CMPT 361 D100 Project: Part 2
Group 6
Daniel Bogusz and Takato Cox

Section 2a: Context Use & Requirement Establishment

Context Identification

When: Anytime and anywhere, though primarily on any SFU campus during operating
         hours, or in preparation for going to a campus.
Who: Expected users: Students, young adults who are comfortable with technology.
         Occasional but important users: Profs.
         Unusual users: Campus visitors (parents of students, and potential future
students)
What: To access information about restaurants on or near campus.
How: By using the SFU snap app on a smartphone or tablet device.

User Identification

User A: Ron Muller

Characteristics
19 Years old.
Expected User: Undergrad at SFU.
Studying Computer Science
Familiar with campus area.
Comfortable with using technology.
Meets friends at restaurants on campus regularly.
System use
         Experienced user: uses app regularly.
         Task: browse restaurants for variety of foods everyone enjoys.
         Task: check if restaurants are open before walking to them.
         Wants to use app quickly, can/will make use of shortcuts.
         Challenge: finding information not displayed by the application.

User B: Mary Englewood

Characteristics
78 years old.
Non expected user: not a student at SFU, retired.
Unfamiliar with standard practices of applications.
Is visiting SFU for a grandchild's graduation.
Is unfamiliar with the area.

System use:

       Novice user: has never used the app before.

       Unfamiliar with standard practices used in applications.

       Biggest challenge is avoiding makes errors.

       Benefits from clear prompts and written instructions.

       Task: Find a convenient restaurant for family to eat. (On a tight schedule.)

User C: Uma Patel

29 years old.

Occasional but important user: prof at SFU.

Teaching business courses at SFU.

Comfortable with using applications.

On campus many hours a day, 4 days a week.

"Foodie"

System use:

       Uses app regularly.

       Task: wants to try many different restaurants.

       Task: check which restaurants she hasn't tried yet.

       Challenge: keeping track of which restaurants she's visited, and her opinion on each.

Functional Requirements

Functional Requirement #1: Each user should be able to leave a review on restaurant pages.
Reviews consist of a numeric rating, and optionally a message.

Functional Requirement #2: Users should be able to see the mean aggregate of the restaurant's numeric reviews on the dining page, and swap between sorting restaurants alphabetically and by aggregate review.

Functional Requirement #3: Users should be able to view the list of individual reviews on a page accessed by the restaurant page. These reviews consist of the date of the review, the numeric score, and the message (if available).

Non functional requirements

Non-Functional Requirement #1: Feedback on the restaurant page should be immediate; a user's rating should update immediately.

Non-Functional Requirement #2: Ratings on the Dining page orderly, clearly visible, and contains the aggregate score, without reducing the visibility of other page elements.

(ie. Adding a column of stars containing a number. The number represents the aggregate rating. The star changes colour gradient (from white to gold) or fills in as the rating increases.)

Non-Functional Requirement #3: Users' right to anonymity will be protected.

(ie. Either all reviews exclude the reviewers name, or users will be given the option to post reviews anonymously.)

LFP Sketches are in the appendix, as specified.

# Section 2b: Medium Fidelity Prototypes

Explanation:

