

FOOD-CYCLED



Team number - 1

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I. INTRODUCTION

Food is one of the basic necessity of life and fuel for the human body and yet, many people still do not have access to a good meal. Many don't realize how much they throw away every day from uneaten leftovers which could otherwise be made available to people in need. In today's world, recycling is a major topic and the idea of reusing would aid in reducing waste. This motivated us to look for a project that combines these two ideas.

'Natural Resources Defense Council estimates that about 40 percent of food in the U.S is never eaten and at the same time one in eight Americans struggle to get proper food.'

The above brief description outlines the core idea of our project, which helps reduce wastage of food and make it available to people in need. This inspired us to take a step forward to initiate this project with the help of an user friendly application and website which will attract more people to be involved in this process and make it a success. Individuals and restaurants can support in this cause and make a difference in their community by providing excess food to those who are in need.

II. PROJECT GOAL AND OBJECTIVES

Overall Goal (Based on Enactus Requirements):

The main objective of this project is to develop user friendly application and website that could be used by individuals and restaurants to give away excess food to those who don't have access to it. Through this project, food is provided for homeless or less privileged people and also to reduce the wastage of food.

Specific Objectives :

There has not been an easy process outlined to help in repurpose excess food that are otherwise going to be thrown. The project proposes a streamlined simple approach to resolve this with the help of smart technology.

Specific Features :

- User friendly hybrid application to help ease donation and collection of excess food.
- Single login and register for Users and Volunteers.
- Login can also be done using social websites such as Facebook and Google+.
- Identifying nearby Soup Kitchens using Google Maps.
- Check for nutritional value, ingredients and validity of the food.
- Feedback on volunteers by users.

Significance :

We are developing an application to effectively collect and make food available to homeless and less privileged people. People who wish to be part of this program are grouped into two types –

1. User(s) – people who wish to contribute food

2. Volunteer(s) – people who wish to collect food from users and drop off at the nearby soup kitchens.

Initially volunteers are registered with their details. The user also needs to register and then mention the food they wish to donate. After that, a request will be sent to the nearby volunteer to pick up the food. Nearby volunteer who is available accepts the request from the user to pick up food. Also the volunteers details will be sent to the user. After the volunteer picks up the food, he/she drops off in the nearby soup kitchens. After the volunteer picks up the food, he/she drops off in the nearby soup kitchens. After accepting the food from the user, they drop off the food at a nearby Soup Kitchen.

III. PROJECT PLAN

Schedule for the four different increments

Increment I

Launch Page for android and website

Login and Register Page for android and website

Facebook and Google Oauth Login for android and website

Increment II

Launch Page for Ionic Application

Login and Register Page for Ionic Application

Facebook and Google Oauth Login for Ionic Application

Google Maps for Soup Kitchens

Camera to upload images

Increment III

Implement Food API to get nutrition information

Dashboard for User

Dashboard for volunteer

Message Notification sent to Volunteer on 'Confirm request'

Thank You page for contributors

Increment IV

Feedback for Volunteers

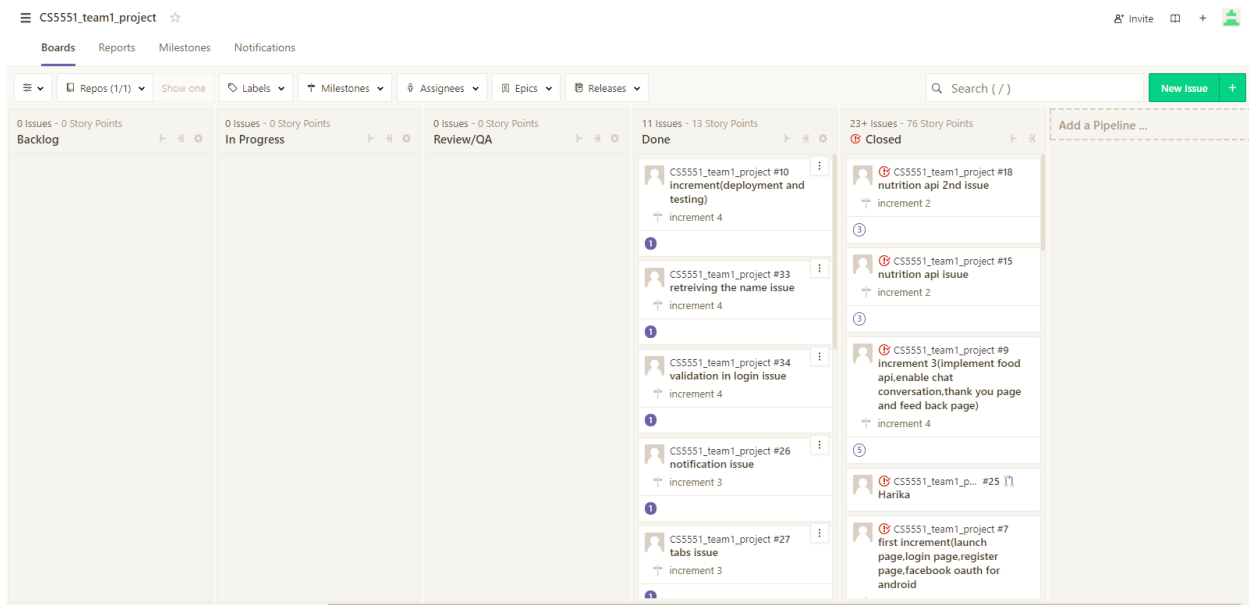
Deployment

Testing

STORIES (ISSUES) :SCENARIO & USE CASE SPECIFICATION

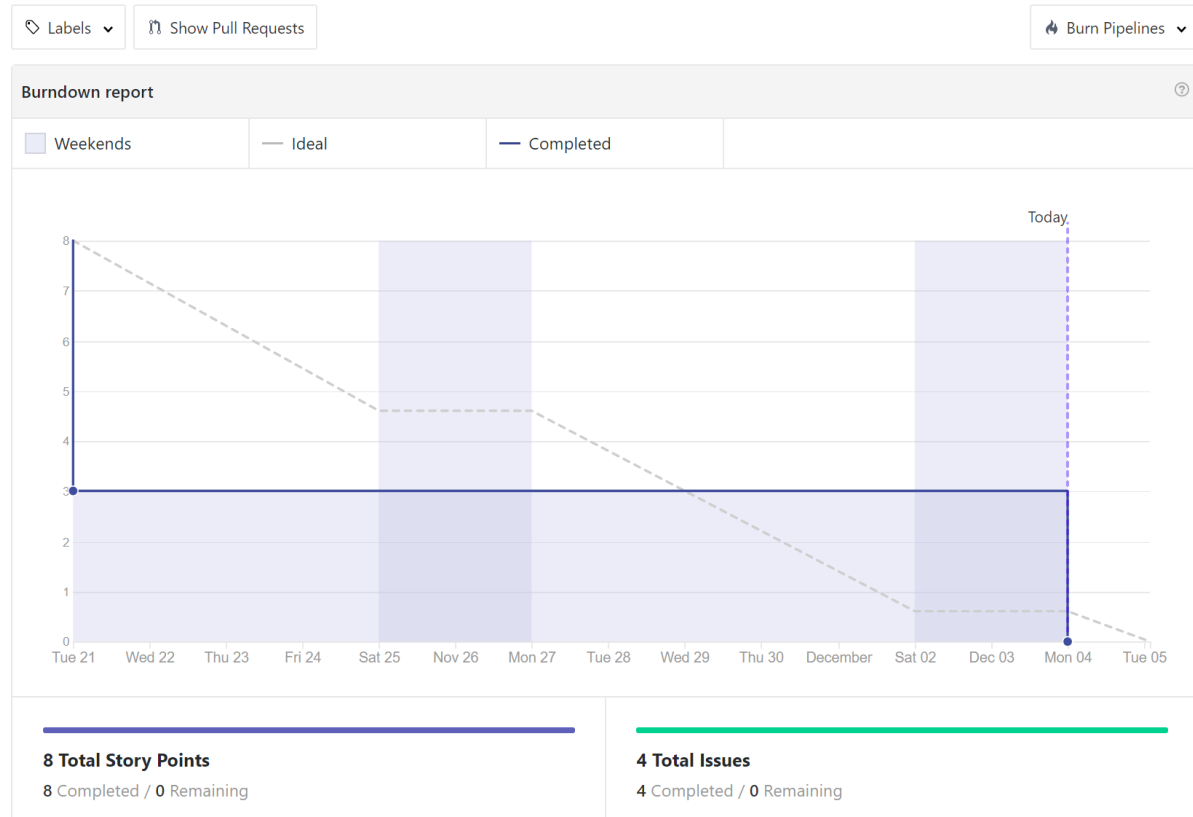
- User logs into the application or signs up if not registered.
- Also Volunteers are registered or can sign up if not registered.
- The User will then provide details such as Name of the food , Cuisine, preparation date, expiry date , spice levels and image of the food.
- A request is then sent to the volunteers nearby.
- After a volunteer accepts request the food history in the User's Dashboard will show a Tick mark indicating that the request was accepted.
- After the volunteer picks up the food , they drop it in the nearby Soup Kitchens.
- Later on , the user can provide a feedback for the volunteer.
- User then logs out of the application.

