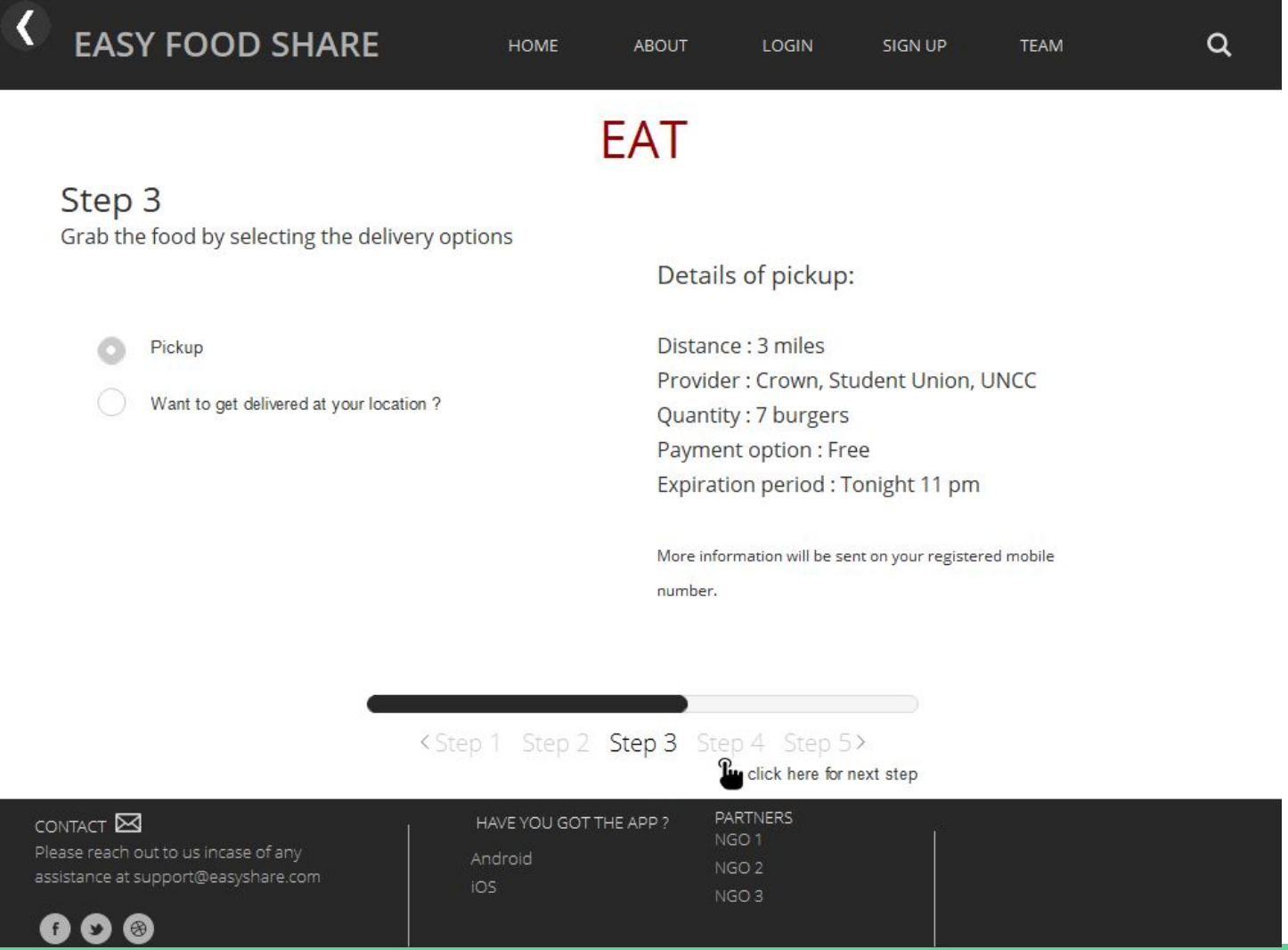


STEP 2 :

This the screen for step 2 in the “EAT” option

Here, user has to select the food from list of different food options available.

User has to click on the tick above the image to select the food.