We started our design implementation by coming up with a rough LFP. We wanted to visually understand what we were trying to design on paper first. We came up with a sketch via an iterative process where we made many edits and in the end came up with a sketch that we were happy with. We started to implement the H-MFP by following the design of the LFP. After we were happy with our H-MFP, we used the H-MFP to start our design for the V-MFP.
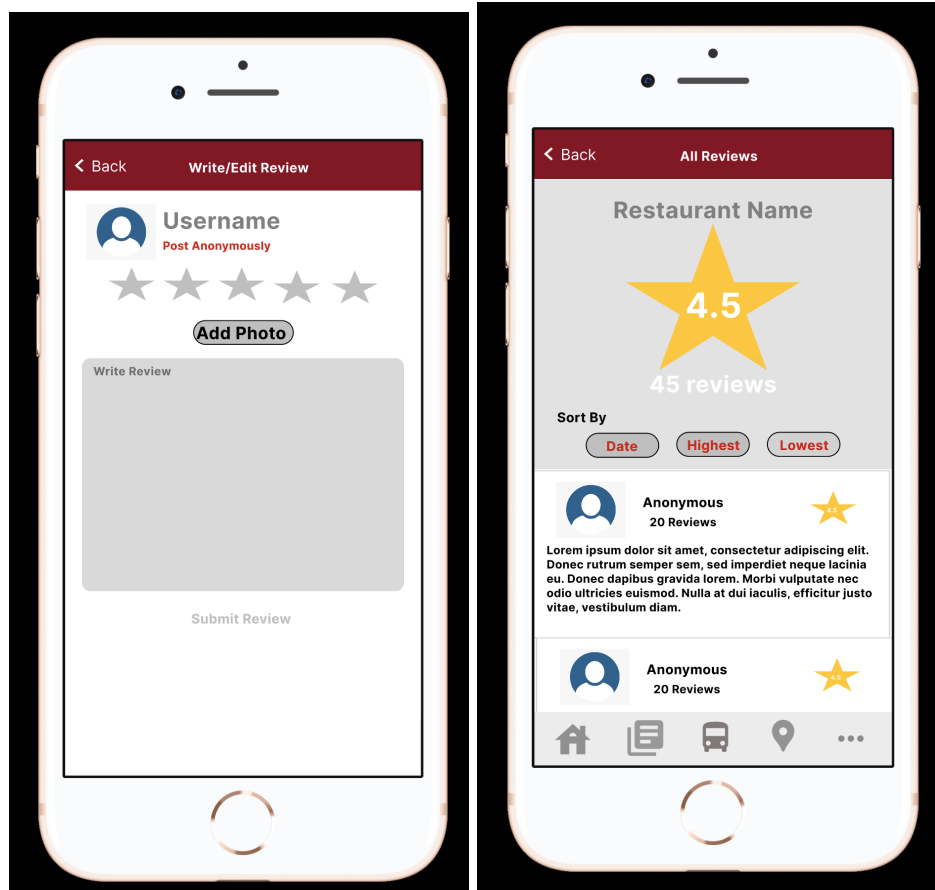
Horizontal MFP:

The main restaurants list page now contains the start rating of the restaurant. The rating is displayed on the right-hand side of the restaurant cards. The ratings are in a range from 0-5 and are clearly visible for easy reading. (FR#2, NFR#2).

From the restaurant page, we now display a rating in the image section of the page, as well as the number of reviews for the restaurant. This is placed in a clear and visible manner where users can instantly read this information. We have added a 'Reviews' section at the bottom of the page as well. These links give the user the option to write/edit a review and also gives them the option to see all the reviews for the restaurant.
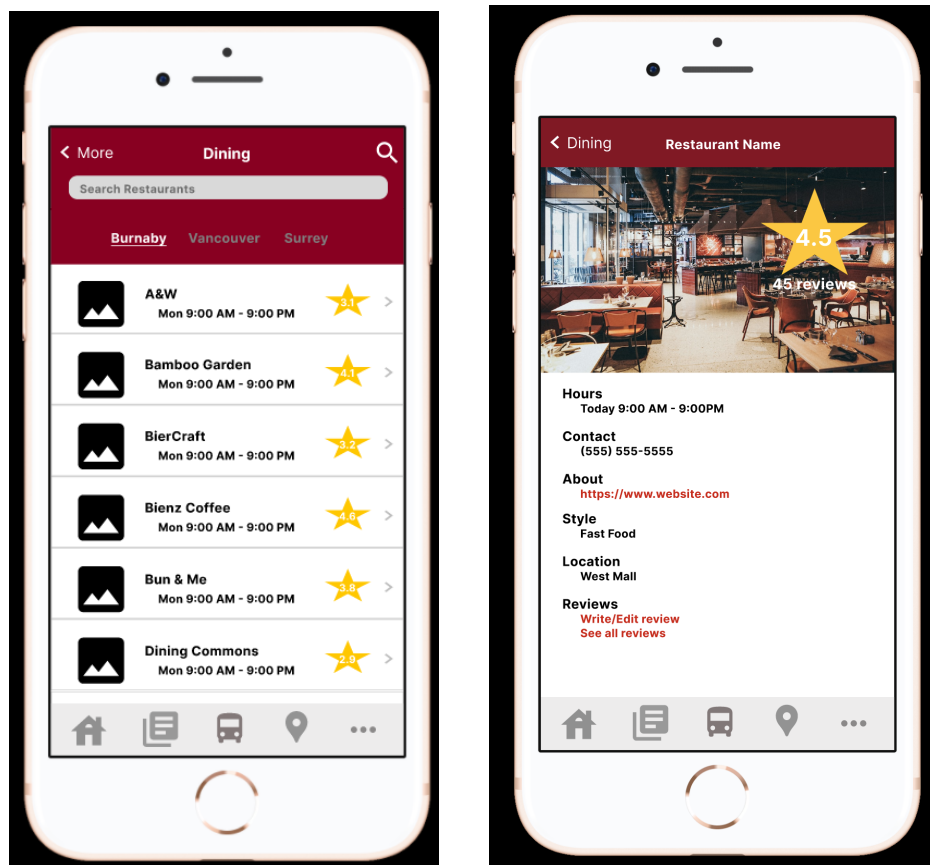
The 'Write/Edit Review' page contains a form which the user can fill out to leave a review for the restaurant. This form is designed for ease of use and has the bare minimum information which is needed to leave a review. (FR#1)