PROJECT TIMELINES, MEMBERS, TASK RESPONSIBILITY



BURNDOWN CHART

increment 4

Start: **Nov 21, 2017** [Change](#) Due: **Dec 5, 2017** [Change](#)

IV. FOURTH INCREMENT REPORT

i. Existing Services/REST API

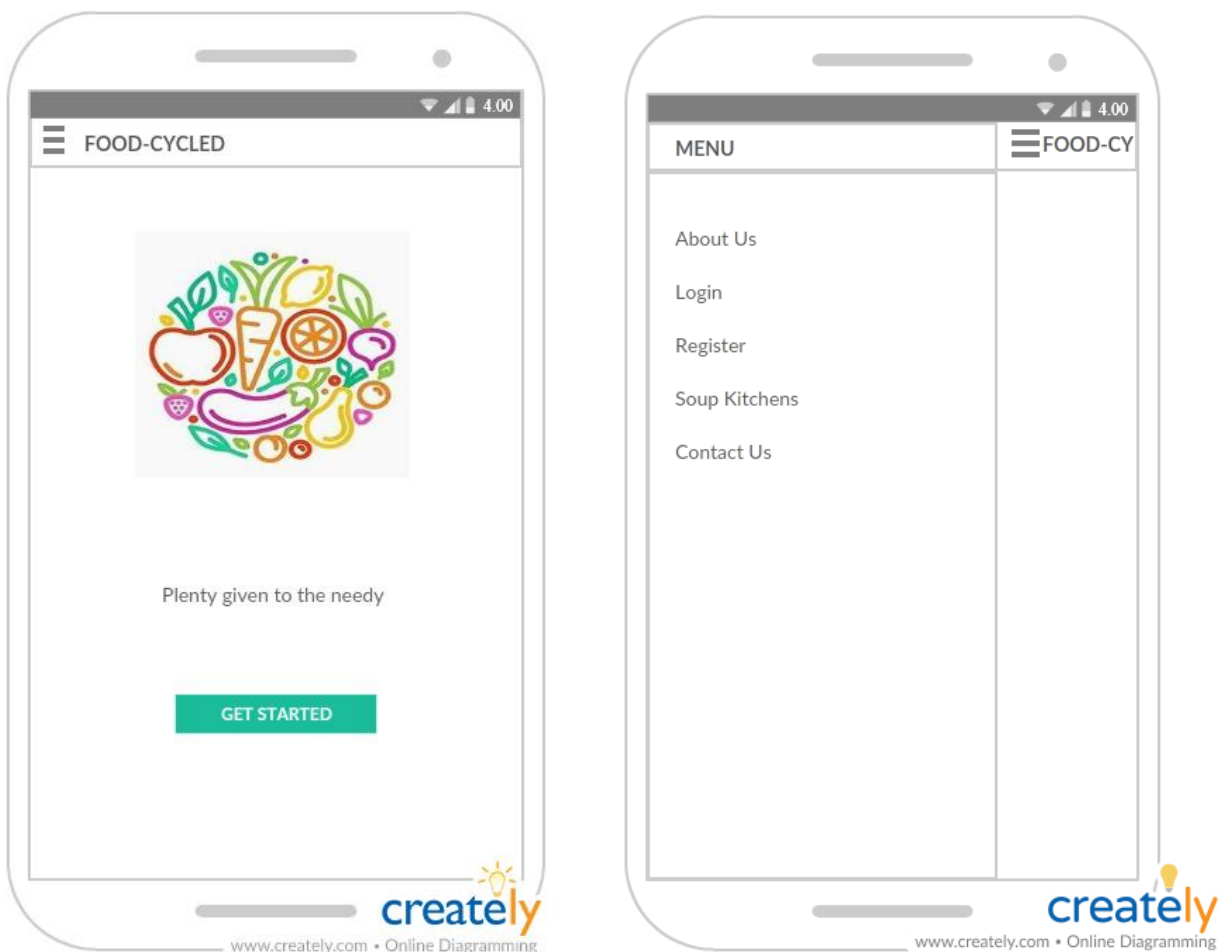
Facebook OAuth API , Google OAuth API, Edamam API, Google Maps API , Camera API

ii. Detailed Design of Features

WIREFRAMES

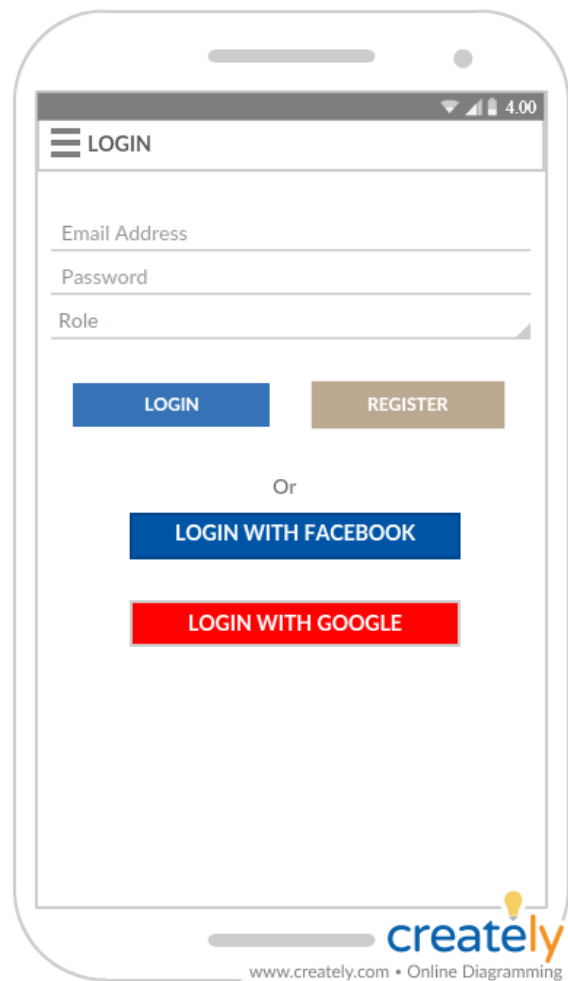
LAUNCH PAGE

The Launch Page of the **Food-cycled** application includes **GET STARTED** button which redirects to Login Page and a side menu bar which contains – **About Us , Login , Register , Soup Kitchens and Contact Us.**



LOGIN PAGE

Single Login Page for both User and Volunteer. It redirects to their respective Dashboard upon successful login. There are two Social Logins implemented – Facebook and Google+, if successful then it is redirected to their respective dashboard based on the role.



REGISTER PAGE

The User and Volunteer registers separately using their basic details. Upon Successful registration, it redirects to the Login Page. Here the User or Volunteer is mentioned using the Role field.

The image displays two mobile application wireframes for a registration page, both titled "REGISTER".

Left Wireframe: Shows the registration form with the following fields: Name, Email Address, Password, Phone Number, Address, Zipcode, and Role. A blue "REGISTER" button is positioned below the form.

Right Wireframe: Shows the same registration form, but with a modal dialog box open over the "Role" field. The dialog is titled "Role" and contains two radio button options: "User" and "Volunteer". Below the options are "CANCEL" and "OK" buttons.

Both wireframes include a status bar at the top showing signal strength, battery level, and the time 4:00. The bottom of each wireframe features the "createely" logo and the text "www.createely.com • Online Diagramming".

DASHBOARD

Upon successful login, User or Volunteer lands in their respective dashboard page. In Volunteer's Dashboard, it displays their name and provides with tabs – Profile, Notifications and History, where History is the default Tab. In User's Dashboard, it displays their name and provides with tabs – Profile and History, where History is the default Tab. User can upload food or leave feedback using the Menu bar.

USER DASHBOARD



VOLUNTEER DASHBOARD

FOOD-CYCLED

Welcome name !!!

PROFILE NOTIFICATIONS HISTORY

Name

Email Address

Phone Number

Address

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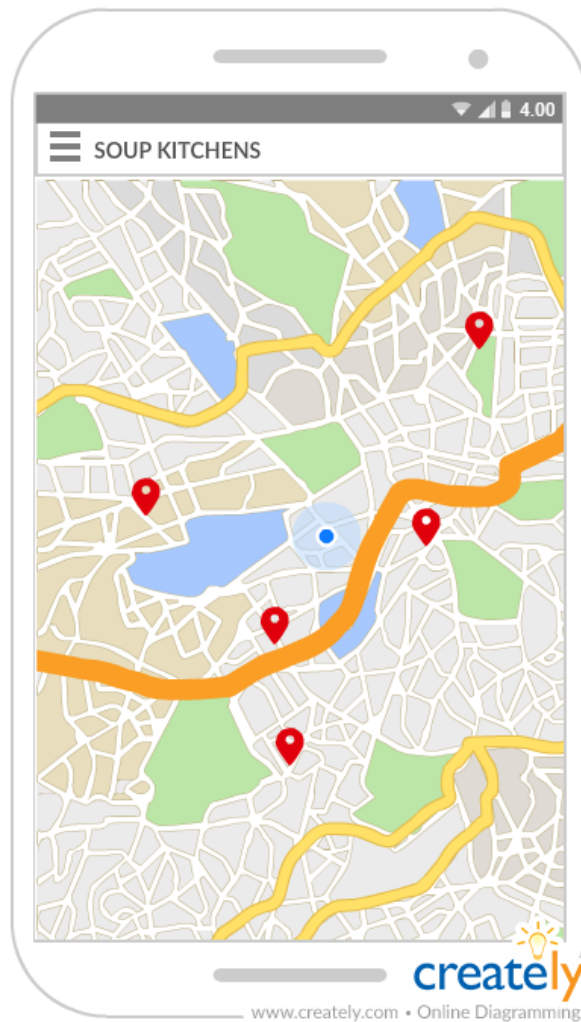
UPLOAD FOOD PAGE

For each food the user would like to donate, he/she needs to fill details like – name of food, cuisine, preparation date , expiry date, spice level and also upload image. 'Get Info' provides the nutrition details of the food entered and 'Confirm Request' sends notification to all volunteers.