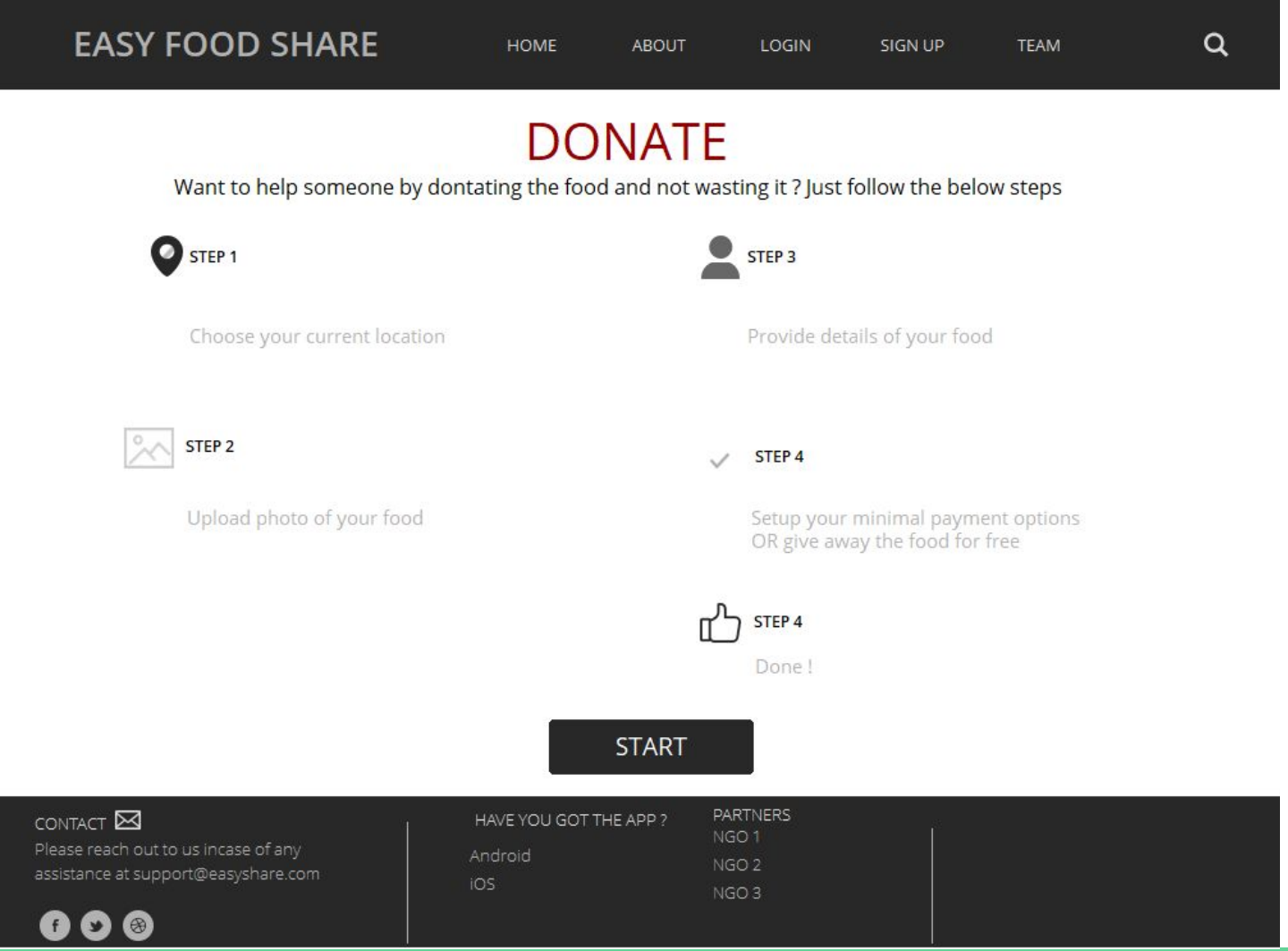
STEP 3:

This is the screen for step 3 in the “EAT” option

Here, user has to select the option of delivery.

User may want to pick up the food or may want some volunteer or social group member to deliver.

Upon selecting the radio button , user can see the respective details as well.



DONATE

This is the screen for DONATE option.

Similar to “EAT” option, user can go through few simple steps and donate the food.

User has to click on start button to proceed.

Evaluation of Concept 1 : Website Application

Pros

- Easy to integrate with other designs [touch, voice]
- No device dependency for the interface
- Allows large view of the information/images.
- Easily accessible interface
- Most familiar type of interface and no special instruction set required.
- Highly available across the locations.
- Least setup cost.

Cons

- User cannot take photo from the interface.
- Need regular maintenance
- Over head of developing the website.
- Devices used to access the interface are costly.

Design Concept 2

Smartphone Application

About Smartphones

- Smartphones have touch screen interfaces which allow the user to interact with any kind of application by tapping, pinching and zooming.
- They offer full-sized qwerty keyboard and voice input to type and/or voice your input.
- The universal digital buttons like ‘Home’ and ‘Back’ offer navigation and switching between various apps stored on the smartphone.
- The list of ‘recent apps’ on smartphones can show the list of apps a user has opened recently to enable a seamless transition.
- By 2022, it is estimated that the number of smartphone users will reach over 270 million.

Application features

- Ability to register new accounts and sign-in using an existing account.
- The donor can capture the food item image using a mobile camera.
- Each step in each feature has its own screen. The user can go to the previous step to make any corrections.
- The application can use voice input to search for a location.
- Ability to search in application from any screen
- Ability to rate and share an experience

Why/ How/ When

Feature	WHY	HOW	WHEN
EAT	Allow users to get free food	By following the steps provided on the application	A homeless person does not have enough money and is hungry
DONATE	To reduce food wastage	By donating the extra food to needy people	When there is leftover food or extra food
HELP	Provide some volunteering towards community	By volunteering to help the poor people to get food delivered	When a homeless person needs food

Storyboard

A conversation between mother and daughter about leftover pizzas

Mom my birthday party got over! What shall we do of the remaining pizzas?
Let me check what I can do!
Searches on phone!
Wow! I got an app called 'Easy Food Share' where I can donate this food to someone by uploading pictures of food and adding details of location and quantity!
Mom opens the app, chooses 'DONATE' option, follows the instructions to upload the photo and submits.
Yay Mom! That was an awesome idea! I'll share this idea with my friends as well! I am happy that someone will not sleep hungry tonight!