The 'All Reviews' page consists of the list of all the reviews for the restaurant. The top section provides the overall rating and review count for the restaurant. There is a section that allows users to sort the list by different conditions (date, highest, lowest). The reviews list is made up of individual reviews by users. Each individual review consists of a profile picture, username, review count, review, and start rating. (FR#3)

Vertical MFP:

The vertical MFP was built on top of the horizontal MFP. We implemented a design that allowed the user to carry out the task of leaving a review for a restaurant. The V-MFP allows a user to test out this feature from start to finish.

The process of a review starts off from the 'Write/Edit Review' page. Here users follow the flow of choosing a star rating, adding a photo, and writing the review. The rating is out of 5 stars and users are able to select the amount of stars they would like by clicking on the star icons. There is an add photo button which allows the user to add a photo and once it is added, the photo is displayed for the user to see. Following this, the user is able to type in their review in the provided test field. One more option that is given to the user is for them to post a review anonymously. We give them this option in case they do not want their identity revealed for the public. The submit button sits at the bottom of this page and it is inactive until a star-rating is selected. (FR#1, NFR#1, NFR#3)

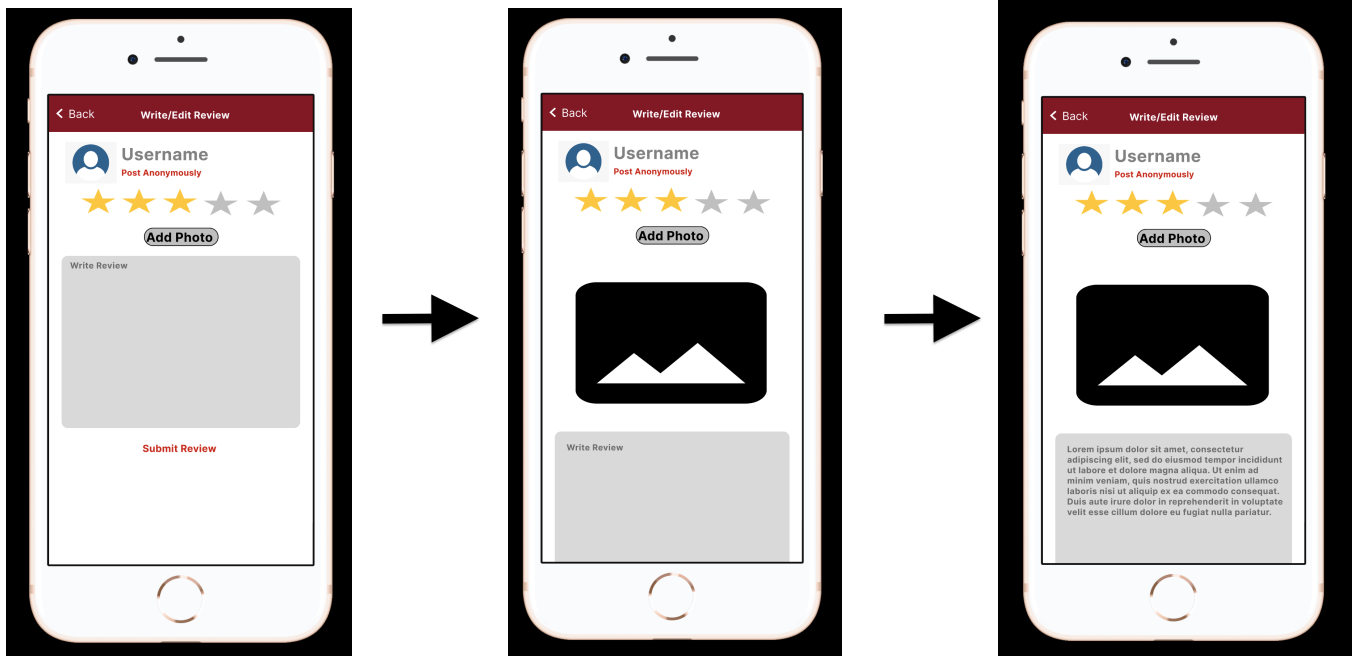This design gives the user freedom and ease of use. It takes into consideration user-friendliness by stripping away unnecessary components. It is a simple design that is intuitive to use. The review itself will be posted on the 'All Reviews' page instantly when this product is implemented on the software side. (NFR#1)

Flow:

1: choose star rating review   **2: add photo**   **3: write**

Section 2c: Analytical Evaluation & Reflection
Component 1: Cognitive Walkthrough

Task 1:

Context: Ron, (User A,) is with friends on Surrey campus. A friend has suggested a restaurant called "Thai Express ". Ron has had a bad experience at a Thai restaurant in the past, being served expired food, so before committing, Ron wants to check the lowest reviews for the restaurant.

Scenario: V-MFP accessed through Figma by Daniel Olivera.

Action Sequence	Does the user know what to do given the action?	Can the user find the right interface component to perform this action?	Can the user associate the feedback from the interface to the correct action they perform?	Does the user understand the feedback so they know where they are in the task after performing the correct action?
Go to the Dining page	Yes, he is familiar with SFU snap	Yes, but did not find shortcut	Yes, the page changes	Yes, pressing 'dining page' takes you to the dining page
Find the correct campus	Yes, he is familiar with SFU snap	Yes, but did not find shortcut	Yes, the page changes	Yes, pressing a different campus shows restaurants for that campus
Find the correct restaurant	Yes, he is familiar with SFU snap	Yes, scrolled alphabetically	Yes, scrolling down shows more restaurants	Yes, scrolling down goes down
Go to the restaurant page	Yes, he is familiar with SFU snap	Yes, immediately clicked the restaurant	Yes, the page changes	Yes, pressing the restaurant takes you to the restaurant page
Go to the reviews page for the restaurant	Yes, a review page is a common concept	Yes, used the shortcut (big star)	Yes, the page changes	Yes, user was happily surprised there was a shortcut
Sort the reviews to see the lowest	Yes, sorting is a common concept	Yes, saw them at the top of the screen.	Yes, the reviews text changes	Yes, pressing the sort button shows different reviews
Check if the reviews indicate a problem with 'bad' food	Yes, he understood reading	Yes, knew how to scroll through reviews.	Yes, scrolling down shows different reviews	Yes, scroling down goes down

Task 2:

Context: Uma, (User C,) has just eaten at a restaurant called "Thai Express" on Surrey Campus. Uma wants to leave a review for the restaurant on the SFU app. Uma wants to leave a high rating, and leave a message complimenting the food.

Scenario: V-MFP accessed through Figma by Daniel Olivera.