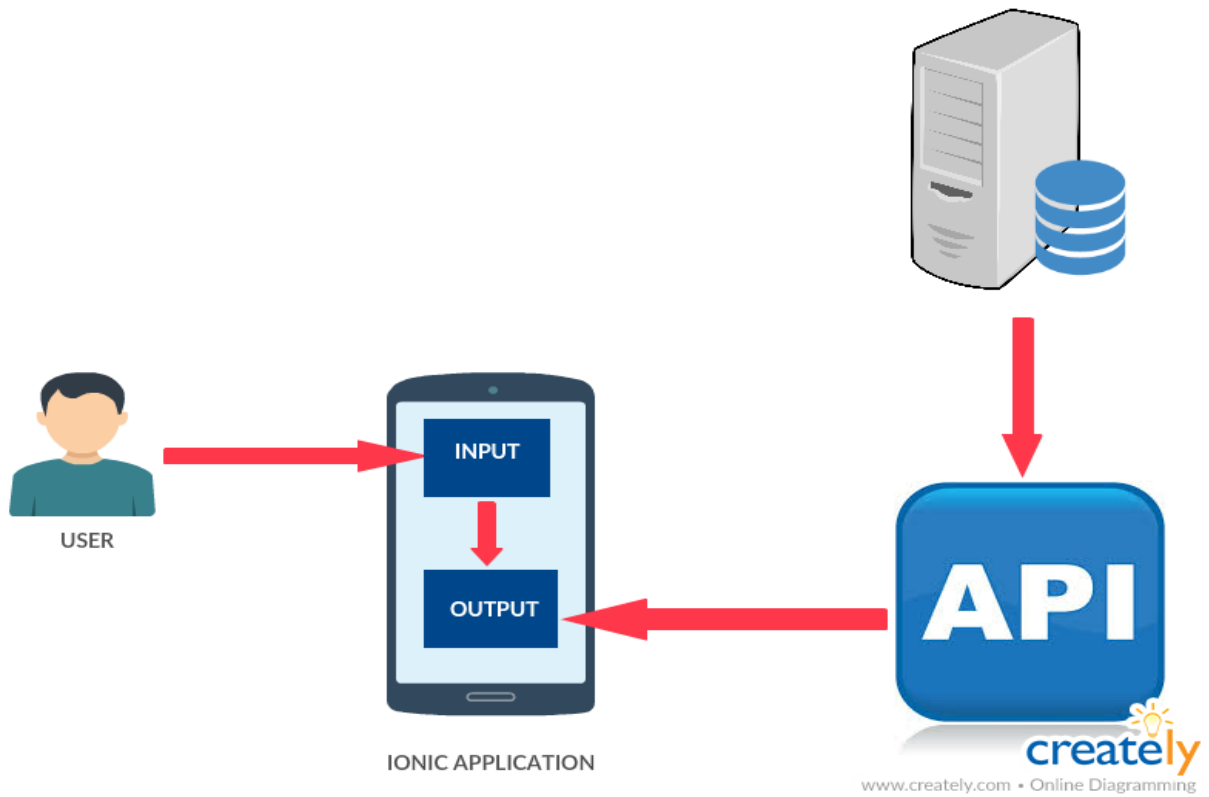
The image shows a mobile application interface for 'FOOD-CYCLED'. The app is running on a smartphone, with the status bar at the top showing signal strength, Wi-Fi, and the time 4:00. The app's header is a dark grey bar with a hamburger menu icon on the left and the text 'FOOD-CYCLED' in white. Below the header, there are five input fields: 'Name of the food', 'Cuisine', 'Preparation Date', 'Expiry Date', and 'Spice Level'. The 'Spice Level' field is a slider control. Below these fields are four buttons: 'UPLOAD IMAGE' (purple), 'GET INFO' (purple), 'CONFIRM REQUEST' (blue), and 'CANCEL' (green). The bottom of the screen features the 'createely' logo and the text 'www.createely.com • Online Diagramming'.

SOUP KITCHENS

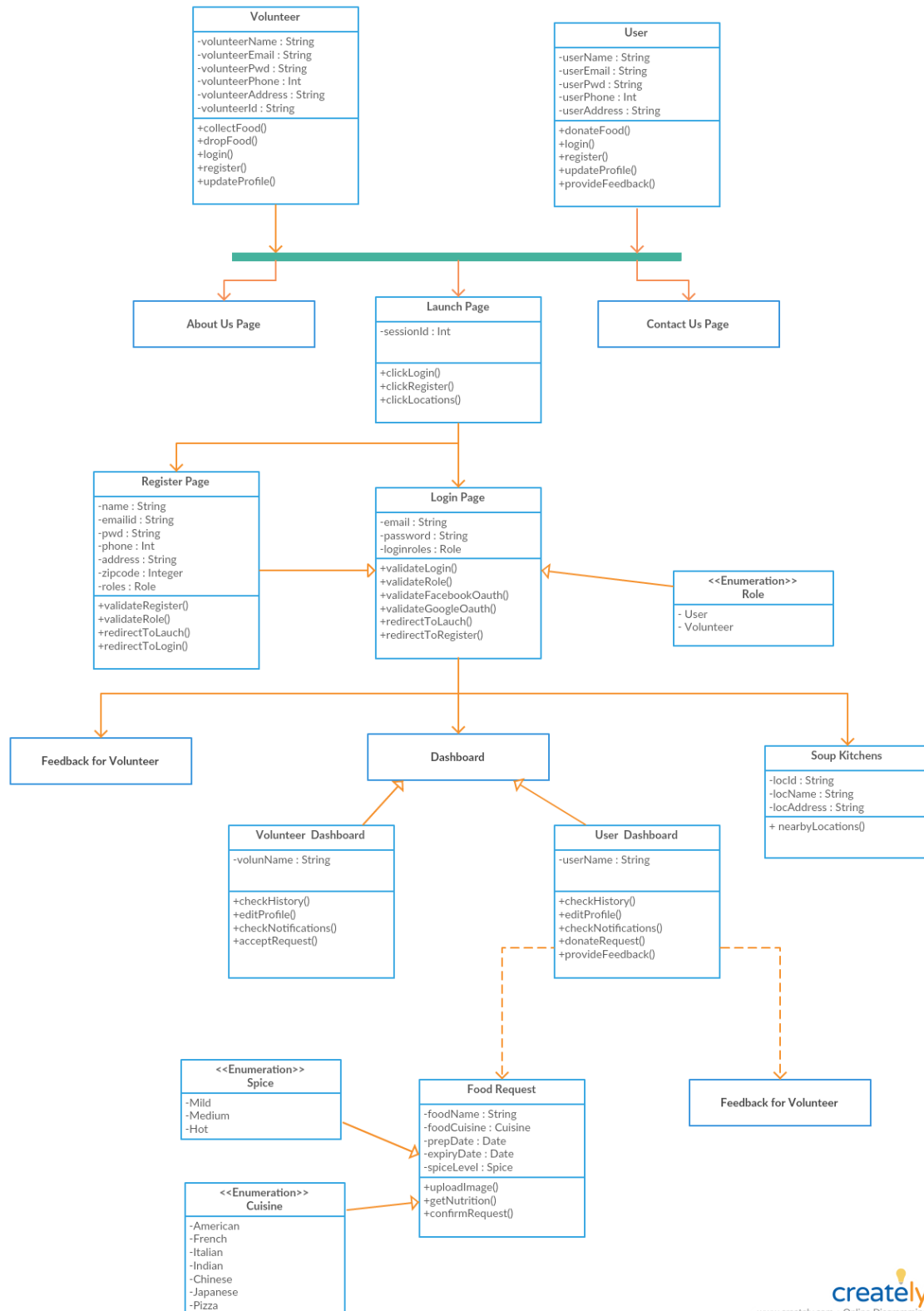
In this Page, the nearby Soup Kitchen Locations are displayed to the person accessing this application.