Scenario

A Saturday evening in Joey’s restaurant Joy Food

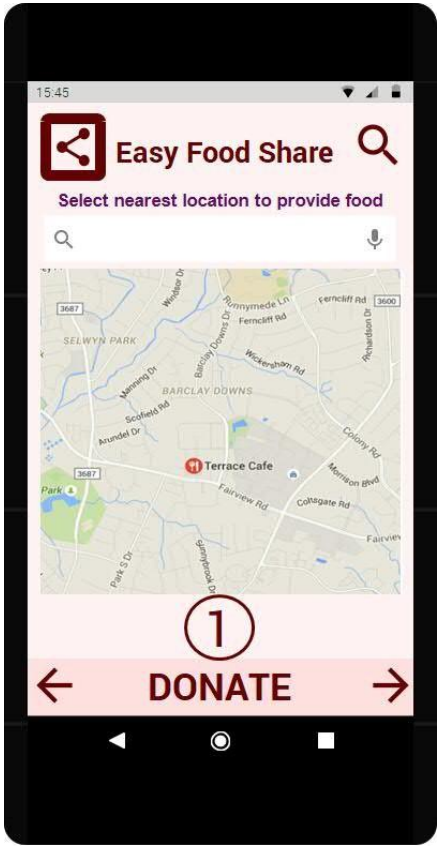
Joey works as a head chef in restaurant named ‘Joy food’. On Saturday evening, expecting the weekend crowd, he had instructed his team to cook food in bulk quantities. But unfortunately, an accident occurred in a nearby road, thereby blocking the access to his restaurant in peak hours. By the time the roadblock was removed, he had lost quite a few customers and there was abundant food kept in storage containers in the kitchen. When he shared the concern of excess food with the rest of the members, one of them suggested to download and use the application ‘Easy Food Share’ to donate the food item. He downloaded, signed-up in the application, added location details, food item details and chose to give the food items for free. Soon a lot of people who had not eaten from days came up to take the food. Joey was very happy with the response in the end and pledged to use the application in the future as well.

Wireframes

- The home page of the application.
- Shows the logo, the search icon, and name of the application.
- Offers options to Sign-up if you are a new user and Sign-in if you are an existing user.
- The ‘EAT’ option is for a hungry person in need of food.
- The ‘DONATE’ option is for a person who wants to donate a food item.
- The ‘HELP’ option is for people who want to volunteer in the process by delivering the food item.

Wireframes

- Step- 1 of ‘DONATE’ option.
- The donor can either type the name of the location, give voice input or auto-detect using GPS.
- Confirmation by tapping the ‘Right arrow’.
- Tapping ‘Right arrow’ proceeds to the next step.
- Tapping ‘Left arrow’ will go to the home screen.

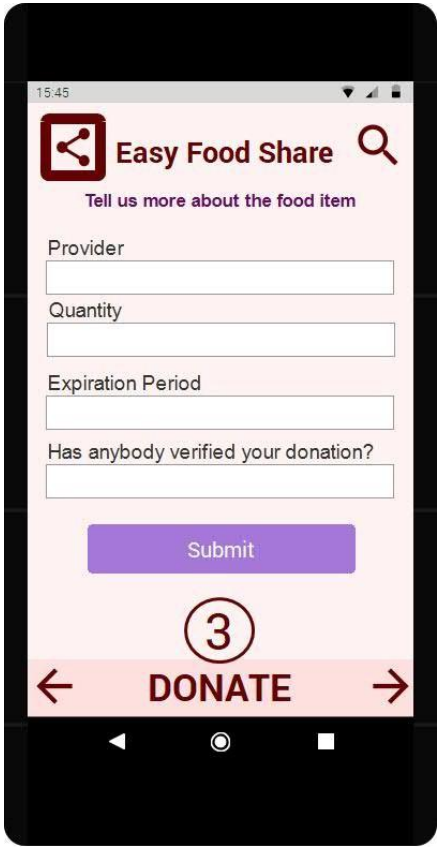


Wireframes

- Step- 2 of the ‘DONATE’ option.
- The donor can upload an existing image by tapping the ‘Gallery’ icon.
- The donor can capture a new image by tapping the ‘Camera’ icon.
- The image gets populated in the given placeholder.

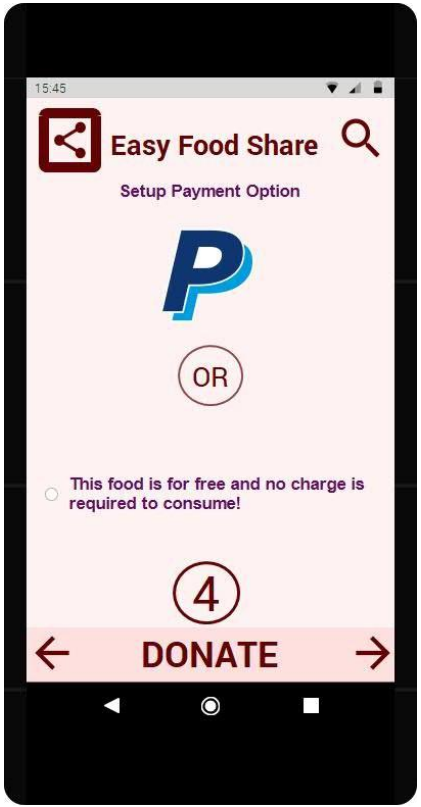
Wireframes

- Step- 3 of DONATE feature.
- Donor fills out details such as Provider Name, Quantity of food, Expiration Period and name of person or verification agency who has verified the safety of food consumption.
- The ‘Submit’ button is used to save these details
- A donor can update the content using the ‘Submit’ button.