Action Sequence	Does the user know what to do given the action?	Can the user find the right interface component to perform this action?	Can the user associate the feedback from the interface to the correct action they perform?	Does the user understand the feedback so that they know where they are in the task after performing the correct action?
Go to the dining page	Yes, he is familiar with SFU snap	Yes, but did not use shortcut	Yes, the page changes	Yes, pressing dining page takes you to the dining page
Find the correct campus	Yes, he is familiar with SFU snap	Yes, but did not use shortcut	Yes, the page changes	Yes, pressing a different campus shows restaurants for that campus
Find the correct restaurant	Yes, he is familiar with SFU snap	Yes, scrolled alphabetically	Yes, scrolling down shows more restaurants	Yes, scrolling down goes down
Go to the restaurant page	Yes, he is familiar with SFU snap	Yes, immediately clicked the restaurant	Yes, the page changes	Yes, pressing the restaurant takes you to the restaurant page
Go to the leave a review page	Yes, he was read the context and knew there was a review page	Yes, saw the 'review section'	Yes, the page changes	Yes, pressing 'write review' takes you to a page for it
Leave a high star rating	Yes, star ratings are common	Yes, knew to click the stars	Yes, the stars change color	Yes, you stay on the same page
Add a photo	Yes, adding photos are common	Yes, saw the button to add a photo	Yes, a photo placeholder appears	Yes, you stay on the same page
Leave a message	Yes, leaving a message is common	Yes, saw the text box.	Yes, a message placeholder appears	Yes, you stay on the same page
Submit the review	Yes, submitting forms is common	Yes, saw the red text to submit review	Yes, the page changes	Yes, it takes you back to the 'reviews' page

Identifying Problems and Possible Improvements:

Problem #1: The user did not notice the icons on the dashboard and always resorted to opening the sidebar menu to navigate to the dining page. The reason he did not notice is because the page icons are beneath the other information on the dashboard.

> Potential Improvement #1.1: overlap calendar pop-ups on the remove the 'my week at a glance' section: this would condense related information and ensure the icons below are visible whether or not there is a pop-up.

> Potential Improvement #1.2: We could make sections collapsible, so that the upper section of the page is not always large enough to force users to scroll down to see the page icons. However, this would undermine the purpose of seeing new information on the dashboard.

Problem #2: The user did not use the swipe shortcut when navigating between campuses on the dining page. The reason he did not notice is because there is currently no indication that this is a possible input.

> Potential Improvement #2: We could add feedback which indicates swiping is possible. We could add the "slide" animation which normally only plays when swiping to the button presses. This would indicate to users (experienced with phone apps) that swiping can be used.

Problem #3: The user misclicked once or twice; he clicked near a button, but it was not close enough to register as being pressed. This problem may be isolated to the Figma interface, as mouse clicks only register a single pixel, while smartphones register the entire finger.

> Potential Improvement #3: This problem could be solved by enlarging the buttons which are small enough to cause problems; this could be done in Figma by adding frames around each button and making those frames the interactive element.

Component 2: Reflection

Context Identification Reflection
Context identification taught us that this app would primarily be used on campus, by people who want to access information as quickly as possible.

In order to achieve this, our priority was clear and uncluttered interfaces, creating shortcuts for experienced users, and conformity to standard app design. For example, a review score is displayed at the top of each restaurant page in order to display this information as quickly as possible; this also offers an opportunity to include a shortcut directly to the review page by pressing the displayed score, improving the speed of navigation.

User identification Reflection
User identification taught us that while we had a clear 'expected-user' to cater to, there would be other types of users who expected different features, and value other non-functional requirements.

We realized that frequent users would value the fastest methods of navigation, while new users would value the clearest indicators for navigation.

In our design, we attempted to include as many shortcuts and advanced tools as possible, but decided these must be implemented after designing the UI so they would not come at the expense of clarity of non experienced users.

We also realized that the purpose of certain features is not to be used quickly, like those on the 'write a review' page, which means communicating the available features clearly is more important than communicating any one feature as quickly as possible.