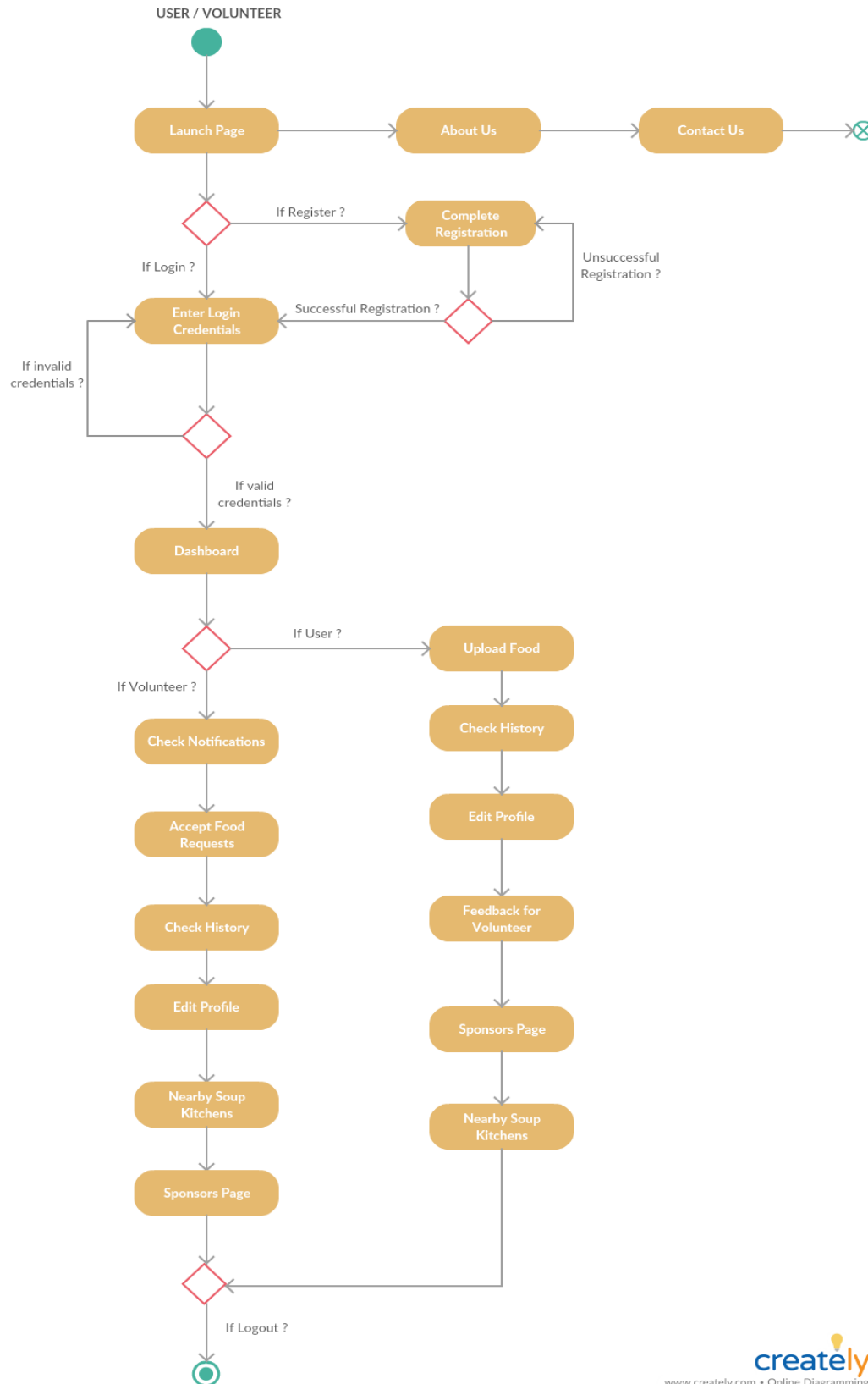
ARCHITECTURE DIAGRAM



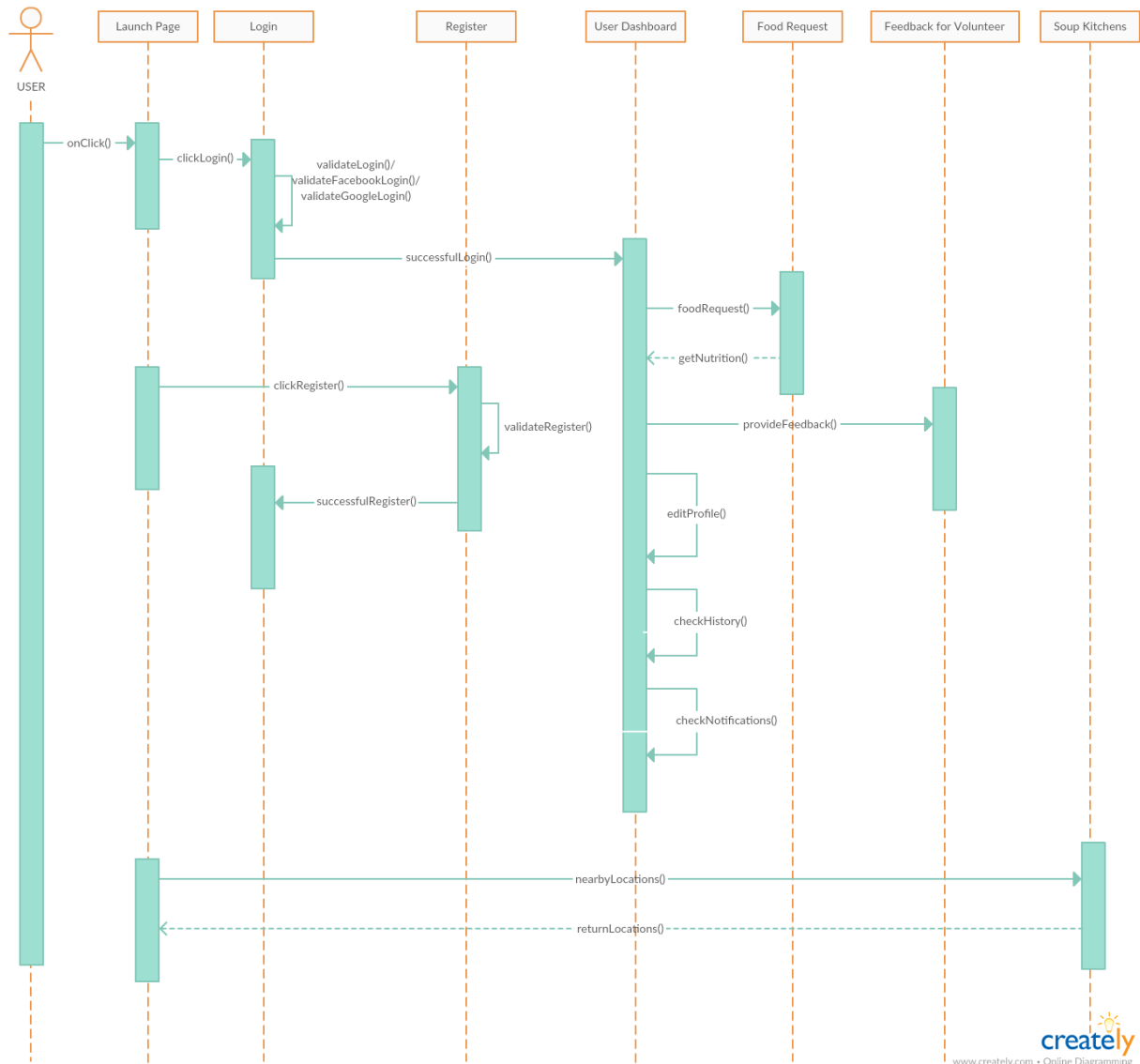
CLASS DIAGRAM

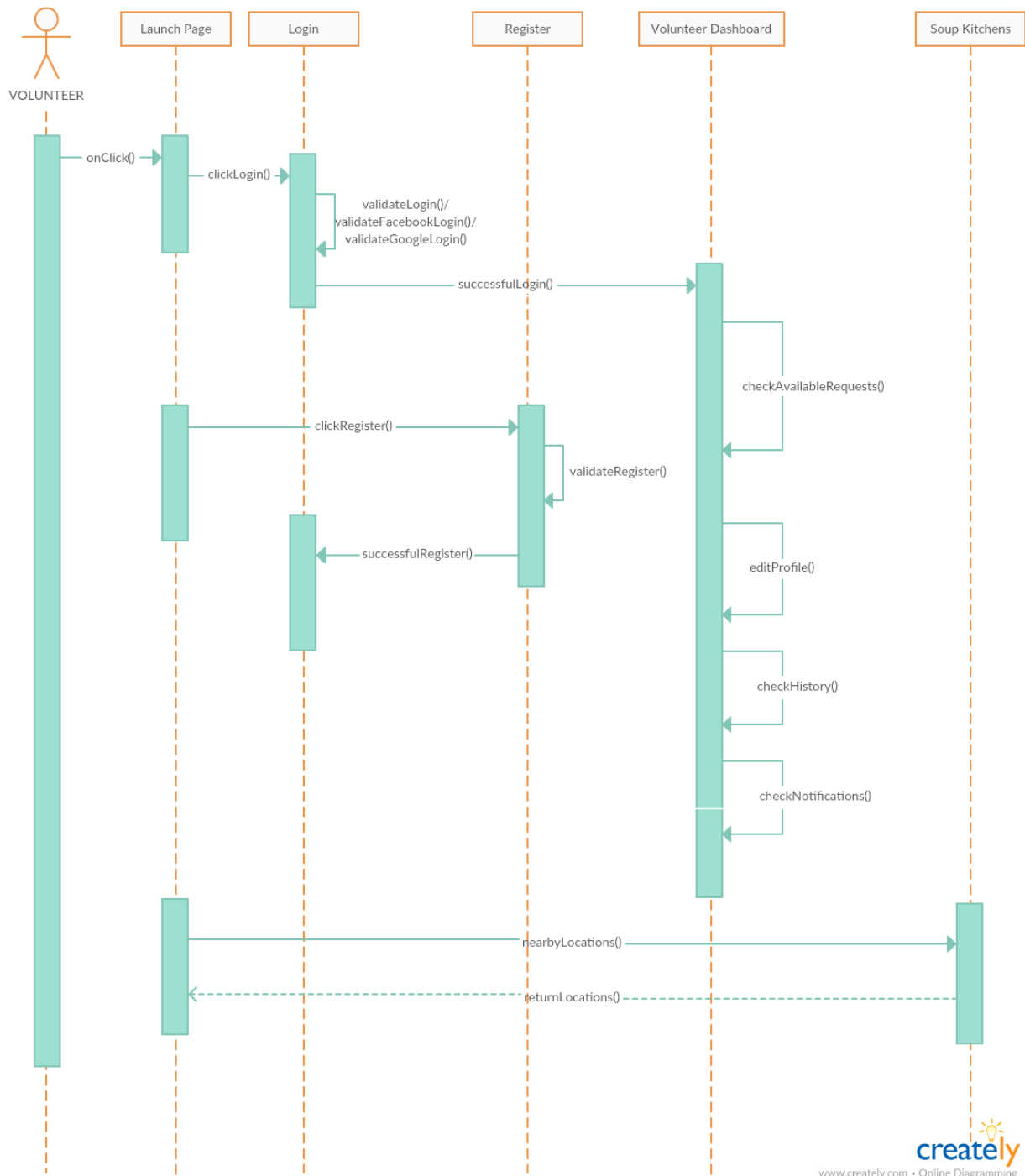


ACTIVITY DIAGRAM

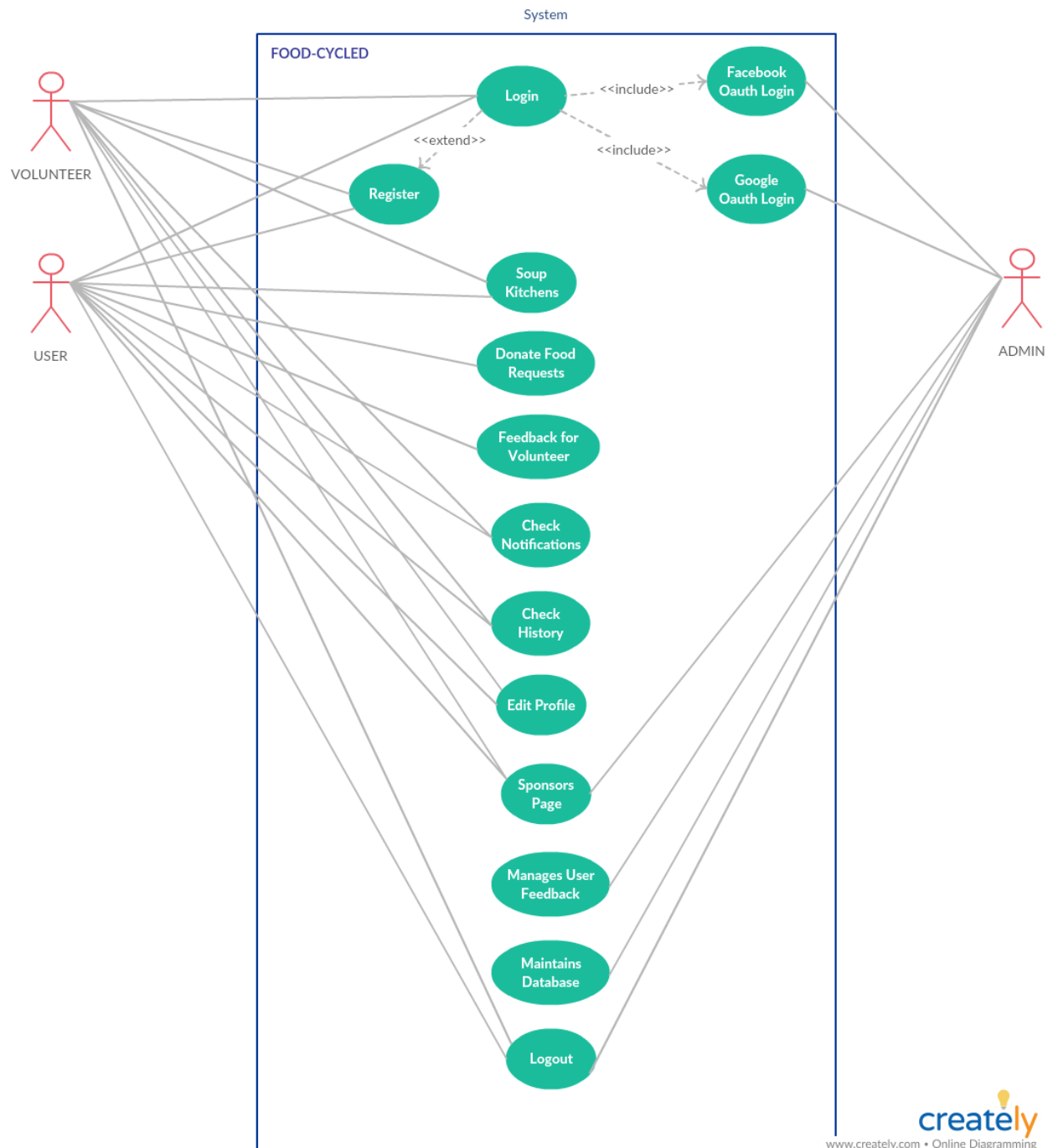


SEQUENCE DIAGRAM



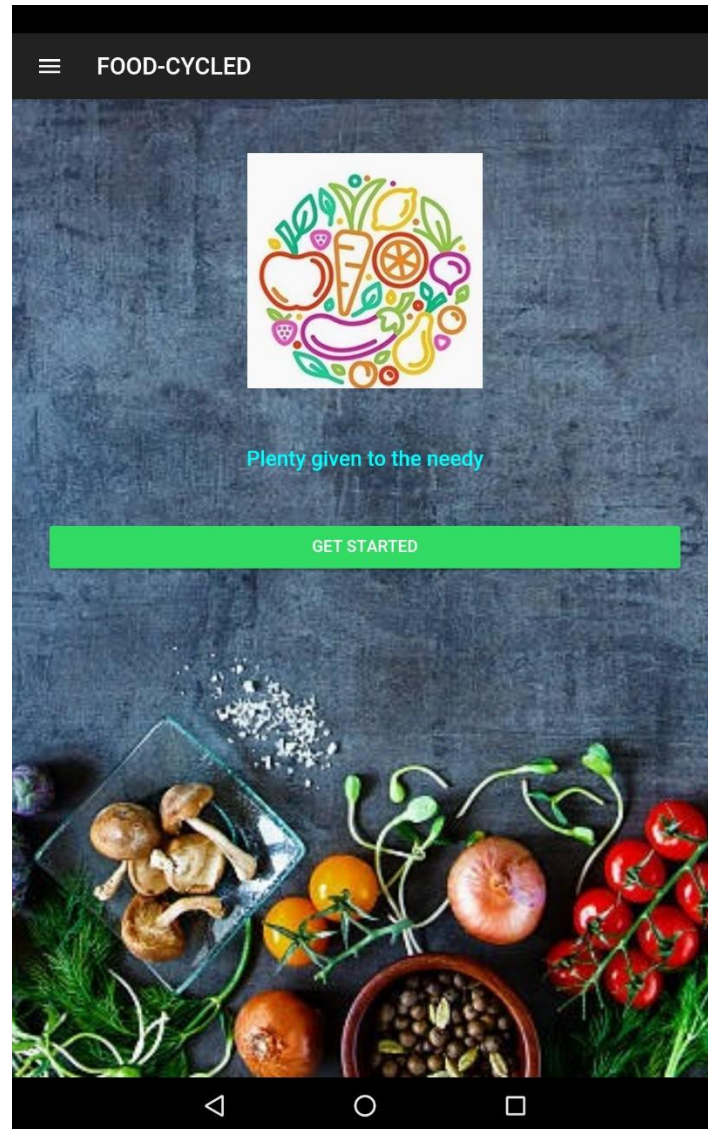


USECASE DIAGRAM



V. IMPLEMENTATION

LAUNCH PAGE



LOGIN PAGE

≡ LOGIN

Email Address

Password

Role

User ▾

LOGIN REGISTER

Or

LOGIN WITH FACEBOOK

LOGIN WITH GOOGLE

The image shows a mobile application interface for a login screen. The background is a dark, textured blue. At the top left, there is a hamburger menu icon and the word "LOGIN" in white. Below this, there are three input fields: "Email Address", "Password", and "Role". The "Role" field is currently set to "User" and has a dropdown arrow. Below the input fields are two buttons: a blue "LOGIN" button and a grey "REGISTER" button. A modal dialog