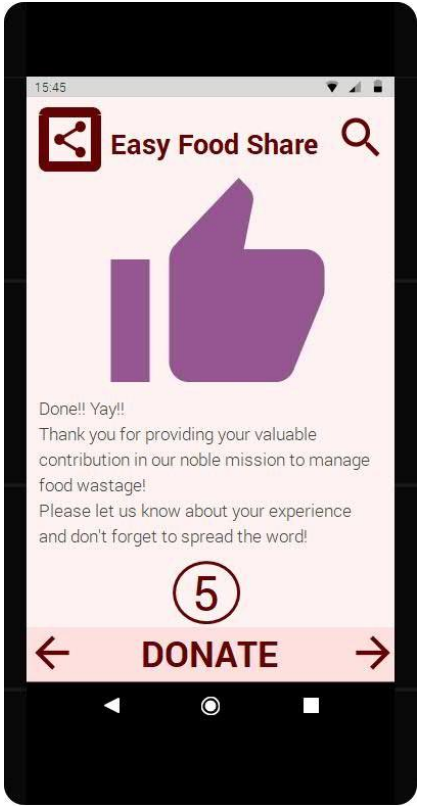
Wireframes

- Step- 4 of DONATE option.
- A donor can set a payment option by tapping the ‘P’ icon.
- The other option is to provide the food for free to the consumer.



Wireframes

- Step- 5 of ‘DONATE’ option.
- Acknowledgment of the completed steps with a message thanking the donor.
- A donor can rate the experience and spread the word by tapping ‘Right arrow’



Evaluation of Concept 2 : Smartphone application

Pros

- Compact and handheld device to access all features from anywhere
- Can use a mobile camera to upload an image instantly in Donate option
- Application compatible with both iOS and Android devices
- The application can work on low-cost smartphones as well.
- Smartphone penetration is increasing so application is accessible to a wide range of users.

Cons

- Needs wifi or mobile data to access the application
- The user needs to download the application to use.
- Since the device is compact, there may be a loss of resolution when viewing images with high resolution.
- Use of hands is mandatory unless the input can be added using voice.

Design Concept 3

Integrated Vending Machine Device

About Integrated Vending Machine

Motivation:

- The user doesn’t have access to cell phone / computer should be able to access our application
- To provide an alternative and additional options for fast food served by vending machine

Device Features:

- An integrated touch screen interface
- GPRS to access current location
- LCD screen to show maps and food images

About Integrated Vending Machine contd..

Application Features:

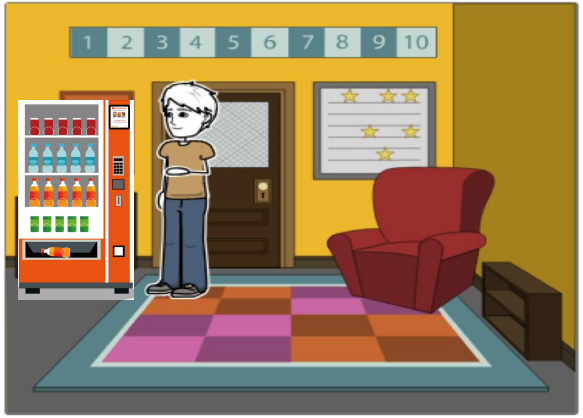
- Simple interface for achieving users primary goal
- Large buttons and icons help user intuitively perform tasks
- Options to browse available eatables by current location or favourite food
- Delivery to current location or pickup options
- User can rate the application

Why/ How/ When

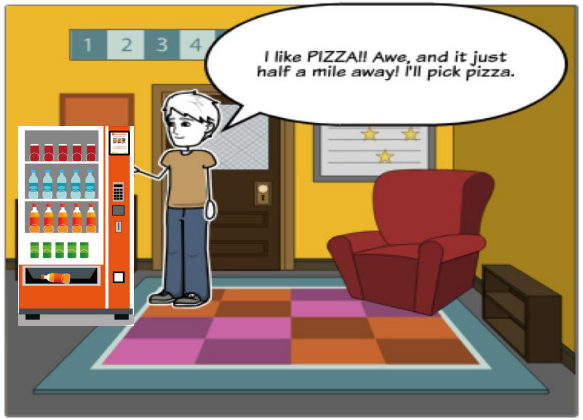
Feature	WHY	HOW	WHEN
EAT	Allow users to get free food	By following the steps provided on the application	A person does not have enough money and is hungry

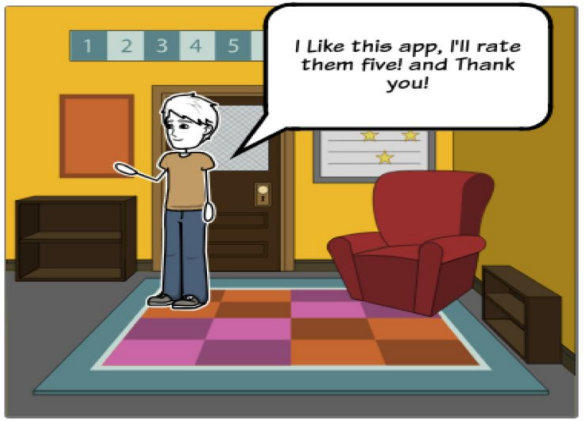
Storyboard

A hungry student searching for food



A hungry student goes to the vending machine to grab some food.





