

# **Project Plan**

Team Number: 8

Project Option: 1

## **Team Members**

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## Feature List

- Sign Up Page: Users can create an account on the platform
- Email Verification: Ensures the authenticity of user accounts by requiring email verification
- Home Page: Central hub of the platform where users can access various features and browse listings
- Edit Account: Allows users to update their account information
- Categorical Browsing: Enables users to search for food listings based on specific categories
- Messaging Inbox: Provides a messaging system for users to communicate with each other
- Search Page: Allows users to search for specific listings or items they are looking for
- Create Listing: Allows users to create listings for the food they want to share
- Edit/Delete Listing: Allow users to modify or delete their listings
- Security Implementation: Ensure the security of user data
- Map Icons: Represent food listings/disposal locations on the map
- Map Range: The geographical area where users can see listings
- Filters: Help users refine the search results
- Messaging Chat: Allow users to communicate about listings and meetups
- Bag (Shopping Cart): Allow users to see the items they want to pick up
- Edit Profile: Allow users to edit their account profile
- Forgot Password: Allow users to reset their passwords if forgotten
- Map Display: Visual representation of food listings on the map
- Archives/Reviews: Users can review and provide feedback on their food
- Push Notifications: Alert users about new listings, messages, etc.
- Allergy Warnings: Flag potential allergens in the food listings
- Location Filtering: Allow users to set location preferences to ensure posts in their area

# 1. Overview

Our software is uniquely designed to address the pressing issues of food waste and the lack of access to free, healthy food options for those in need. By focusing on a sustainable way of living, we've created a platform where individuals can effortlessly access and provide free homemade meals and non-perishable goods. Users can seamlessly filter by preferences, dietary restrictions, and proximity through a variety of user-friendly interfaces. Among these are a distance filtering map and integrated messaging services, ensuring that both givers and receivers can easily communicate and coordinate.

One standout feature of our platform is the innovative 2-step system. If for any reason a receiver does not collect the food, this system empowers the giver with the choice to either compost the food, reduce waste, or relist it for other users, ensuring that the food still reaches someone in need. Recognizing the diverse tech proficiency of our potential users, we've made a conscious effort to prioritize simplicity in our design. We emphasize visual cues and intuitive navigation over lengthy instructions or complex user interfaces.

Our value proposition is clear: we aim to make sustainable living more accessible, convenient, and effortless for the general public. Beyond just facilitating food sharing, our platform is equipped with features that ensure dietary restrictions are respected and potential allergens are flagged. This attention to detail and our commitment to user experience sets our solution apart.

## **a. Envisioned Usage**

### **1. Ocean**

- Demographic: Ocean is a 22-year-old environmental science student who lives in a smaller city.
- Behaviour and Needs: Ocean is passionate about living a sustainable lifestyle and ensuring environmentally friendly practices. She will use the platform to share any excess fruit and vegetables from her garden. Having a proximity filter is something Ocean appreciates to minimize transportation emissions. She actively uses the messaging feature to coordinate pickups with other users.
- Tech Proficiency: Ocean is moderately tech-savvy and is comfortable using mobile apps and websites.

### **2. Trent**

- Demographic: Trent is a 36-year-old single father, he works full time and lives in a large city in a downtown apartment.
- Behaviour and Needs: Trent relies on the platform to access free and healthy meals for his children when short on time or money. The proximity filters allow him to find options that are close to his home minimizing time wasted in his day. Trent's youngest daughter has dietary restrictions, so having the allergen flagging system is something he relies on.
- Tech Proficiency: Trent is very tech-savvy and is comfortable using a wide array of applications, but appreciates a simplistic and intuitive interface.

### **3. Grace**

- Demographic: Grace is a 64-year-old retiree living in a small house with her 3 retired relatives. She enjoys cooking but often has more food than is necessary for those in her household.
- Behaviour and Needs: Grace uses the platform to share homemade meals and excess home-grown vegetables. She appreciates having a 2-step system to alleviate food waste by relisting the food if it is not collected. She is not the most tech-savvy but appreciates the ease of navigation on the platform.
- Tech Proficiency: Grace is not tech-savvy and relies on simplicity and visual cues to help navigate applications.