In our design, we ensure all options are on screen at the same time when arriving at the 'write a review' page (the star rating, uploading a picture, leaving a message, and toggling between anonymous and non-anonymous reviewing).

Requirements Specification Reflection
Requirement specification taught us the desired primary functional requirements were simple: there is a standard for what people expect from an app for reviewing restaurants; the more important aspect of our design, which determines the user experience, is how these requirements are implemented.

When implementing our design, we ensured the app worked the way users would expect it to. This is achieved by maintaining clear visuals to indicate the functionality, and clear and instantaneous feedback to assure users things are working as they expect.

For example, users are able to sort reviews in multiple ways (by date, by highest reviews, and by lowest reviews). Our design places this feature where the user would expect it (both in terms of conformity to other applications, as well as in proximity to its effect). The visuals of the buttons also change when pressed to indicate to the user which sorting is active, as well as to provide feedback when a button is pressed. This change in visuals conforms to other applications, darkening the selected option.

Cognitive Walkthrough Reflection
Our cognitive walkthrough was very successful, the user had no difficulties completing the tasks, indicating that our design was clear and understandable to others.

For example: during the first task of the walkthrough, the user clicked on the rating on the restaurant page, expecting it to act as a shortcut to the ratings page, which it did.

The only problem I noticed were instances of the user being unaware of shortcuts or alternative methods of navigation, which prompted me to seek and implement possible solutions.

On the dashboard, we have modified pop-up announcements to overlap with the calendar, rather than taking up more space, this way the layout of the dashboard is not compromised by pop-ups, and the page icons are always visible.

We added 'swipe' animations when navigating between campuses on the 'dining' page, even when pressing buttons, in the hopes that this will indicate to users that swiping is an option.

We enlarged some of the buttons to prevent users from misclicking.

<u>Prototyping Reflection</u>
During the process of prototyping, first on paper (LFP) and then with Figma (MFP), we came to appreciate the difference in implement time between low and medium fidelity prototyping. For this reason, our designing process became more iterative: discussing ideas amongst ourselves and agreeing on what would work best before implementing them with Figma.

We learned the value of prototyping: using conversation and sketches to avoid mistakes which become obvious once visible; overall this caused our designs to become more planned, and all around better.

However, our time spent implementing designs in Figma provided its own benefits: during this time we would have ideas for how to improve what we were working on. For example, when implementing a visual, it may become apparent that it might look better in a different position, or could be used as a shortcut.

Seeing what tools were available gave us ideas for how we could incorporate them into our design. For example:

- Using frames as buttons to enlarge them, making it easier for users to press them.
- Seeing what transition animations were available made us realize what a benefit they could be.

Appendix

LFP

List Page

< More Dining 🔍
🔍 Search Restaurants

BURNABY CAMPUS

☐ Restaurant Hours ⭐4.5 →
☐ Restaurant Hours ⭐3.9 →
☐ Restaurant Hours ⭐4.1
☐ Restaurant Hours ⭐2.9
☐ Restaurant Hours ⭐4.8

○ ○ ○ ○ ○

Restaurant Page

Image ⭐4.5
45 Reviews
Write a Review

🕐 Hours
📞 Phone #
ⓘ Info Info
   Info Info
✂ Restaurant Type
🌐 Website
📍 Location
☆ What People Are Saying

Name dd-mm-YYYY
〜〜〜〜
〜〜〜〜

Name dd-mm-YYYY
〜〜〜〜
〜〜〜〜

Name dd-mm-YYYY
〜〜〜〜
〜〜〜〜

See All >

edge of screen

All Reviews Page

⭐4.5
45 Reviews

Sort By
(Most Relevant) (Date) (Highest) (Lowest)

♀ Name
20 Reviews ⭐5
〜〜 〜〜 〜〜
〜〜〜〜 〜〜

Image

♀ Name
15 Reviews ⭐4
〜〜〜〜
〜〜〜〜
〜〜〜〜 more

edge of screen

Write a Review Page

♀ Name
☆☆☆☆☆ ← choose
(Add Photos)
Write Review