Scenario

Robert, a hungry man

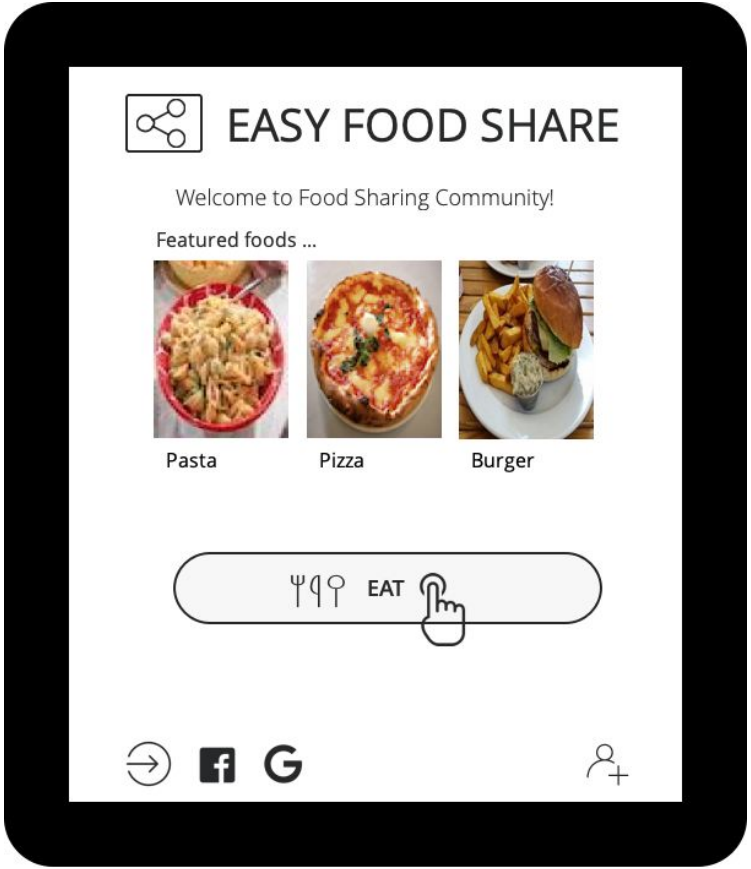
Robert

On an evening of a rainy day, a poor man Robert was waiting for the train at station. Due to some technical issue, there was not a single train from the last few hours. Robert was very hungry! However, he didn't have enough money to buy meal from a nearby restaurant. He was just looking around and asking few people for money, but no one gave him. While roaming around in the station he saw a vending machine with Easy Food Share application integrated. So, he decided to give a try, he signs up to the application, and looks for food availability nearby. He got surprised to see eatables available within a mile. Then, he chooses the food of his choice and select the pick up from the store as it was very close by. He went to the provider outlet, shows his identity and got the food.

Wireframes

“Home” Screen:

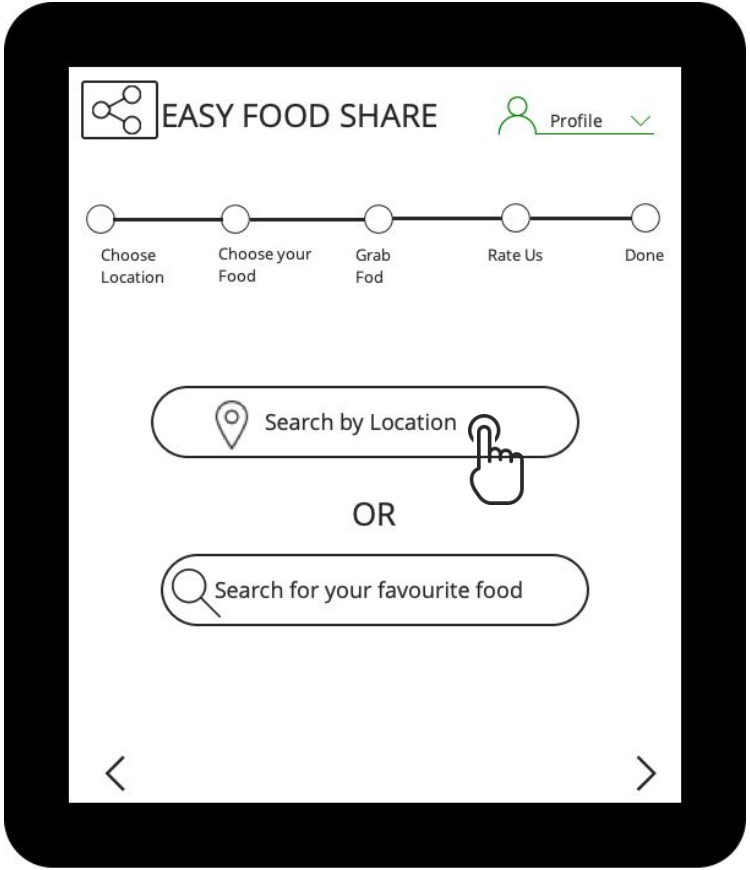
- The home screen provides following options
- Existing user can login to application
- A New user can
  - Sign up to application
  - Login through facebook
  - Login through google
- After Login / Sign up user would press on EAT button to proceed further.



