Proposed Level of Achievement

Gemini

User Stories

1. As a person who works till late, I want to be able to enjoy ready-to-eat home-cooked meal without having to spend time and effort preparing one myself.
2. As a person who comes from a family that does not know how to cook, I want to eat home-cooked food that tastes unique and healthier.
3. As a person who loves cooking and wants to spread the warmth to others around me, I want to be able to have someone who would try my food and enjoy it.
4. As a person who can cook home-cooked food well and is in need of some extra money, I want to be able to use my cooking skills to earn some extra income.
5. As a person who cooks too much and does not want to waste food, I want to be able to find someone who is interested and willing to eat my food.

Project Scope

A platform that allows users to post the details of the meal they want to share and view the meals available for purchase, with the aim of sharing delicious home cooking, lowering food cost and reducing food wastage and leftover.

Buy	● View the meals available and details of the seller (e.g. area of stay, mobile phone number, rating, review) ● Filter (e.g. vegetarian, halal, nearby) the meals available based on preferences ● Sort (e.g. recent, lowest to highest price) the meals available based on preferences ● Search food
Sell	● Post meals, indicating the name of the dish, a picture of the dish (optional), the ingredients used, the type of dish, a short description (optional) and the price of dish ● Update post and make modifications ● Delete post once the meal is sold
View Users	● Search for other users ● View profile of other users
Profile	● Register and login ● View and edit profile and upload certification (optional) ● Delete account
Favourite	● Mark a post as favourite ● View posts marked as favourites

Chat/Rate	● Search chat ● Chat with sellers to indicate interest in the meal ● Discuss details and make necessary arrangements ● View status of messages sent (delivered/seen) ● View notification badge ● Rate and review other users upon successful transaction

GitHub Link

https://github.com/zixinn/orbital2019

Edge Features Developed

Feature	Details
Filter/sort	● Allow users to filter (e.g. vegetarian, halal, nearby) and sort (e.g. recent, lowest to highest price) the meals available based on their preferences
Chat/rate	● Allow buyers to send messages to sellers to express interest in the meals and find out more about the meals, and allow both parties to discuss collection and payment details ● Allow users to rate and review upon successful transaction
Edit/delete profile	● Allow users to edit their profile when needed (e.g. when users move house and their area of stay changes) and delete their account when they no longer use the application ● Allow sellers to upload relevant certification (e.g. food safety, vocational) to improve their credibility and provide assurance to buyers
Favourite	● Allow users to mark a post as favourite and view posts marked as favourite
View users	● Allow users to search and view the profile of other users

Problems Encountered and Bugs Squashed

Problem	Solution
Unsure if filter should be and or or	Check against new and existing applications to better understand the expectations of users
Toggling of favourites icon is based on device and not user	Use setTag instead of SharedPreferences to track whether the post is liked
Posts with same name will be overwritten.	Store posts using id instead of name in firebase.
Problems updating posts with seller details	Store users using id instead of name in

when user updates username.	firebase.

User Testing

<u>Self-evaluation</u>

The logout icon may be ambiguous and users may not be aware of its function. Users may press the icon without recognising what they will find behind it. As such, we have decided to replace the icon with text to improve clarity and increase engagement. The food type field may also be ambiguous. To make it clearer, we have separated it into 2 fields, dietary and category.

Moreover, users may also have difficulty finding their chat with another user. To facilitate the searching of messages, we have added a search bar for the chat. We have also added a tab in the bottom navigation for users to view the profile of other users so that buyers and sellers can get to know each other better before deciding on the transaction. To improve the layout of the reviews, we have changed the presentation of the reviews and displayed it in listview instead.

<u>Cognitive Walkthrough</u>

We conducted cognitive walkthrough to evaluate the usability of the application and analyse the thoughts of users as they walk through the assigned tasks. We hope to focus on the user's ability to learn and understand the system as a new or infrequent user unfamiliar with the application.

The reviewer will walk through tasks that would be important for the target user to accomplish their goals and then answer the following four questions during each sequence of the assigned task:

1. Will the user try to achieve the right effect?
2. Will the user notice that the correct action is available?
3. Will the user associate the correct action with the effect that the user is trying to achieve?
4. If the correct action is performed, will the user see that progress is being made toward the solution of the task?