## 2. Major Milestones

Deadline	Deliverable
Term 1 Week 9: Mini Presentation	User log-in with credentials and permissions. Profile page with user's information.
Term 1 Week 13: Design Submission	General user interface design. Flow control. System architecture.
Term 2 Week 4: Peer Testing	Sign up, Email Verification, Home, Edit Account, Browse by Category, Messaging inbox, Search, Create Listing, Edit/Delete Listing.
Term 2 Week 8: Peer Testing	Security, Map Icons, Map range, Filtering, Messaging chat, Bag, Edit Profile, Forgot Password, Map display.
Term 2 Week 13: Final Project Submission	Archives/Reviews, Push Notifications, Allergy warnings, Location Filtering.

## 3. Technology Stack

Our chosen stack is React Native with the Django REST Framework.

The Django REST framework provides a REST interface which can be consumed by a React Native frontend and a MySQL database.

React Native was an easy choice for us, we admire that it is a dual platform and is widely used by mobile developers today. It has excellent documentation and we have heard from peers that it is a valuable framework to learn. We also appreciate that React Native is fully open-source with top-notch community support.

There were a lot of backend choices for React Native. We went with Django because the REST interface has high compatibility with React. Django has excellent built-in libraries and features for security, database, and admin purposes. Along with the high level of abstraction that Python provides, we think development time will be sped up with this framework. The MVC architecture provides a simple structure for code reuse and simplicity. Django is another highly employable, well-documented, and versatile backend framework that looks set to stick around for a while.

We think MySQL is a safe, fast and reliable choice for our needs and is a popular database choice in the industry.

## 4. Teamwork Distribution and Anticipated Hurdles

Category	Mackenzie Kudrenecky	Alexander Roizman	Brandon Mack	Joss White
Experience	Django python project, HTML/CSS/PHP web app	HTML/CSS/PHP, Web design, mobile design.	HTML/CSS, Website Design, App Design	Django python project, Web Apps, Mapbox
Good At	Database, project and time management	UI, front end.	UI design, front-end	Architecture, database, UI
Expect to Learn	React Native, Map API, messaging, security	React Native, UX, Map API, messaging, and databases.	React Native, Databases, API	React Native, Rest and API configuration, messaging

Category of Work/Features	Mackenzie	Alexander	Brandon	Joss
Project Management	✓	✓	✓	✓
Technical Direction				✓
Technical Help			✓	
Troubleshooting	✓	✓	✓	✓
System Architecture Design	✓			✓
User Interface Design	✓	✓	✓	✓
CSS Development	✓	✓	✓	
Feature 1: log in	✓	✓	✓	✓
Feature 2: sign up	✓	✓	✓	✓
Feature 3: Home page	✓	✓	✓	✓
Feature 4: Email Verification			✓	
Feature 5: Edit Account		✓	✓	
Feature 6: Browse by category	✓	✓		✓
Feature 7: Messaging Inbox		✓		✓
Feature 8: Search	✓	✓		✓
Feature 9: Create a listing	✓		✓	
Feature 10: Edit/Delete Listing	✓	✓		✓
Feature 11: Security				✓
Feature 12: Map Icons	✓		✓	✓
Feature 13: Map Range	✓		✓	✓

Feature 14: Filtering	✓			✓
Feature 15: Messaging chat	✓	✓		
Feature 16: Bag		✓		
Feature 17: Edit Profile		✓	✓	✓
Feature 18: Forgot Password			✓	
Feature 19: Map display	✓	✓	✓	✓
Feature 20: Archives/Reviews	✓	✓		
Feature 21: Push Notifications	✓	✓	✓	
Feature 22: Allergy Warnings	✓	✓		✓
Feature 23: Location Filtering			✓	✓
Feature 24: Admin	✓	✓	✓	✓
Database Setup	✓			✓
Presentation Preparation		✓	✓	
Design Video Creation		✓		
Design Video Editing	✓	✓		
Design Report	✓			✓
Final Video Creation		✓	✓	
Final Team Report	✓	✓	✓	✓
Final Individual Report	✓	✓	✓	✓