Wireframes

“Select Options” Screen:

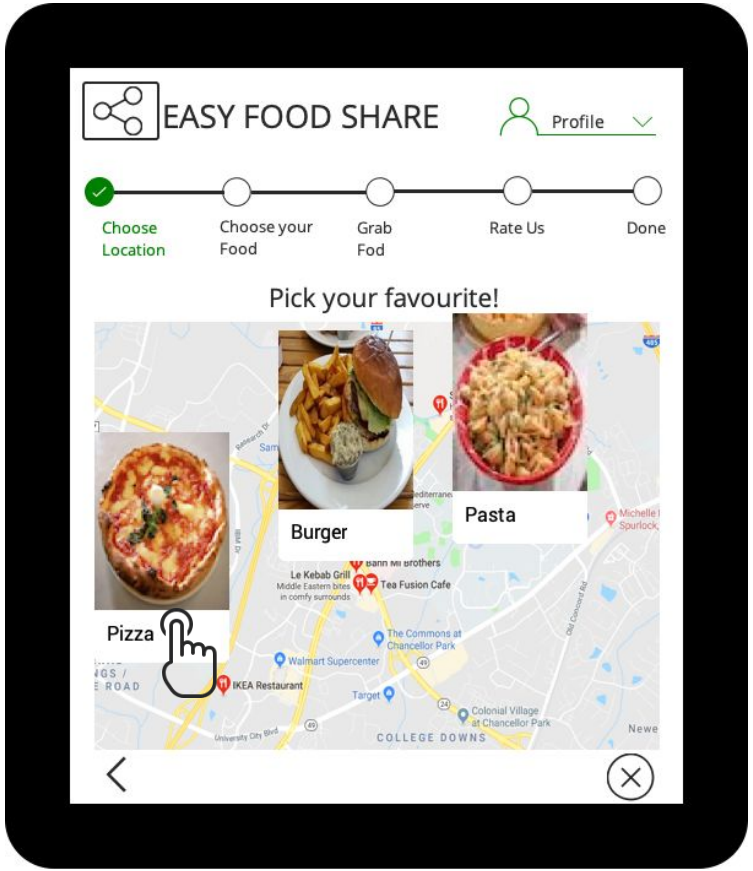
- Search by Location option allow user to browse nearby eatbales.
- User can also search for their favorite food by ignoring location preferences.
- Clicking on a button will take user to respective page.
- This screen also have next and previous buttons.
- Clicking next button selects default option, search by location and proceeds further.
- Clicking previous button goes back to previous page
- A progress bar at the top shows all the steps and the current progress.



Wireframes

“Choose your food 1” Screen:

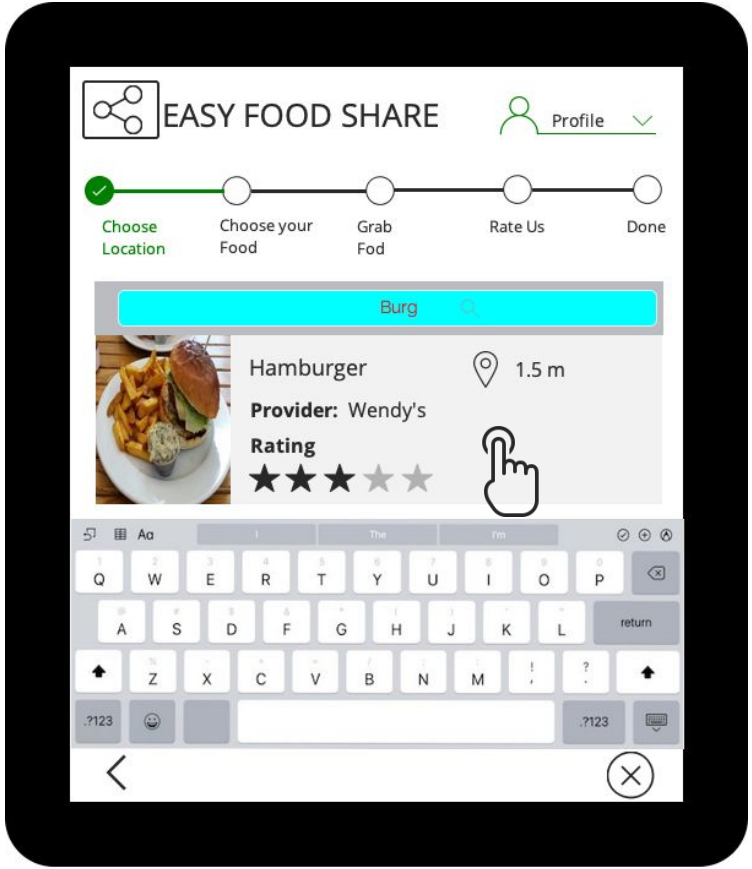
- User can choose from nearby available food items.
- Up on clicking on a food item, application takes user to the next screen.
- User can also click on close button to come out of application.
- Previous button to go back.