titled "Role" is open in the center of the screen. It has two radio button options: "User" (which is selected) and "Volunteer". At the bottom of the modal are two buttons: "CANCEL" and "OK". The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

LOGIN

Email Address

Password

Role
User

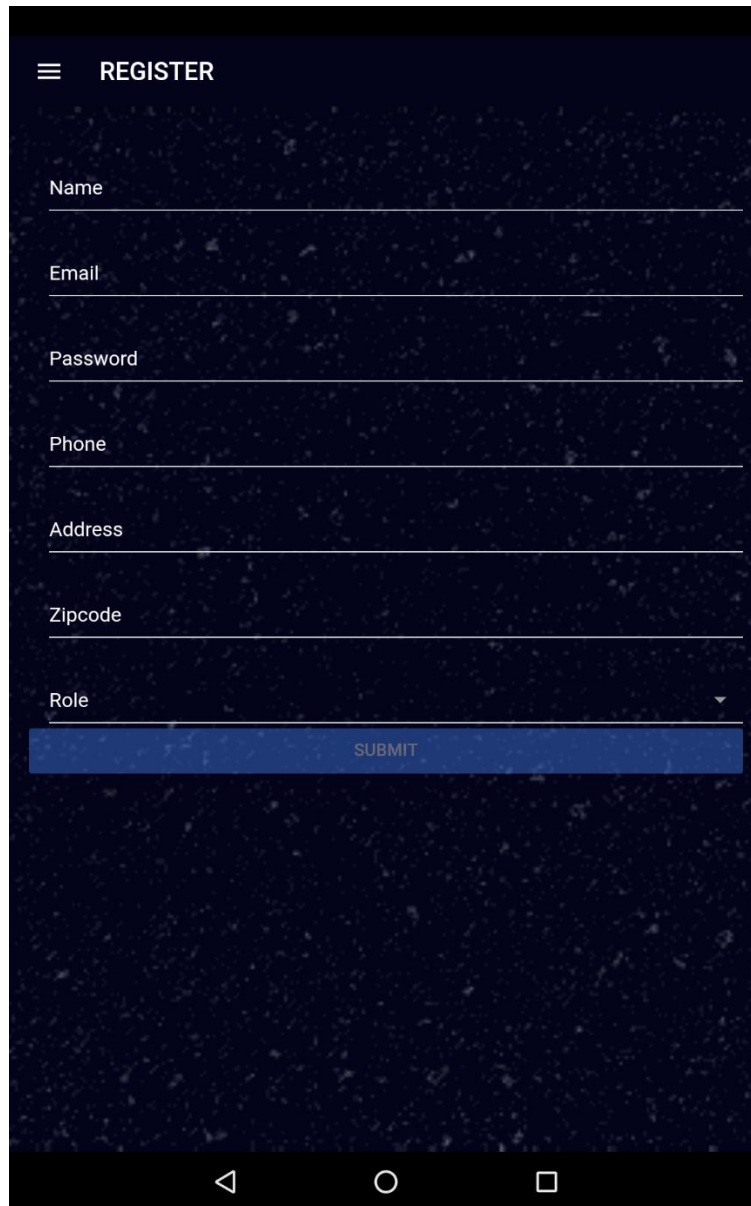
LOGIN REGISTER

Role

☒ User

☐ Volunteer

CANCEL OK

REGISTER PAGE

A mobile application registration form titled "REGISTER" with a hamburger menu icon on the left. The form is set against a dark blue background with a subtle pattern. It contains seven input fields: "Name", "Email", "Password", "Phone", "Address", "Zipcode", and "Role". The "Role" field is a dropdown menu with a downward arrow. Below the input fields is a blue "SUBMIT" button. The bottom of the screen features a black navigation bar with three white icons: a back arrow, a circle, and a square.