Target User	Working adults	Anyone who wants to sell home-cooked food
Test Scenario	A user wants to find meals they are interested in.	A user wants to sell the meals they have prepared.
Tasks	Filter and sort meals available	Upload certification
	Favourite meals and view favourites	Chat with buyer
	Chat with seller	View buyer details

Steps Needed to Accomplish the Tasks:

Task	Steps
Filter/sort meals	1. Select "buy" in the bottom navigation 2. Select the "filter/sort" button 3. Select the dietary and category to filter 4. Select how the meals are to be sorted 5. Select the "done" button
Favourite meals	1. Select "buy" in the bottom navigation 2. Select the meal to view details 3. Select the "favourites" icon at the bottom
View favourites	1. Select the "favourites" icon in the app bar
Chat with seller	1. Select "buy" in the bottom navigation 2. Select the meal to view details 3. Select the "chat" floating action button 4. Type a message 5. Select the "send" button
Upload certification	1. Select "profile" in the bottom navigation 2. Select the "edit" floating action button 3. Select the "upload" button under certification 4. Select the "update" button
Chat with buyer	1. Select the "chat" icon in the app bar 2. Select the buyer to chat with 3. Type a message 4. Select the "send" button
View buyer details	1. Select "users" in the bottom navigation 2. Enter the name of the user in the search bar 3. Select the user

Why are the Tasks so Important?

As a buyer, users will need to be able to find meals that appeal to them. As a seller, users will need to be able to sell the meals they have prepared. These are essential functions that a user needs to successfully utilise the application and bring about a successful transaction.

Findings:

Issue	Recommendation
Users may not remember what they have selected for the sort/filter previously. (Q3)	Show the filter and sort options previously selected upon going to the filter/sort page.
Users may not be able to find the favourites icon when it is located inside the view details page. (Q2)	Shift the icon onto the gridview so that it will be more visible to users.
Users may not be aware that the meal has been added to or removed from the favourites. (Q4)	Toggle the favourites icon. The icon will turn red when it is added to the favourites and white when it is removed.

Users are not able to unfavourite a meal from the favourites page. (Q1)	Include the favourites icon on the meals in the favourites page for users to unfavourite.
Users do not know if their messages have been delivered and seen when chatting. (Q4)	Indicate whether messages have been delivered and seen.

By implementing these usability recommendations, we hope to improve the functionality and ease of use for users navigating the application. By enhancing the users' experience, we hope that users would be more inclined to utilise the application to share their meals.

Survey of Potential Users
We also gathered feedback from potential users. Based on the feedback collected, there were concerns about food hygiene and safety. Sellers should abide by food safety regulations. In view of that, we have added a field for sellers with relevant food safety certification (e.g. WSQ Follow Food & Beverage Safety and Hygiene Policies and Procedures certificate) to upload them in their profile to improve their credibility. Buyers can also assess sellers based on the reviews provided by other buyers and chat with the seller before making their decision.

In addition, there were suggestions to include favourites to allow users to favourite a post for easier access. As such, we have added a favourite button to the posts for users to favourite the posts that they are interested in and to view their favourites. There were also suggestions to allow users to rate only when there is a successful transaction to prevent fraudulent ratings and we have implemented the necessary changes.

Also, food is easily perishable. Therefore, besides posting already cooked meals, sellers can also post meals that they intend to cook and prepare the meal portion according to the number of orders received. With the above modifications, we believe that our application provides a suitable solution to the problem. We will continue to improve on the application so that it can better serve its purpose.

Project Log

S/N	Task	Date	Orbitee 1 (hrs)	Orbitee 2 (hrs)	Remarks
1	Liftoff Day 1	13/05/2019	9	9	- Attend workshop
2	Liftoff Day 2	14/05/2019	9	9	- Attend workshop
3	Meeting with Adviser	14/05/2019	1	1	- Discuss possible features and areas to focus on - Discuss the technology required
4	Design Logo	15/05/2019	2	2	- Create and edit logo
5	Discussion	16/05/2019	2	2	- Formulate project idea and structure - Discuss and lay out the skeleton of the application - Brainstorm and discuss core features to implement
6	README	17/05/2019	3	3	- Describe problem motivation, aim and user stories - Describe proposed core features, program flow and development plan
7	Research	18/05/2019	5	5	- Pick up the necessary technology (Android Studio)
8	Frontend Programming	19/05/2019	4	4	- Design login page and registration page
9	Frontend Programming	20/05/2019	3	3	- Design homepage
10	Backend Programming	25/05/2019	5	5	- Design app navigation - Store user's profile in database
11	Project Video	26/05/2019	5	5	- Showcase project idea - Describe aim, features, app navigation and technology used
12	Project Poster	01/06/2019	3	3	- Showcase project idea - Describe aim, features, app navigation and technology used
13	Project Log	02/06/2019	1	1	- Record tasks performed and hours spent