Wireframes

“Choose your food 2” Screen:

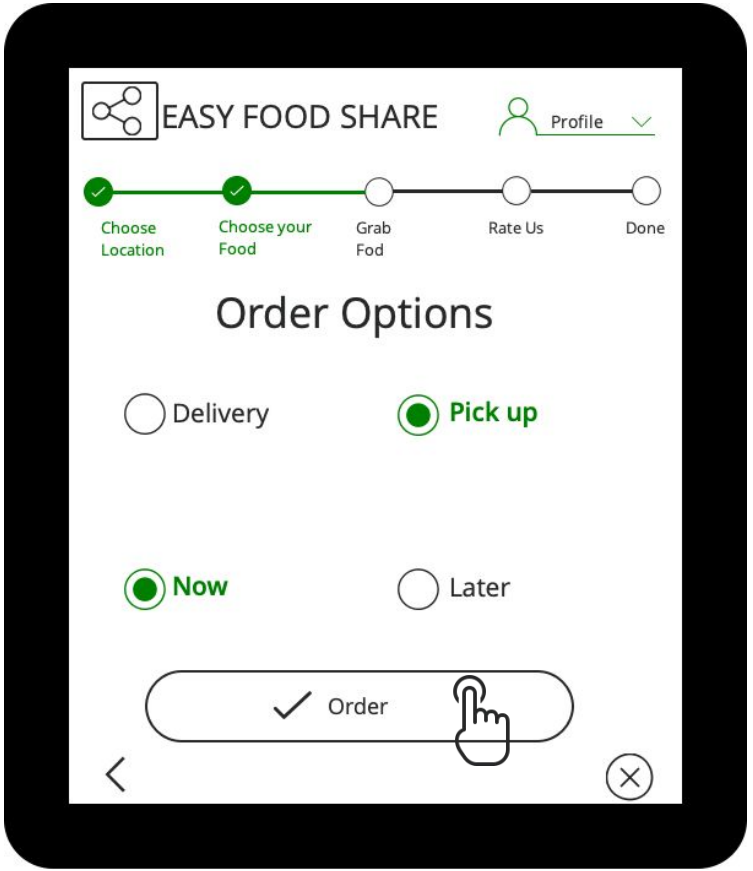
- This screen provides search bar to search for users favorite food.
- Search results have food name, provider, rating and distance from the current location.
- User can touch and select on the food card to proceed further.
- User can also click on close button to come out of application.
- Previous button to go back.



Wireframes

“Order Options” Screen:

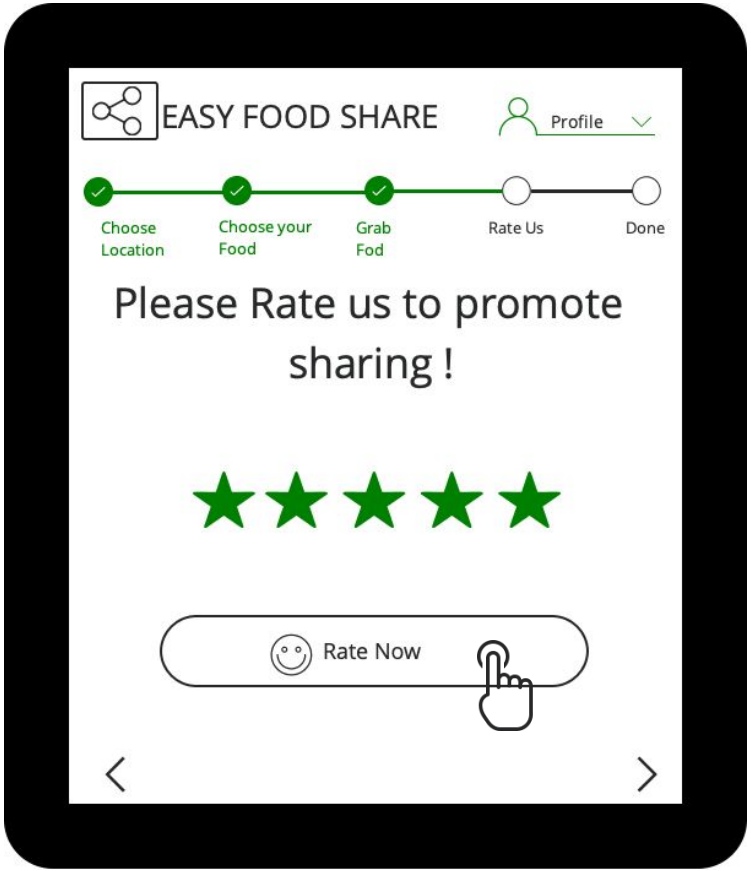
- This screen allows users select how and when then want to get the food.
- Screen has radio buttons which provides options.
- User would click on order button to confirm selections and proceed further.
- User can also click on close button to come out of application.
- Previous button to go back.