REGISTER

Name

Email

Password

Phone

Address

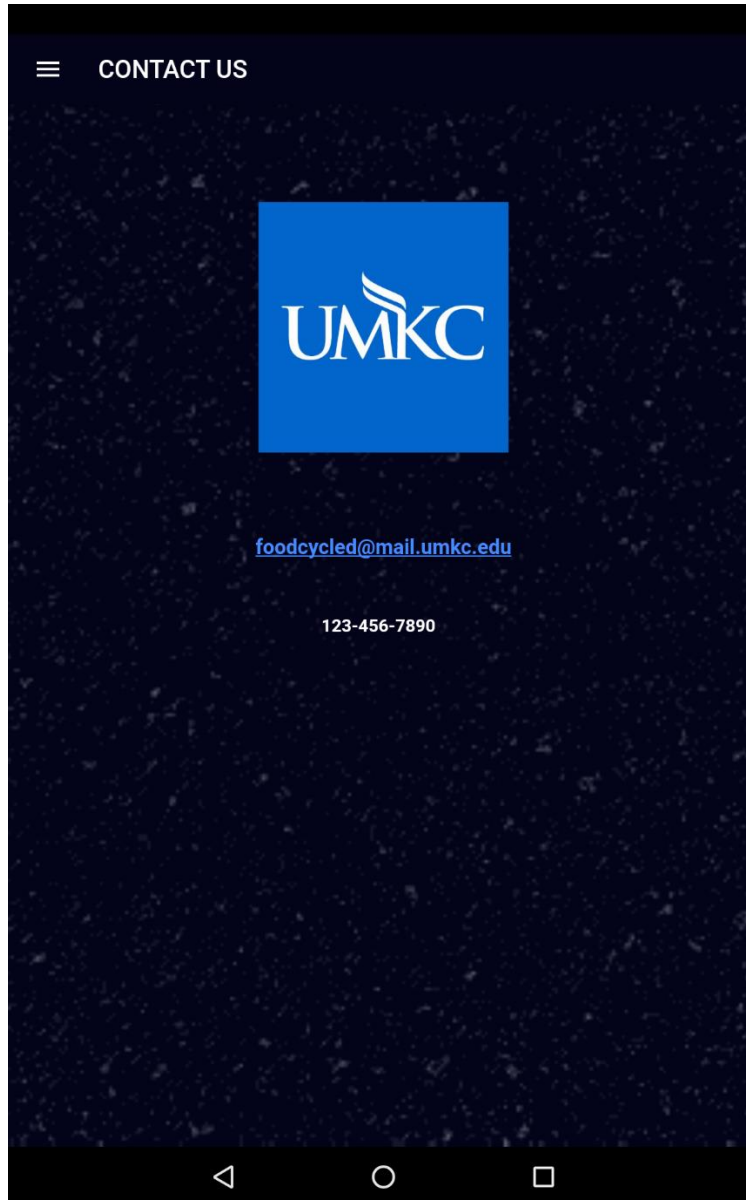
Zipcode

Role ▼

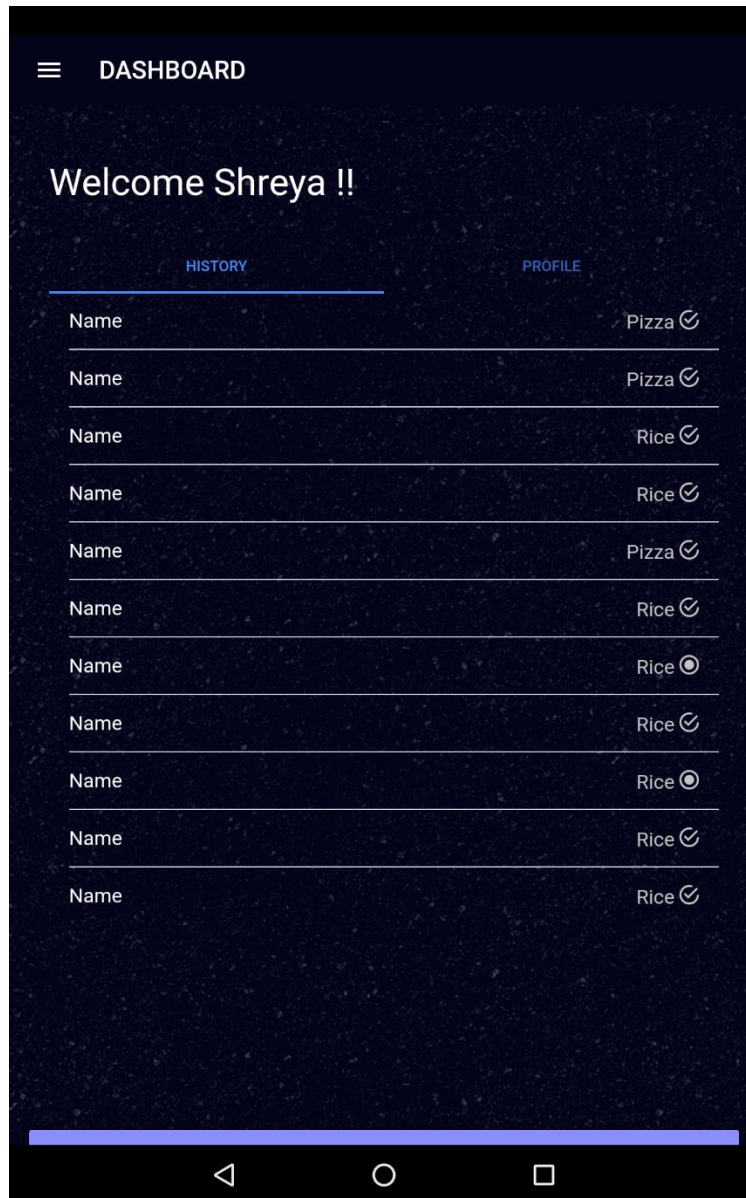
SUBMIT

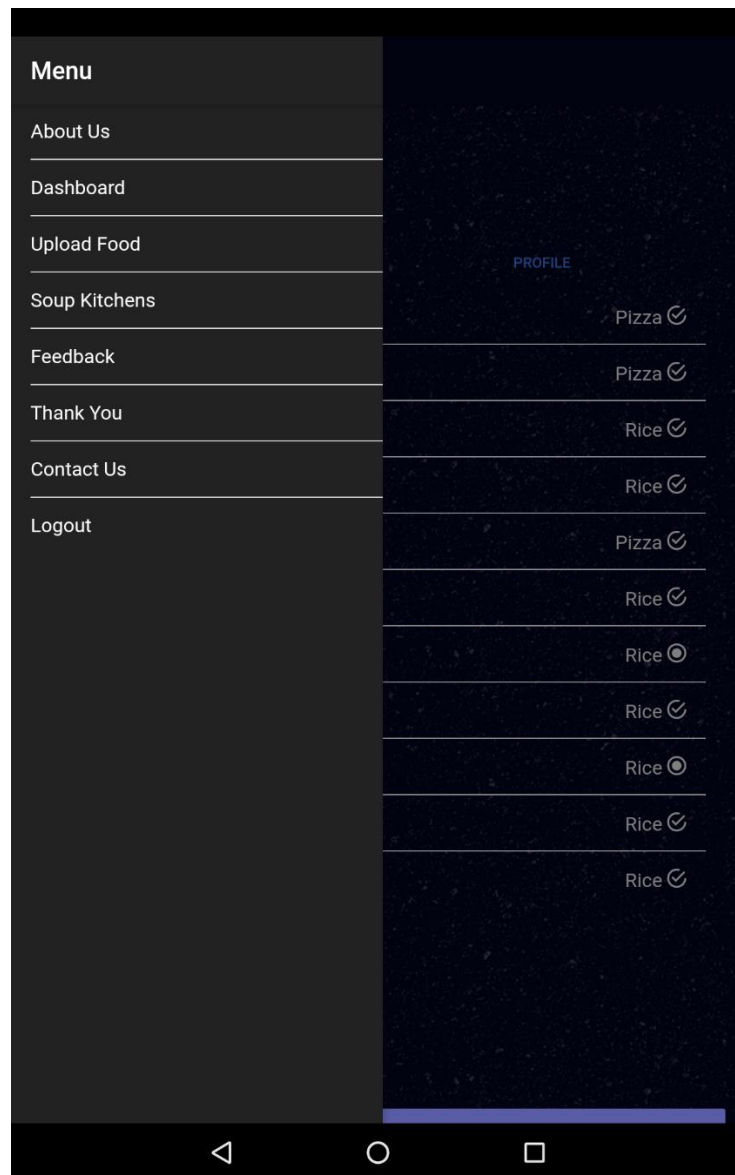
ABOUT US PAGE

CONTACT US PAGE



USER DASHBOARD PAGE






UPLOAD FOOD PAGE

The screenshot displays a mobile application interface titled "FOOD-CYCLED". The background is a dark, textured blue. The form contains the following elements:

- Name:** A text input field with a dropdown arrow on the right.
- Cuisine:** A text input field with a dropdown arrow on the right.
- Preparation Date:** A text input field.
- Expiry Date:** A text input field.
- Spice level : 0:** A horizontal slider control with a white dot at the start.
- Buttons:** Three buttons are located at the bottom of the form:
 - UPLOAD:** A blue button with a camera icon and the text "UPLOAD".
 - CONFIRM:** A dark blue button with the text "CONFIRM".
 - GET INFO:** A dark blue button with the text "GET INFO".