14	Programming	05/06/2019	8	8	- Create a form for users to post their food - Store information of posted food in firebase
15	Programming	07/06/2019	3	3	- Design sell page - Allow users to view their posted food
16	Programming	08/06/2019	8	8	- Allow users to update their post and make modifications - Allow users to delete their post once their meal is sold - Store updates in firebase
17	Peer Evaluation for Milestone 1	09/06/2019	3	3	- Watch and read milestone 1 materials presented by other teams - Evaluate and provide comments
18	Programming	14/06/2019	3	3	- Design buy page - Allow users to view the meals available
19	Programming	15/06/2019	5	5	- Allow users to view details of the food and details of the seller
20	Programming	16/06/2019	8	8	- Design rate page - Allow users to search for other users - Allow users to give ratings and reviews to other users - Store ratings and reviews in firebase - Display ratings and reviews in seller's details
21	Programming	21/06/2019	3	3	- Design profile page - Allow users to view their profile details
22	Testing	22/06/2019	3	3	- Perform user testing on the system and made necessary changes - Change drawer layout to bottom navigation layout
23	Project Video	23/06/2019	5	5	- Showcase prototype/ complete system - Demonstrate key features and app navigation
24	Project Poster	28/06/2019	3	3	- Showcase prototype/

					complete system - Demonstrate key features and app navigation
25	README	29/06/2019	4	4	- Describe project scope - Showcase core features developed - Analyse problems encountered - Describe testing performed on the system - Describe features for the next phase
26	Project Log	30/06/2019	1	1	- Record tasks performed and hours spent
27	Peer Evaluation for Milestone 2	05/07/2019	3	3	- Watch and read milestone 2 materials presented by other teams - Evaluate and provide comments
28	Programming	06/07/2019	8	8	- Allow users to sort and filter the meals available based on their preferences
29	Programming	07/07/2019	8	8	- Allow users to edit their profile (Zi Xin) - Allow users to delete their account (Lu Shing) - Update post details when seller's profile is updated (Zi Xin) - Delete posts when account is deleted (Lu Shing)
30	Research	12/07/2019	3	3	- Watch videos on how to implement chat system
31	Programming	13/07/2019	8	8	- Implement chat system for users to express interest in the meals and discuss necessary details (Lu Shing) - Allow users to send and receive messages (Lu Shing) - Store messages in firebase (Lu Shing) - Display messages (Zi Xin) - Display users with whom you have messages (Zi Xin)
32	Programming	14/07/2019	8	8	- Allow users to see if messages are seen (Zi Xin) - Display last message from

					chat (Zi Xin) - Display notification badge (Lu Shing)
33	Programming	19/07/2019	3	3	- Add edit and delete icon for update and delete post (Lu Shing) - Add search bar for food and chat (Zi Xin)
34	Testing	20/07/2019	8	8	- Perform user testing on the system and made necessary changes - Allow users to upload certification (Zi Xin) - Allow users to favourite posts and view favourites (Lu Shing) - Separate food type into dietary and category (Zi Xin) - Add date and time to post (Lu Shing)
35	Programming	21/07/2019	8	8	- Store users and post using id instead of name in firebase (Zi Xin) - Allow users to rate only when there is a successful transaction (Lu Shing) - Allow users to view the profile of other users (Zi Xin) - Display reviews in listview (Lu Shing) - Display meaningful error messages (Lu Shing)
36	Project Poster	26/07/2019	3	3	- Showcase prototype/ complete system - Demonstrate extended features and app navigation
37	Project Video	27/07/2019	5	5	- Showcase prototype/ complete system - Demonstrate extended features and app navigation
38	README & Project Log	28/07/2019	5	5	- Describe user stories and project scope - Describe problems encountered and bugs squashed - Showcase extended features developed - Analyse problems encountered

					- Describe testing performed on the system - Record tasks performed and hours spent

Total hours spent per member on all 3 milestones: 179