Wireframes

“Rate Us” Screen:

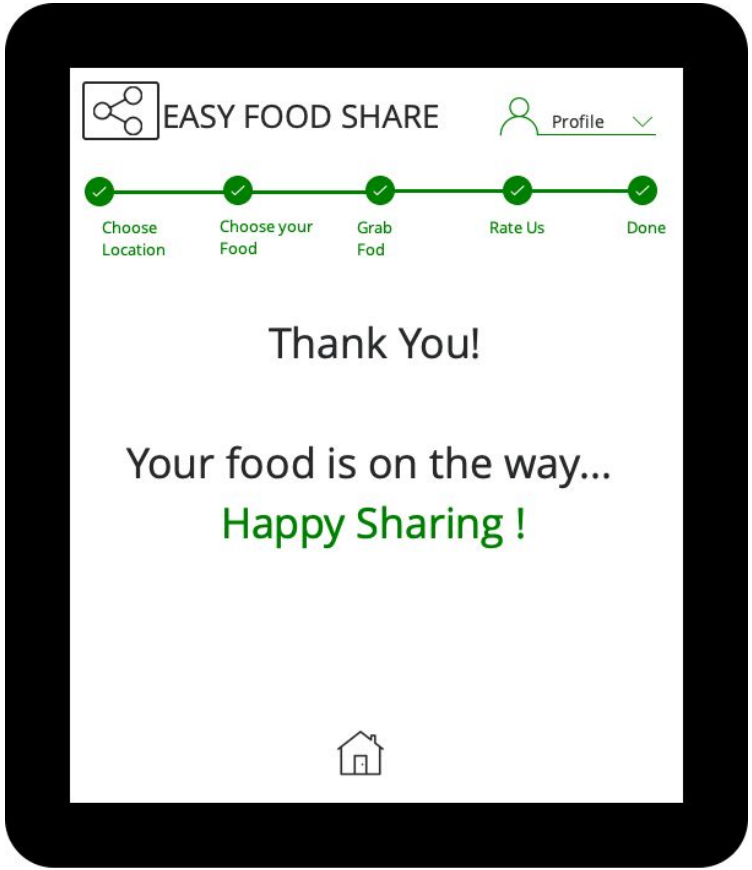
- This screen is to get feedback from user.
- User would select on stars to rate and click on Rate Now button to go to next step.
- User can also click on next button on bottom right corner to skip this step and proceed.
- Previous button to go back.



Wireframes

“Confirmation” Screen:

- Once user’s order is confirmed, forward a user to confirmation screen with an acknowledgement message.
- All steps in the progress bar turns to green indicating the successful order.



Evaluation of Concept 3: Vending Machine Concept

Pros

- User doesn’t need to own any device to access the application.
- Integrated to any vending machine, or device which has internet connectivity.
- Simple and Intuitive Interface.

Cons

- Can’t be personalized to user preferences.
- Location is fixed.
- Can’t implement all the User Goals.
- Limitations with device compared to other design concepts.

Final Evaluation

Evaluation of design goals

Design Goals	Website Portal	Smart Phone	Integrated Vending Machine
Search food [EAT]	Very satisfied	Very satisfied	Very satisfied
Donate food [DONATE]	Satisfied	Very satisfied	Not Satisfied
Help	Very satisfied	Very satisfied	Very satisfied
Select the food	Very satisfied	Satisfied	Satisfied
Select the delivery option	Very satisfied	Very satisfied	Not satisfied
Take and upload food photos	Not satisfied	Very satisfied	Not satisfied
Select the location	Very satisfied	Very satisfied	Satisfied

Evaluation of usability goals

Usability Goals	Website Portal	Smart Phone	Integrated Vending Machine
Simplicity	Very satisfied	Very satisfied	Satisfied
User friendly	Satisfied	Very satisfied	Satisfied
Flexibility	Very satisfied	Very satisfied	Very satisfied
Responsiveness	Satisfied	Very satisfied	Satisfied
Accessible	Very satisfied	Very satisfied	Not satisfied
Cross platform	Very satisfied	Very satisfied	Not satisfied
Intuitive for new users	Very satisfied	Very satisfied	Satisfied

Chosen Design Concept

After final evaluation, we have chosen the **smartphone application concept.**

Justification

- Satisfies the design and usability goals better than other concepts.
- The main focus is of poor people who can easily afford such type of interface.
- Only concept which allows the user to take a photo of food and upload quickly.
- Smartphones are always available on the go and at the cheap setup cost.
- Many users are already familiar with the instruction set of the smartphone.
- Enhances sociability - users are always online.
- The speed of interaction on a smartphone is faster than other concepts.

Design Goals Clarity

- **One application -** smartphone design concepts help to fulfill all Usability Goals and User Goals. It also allows the user to customize according to their preferences.
- **On the go -** users can browse and order the food from any place, donors also easy can capture the image of food and post its availability.
- **Well informed -** As smartphone supports alerts and notifications, it would be very helpful to update the user with their order status.
- **The application can make suggestions -** As the user can make account and login into the system, they can set or application can learn from their preferences and make suggestions when similar eatables available.