The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

 **DASHBOARD**

Name

Rice

Cuisine

Indian


Preparation Date

12/05/2017

Expiry Date


12/07/2017

Spice level : 36

 UPLOAD

CONFIRM

GET INFO

| Details × | |
|--|-----------|
|  Rice Sushi Rice in a Rice Cooker recipes | |
| Fat | 4.524 g |
| Carbs | 618.852 g |
| Protein | 51.558 g |
| Cholesterol | 0 mg |
| Sodium | 45.72 mg |
| Calcium | 98.64 mg |
| Magnesium | 282.48 mg |
| Potassium | 670.8 mg |
| Iron | 6.24 mg |
| Zinc | 9.1428 mg |
| Phosphorus | 842.4 mg |
| Vitamin A | 0 µg |
| Vitamin C | 0 mg |
| Thiamin (B1) | 0.546 mg |
| Riboflavin (B2) | 0.3744 mg |
| Niacin (B3) | 12.48 mg |
| Vitamin B6 | 1.131 mg |

FEEDBACK PAGE

The screenshot shows a mobile application interface for a feedback page. At the top, there is a hamburger menu icon and the title "FEEDBACK". Below this, a message reads: "We would love to hear your thoughts and concerns with anything so we can improve." There are two input fields: "Volunteer Name" and "Rate our volunteers", both with dropdown arrows. A modal dialog titled "Rate our volunteers" is open, displaying five radio button options: "Excellent", "Very Good", "Good", "Fair", and "Satisfactory". At the bottom of the modal are "CANCEL" and "OK" buttons. The background of the app is dark blue with a subtle pattern. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps icons.

FEEDBACK

We would love to hear your thoughts and concerns with anything so we can improve.

Volunteer Name

Rate our volunteers

Rate our volunteers

☐ Excellent

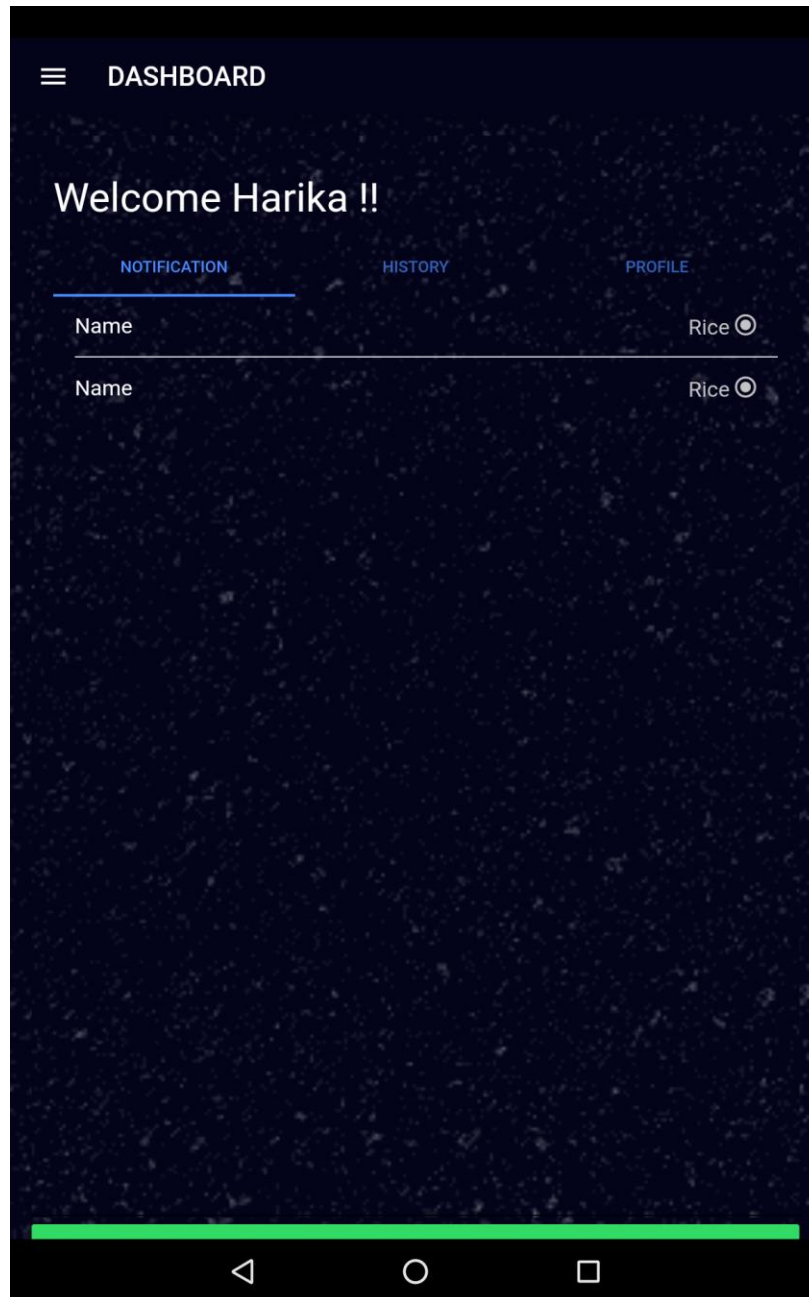
☐ Very Good

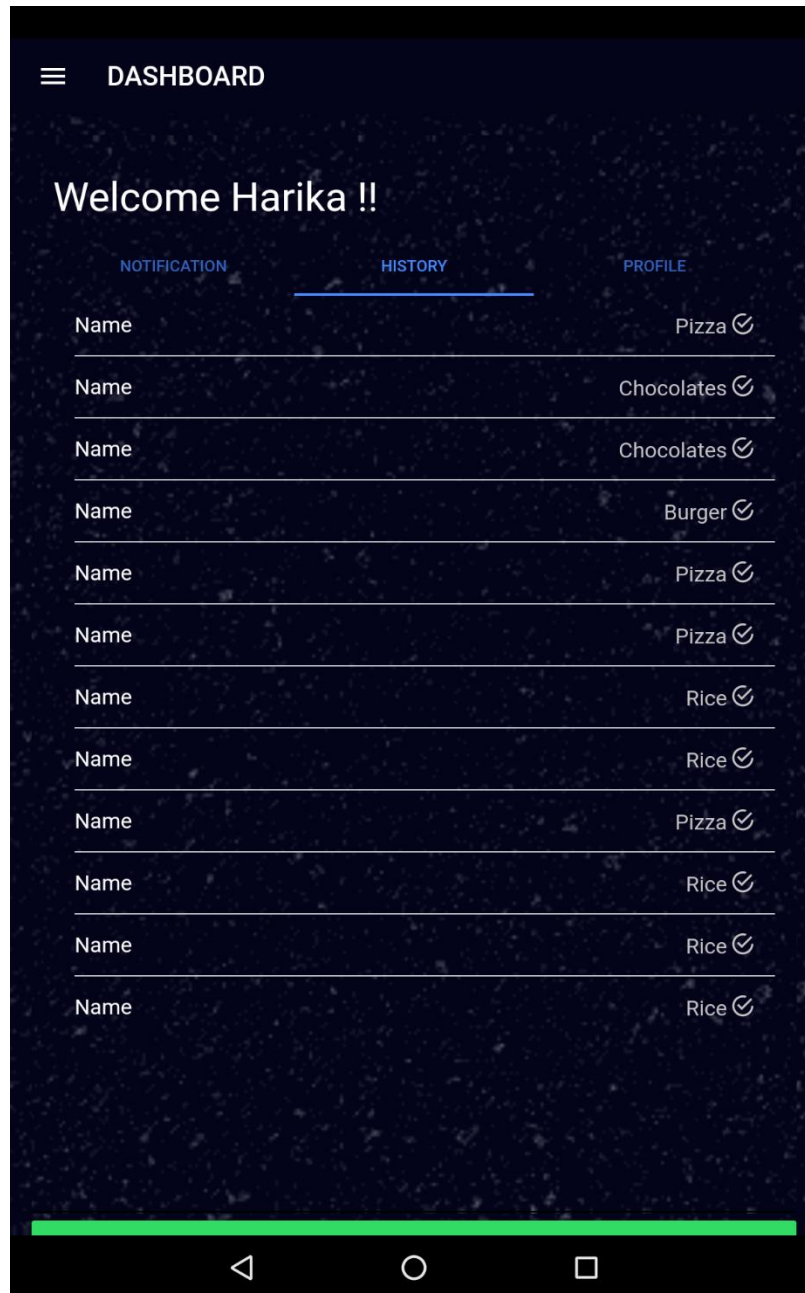
☐ Good

☐ Fair

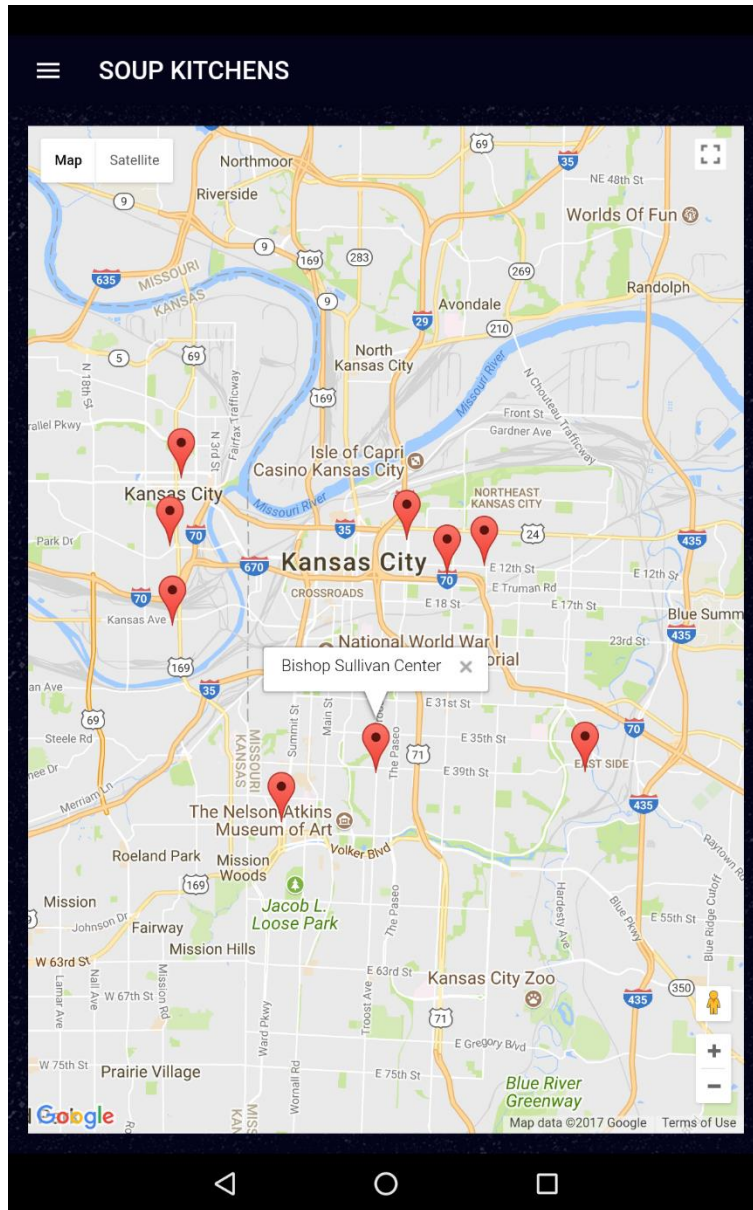
☐ Satisfactory

CANCEL OK

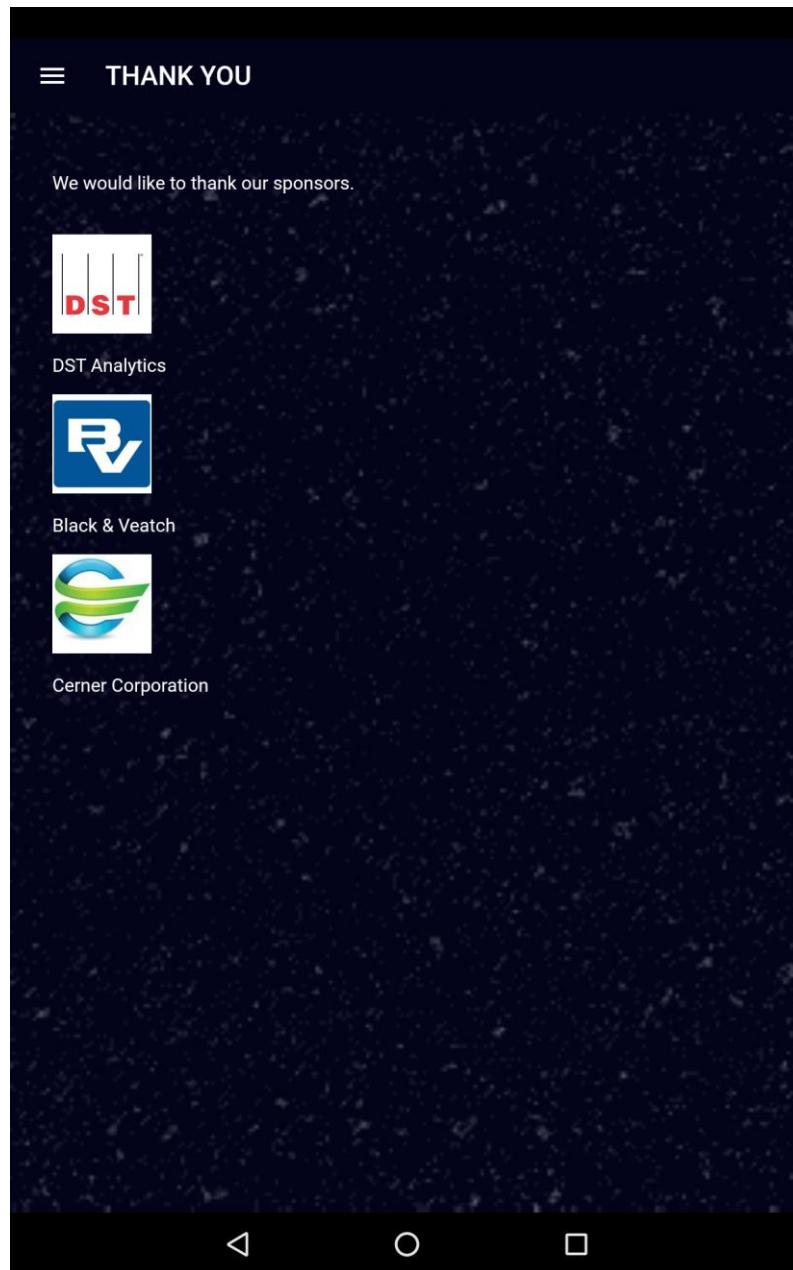
VOLUNTEER DASHBOARD



SOUP KITCHENS



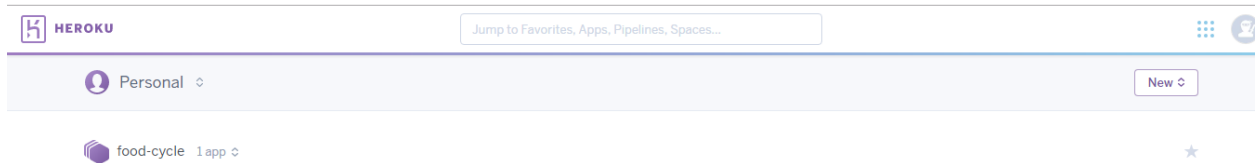
THANK YOU PAGE



VI. DEPLOYMENT

Heroku :

We have deployed the application in Heroku .



Youtube Link to our Application Demo : <https://youtu.be/Lxj-A1iWmPI>

Source Code Github Link : https://github.com/shreyaabadri/CS5551_team1_project/tree/harika/code

DropBox link for Complete Project : <https://www.dropbox.com/s/72j75wbdkq3grqk/food.rar?dl=0>

VII. TESTING

i. UNIT TESTING

| Sr No | Test Case | Description | Expected Outcomes | Result |
|-------|--|--|---------------------------------------|--------|
| 1 | Successful Authentication (Single Login for User and Volunteer) | User and Volunteer should be able to Login with the Email and password they provided while registering | Successful Login | Pass |
| 2 | Unsuccessful Authentication | Provides wrong credentials | Login Unsuccessful with error prompts | Pass |
| 3 | Successful OAuth Login (Facebook and Google+ login) | User or Volunteer provides correct credentials | Successful login | Pass |
| 5 | Registration Page | User and Volunteer should be able to successfully register by providing their role. | Successful Registration | Pass |
| 6 | Upload Food Page | User should be able to get nutrition information of the food | Nutrition details | Pass |

ii. PERFORMANCE TESTING

The screenshot shows the Lighthouse Performance audit results for a login page. The overall performance score is 98, and the ruleset applied is YSlow(V2). The URL is http://127.0.0.1:53777/pages/login/login.html. The audit is categorized as 'Grade A'.

Grade A Overall performance score 98 Ruleset applied: YSlow(V2) URL: http://127.0.0.1:53777/pages/login/login.html

ALL (23) FILTER BY: [CONTENT \(6\)](#) | [COOKIE \(2\)](#) | [CSS \(6\)](#) | [IMAGES \(2\)](#) | [JAVASCRIPT \(4\)](#) | [SERVER \(6\)](#) [Tweet](#) [Share](#)

| Category | Score | Item |
|----------|--------------------------------------|------|
| A | Make fewer HTTP requests | |
| A | Use a Content Delivery Network (CDN) | |
| A | Avoid empty src or href | |
| B | Add Expires headers | |
| B | Compress components with gzip | |
| A | Put CSS at top | |
| A | Put JavaScript at bottom | |
| A | Avoid CSS expressions | |

Grade A on Make fewer HTTP requests

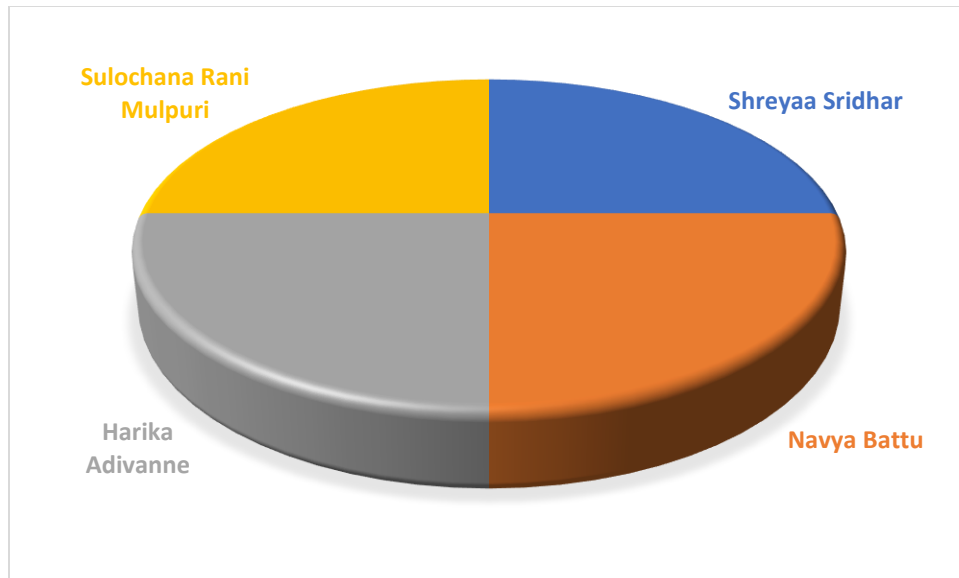
Decreasing the number of components on a page reduces the number of HTTP requests required to render the page, resulting in faster page loads. Some ways to reduce the number of components include: combine files, combine multiple scripts into one script, combine multiple CSS files into one style sheet, and use CSS Sprites and image maps.

[Read More](#)

VIII. TECHNOLOGY USED

- Android SDK
- HTML
- CSS
- Ionic
- Firebase
- PostgreSQL
- Heroku

IX. PROJECT MANAGEMENT



X. BIBLIOGRAPHY

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<https://www.nrdc.org/issues/food-waste>

<https://stackoverflow.com/>

<https://developers.facebook.com/>

<https://developers.google.com/>

<https://firebase.google.com/>

<https://www.postgresql.org/docs/>