Assignment 2F
Project Title: FoodieVenture
Team Members: DJ Hoffman, Tiffany Tse, Ashley Lardizabal

Project Summary

The FoodieVenture app aims to recommend new foods to users depending on their mood and dietary preferences. FoodieVenture provides users with a curated list of dining options that serve the recommended foods to help them discover new or pre-existing local businesses they may have missed. It serves as a platform to motivate the community in exploring new cultures and unique global flavors, with 24/7 room for expression of how one feels, what flavors one craves, and experience creating the ideal taste in the comfort of one's home. The food search functionality that the app supports is specially tailored for eaters bored with food in their daily routine, natural food explorers, picky eaters who only enjoy a limited menu, and those with dietary restrictions seeking a broader menu.

User Analysis

For our user analysis, we collected data by orally surveying family members and roommates in-person; and friends through virtual video meetings via Zoom. In these surveys, we asked interviewees to rate their experiences and skills on a low, medium, high scale. When using this scale, users are allowed to use hybrid intervals, e.g, low-medium, medium-high. Some experiences and skills we surveyed from interviewees include general computer expertise, previous experience with food lifestyle apps, and level of interest in cooking, trying new foods, or finding dining experiences. After analyzing our data, we concluded on four different user profiles that our app FoodieVenture would target, and even after building our app prototype, we've found that these profiles haven't changed. In fact, as we consider our app's areas of growth, we see our number of user-profiles increasing.

The first user profile we have is the bored, indecisive eater. They are users who are looking for new foods to try and would use our app to find food choices when they are tired of their current options. We found that these users will typically have medium computer experience and they will most likely be in their 20s and beyond. They have low to medium experience using food lifestyle apps and have low-level cooking experiences. The second profile we have is food explorer. This user is open to trying new things so they would use our app to accommodate their changing food preferences. We found that these users are parallelly well-experienced with computers as well as food lifestyle apps. They have a wider age range from 18-50 years old and have medium to high-level cooking experiences. The third user profile we have is the picky eater. These users are those with specific food preferences and would use our app to help find a particular food to satisfy their cravings while staying within their boundaries. Picky eaters generally have medium experiences with food lifestyle apps since they seek out very particular eateries and foods. They have varying expertise with computers and have a low to medium experience with cooking. Our final user profile is those with dietary restrictions. These are users

who have strict dietary needs or preferences that they adhere to. Similar to the picky eater, those with dietary restrictions would use our app to find specific foods that satisfy their cravings while keeping to these restrictions. These users are more involved with their food lifestyle as we've found them to have medium to high experience with computers, cooking, and using food lifestyle apps.

Task Analysis

Our original task analysis consists of six tasks: Explore food options by global cuisines for the first time, find food options for new dietary needs as an existing user, search for foods based on current mood, view user history, review food wishlist, share content with others. Out of these six, two tasks' subtasks had changed due to our prototype revisions and usability tests helping us better visualize a streamlined flow; but all tasks are still supported.

The first task that changed was Task 4, viewing user history. Our user history has gone through multiple prototype iterations. In our first iteration, the History page followed Task 4.1.1.1 accurately. This meant that users would go to the user History page and see what foods they viewed linearly and it could be sorted by all the filters we listed: mood, cuisine, flavor profile, portion, oldest to newest, newest to oldest. There was no account for sorting through community posts or tracked moods, like mentioned in 4.1.1.2 and 4.1.1.3 respectively. After our second usability test, we realized that when reviewing their history, users should be able to add and remove foods from their wishlist locally on that page. This would mean adding a task 4.1.1.4 to account for this function. In our final iteration, however, we decided to revise the user history altogether and call it a user Activity page that is more comprehensive of how the user has been interacting with the app. We shortened our list of filters to only have newest to oldest, oldest to newest and by cuisine. We integrated liked, commented and shared posts onto the page. We also decided to allow users to keep track of viewed and wishlisted foods; but not add or remove foods locally on the Activity page. With this as our current prototype, Task 4 follows 4.1.1.1a-b,d and 4.1.1.2 and revises 4.1.1.3 to "Track wishlisted foods" with mediocre use among many users.

The second task that changed was Task 6, sharing content with others. This task originally starts off with 6.1 saying to select a specific food to share. When drafting our task analysis, we had pictured the sharing options to be located on the details page of a specific food, which is why this was our task's starting point. However, in our current iteration of our prototype, there is a community page for users to directly share on and without involvement of the food's detail page. Because our current prototype allows users to share content natively on the app and not on other social media platforms, 6.2 also doesn't apply as it states to select a "share option." The only subtasks that stay the same within Task 6 are the functionalities to natively view others' content as well as interact with them via likes, comments and tags, which are 6.3 and 6.4 respectively on our original task analysis. With our final prototype, 6.1 would be more accurate if it were "Go to community" and 6.2 would be "Post content."

Conceptual Analysis

In our original conceptual analysis, we have a comprehensive list of objects that make up the general main concepts of our app. We have thirteen objects listed on our conceptual model chart: account, foodie profile, food generator, cuisine finder, foodie community, food, history, recipe, business, foodie coach, food dictionary, wishlist, rewards. All but one of these objects are still supported; and after multiple prototype iterations as well as conceptual brainstorming, two objects have revised attributes and operations.

The one object that is no longer supported is the History page. This object has been renamed to Activity and retains all attributes listed in the original History concept except for "portion size," "flavor profile," and "recorded mood." In addition to "name + photo of viewed food," "recorded date of activity" and "cuisine," the object should also now include "shared content" and "content interaction" as attributes. It also has revised operations since "filtering by flavor, portion and moods" as well as "tracking recent moods" are no longer operations that apply. All other operations including, "filtering by cuisine," remain with an added operation being: viewing the details page of a corresponding food or shared content.

The first object that has faced changes as a result of our different prototypes is the Foodie Community. This object "lists shared recipe" as one of the attributes of the object. However, our current prototype does not support user submissions of recipes. As a result, this also eliminates "read different versions of a recipe" from the operations. In our task analysis, the process for sharing content has changed to only allow users to share on the native Community page and not to other social media platforms. Respectively, this eliminates the operation to "share with other(s) on social media platforms." Because "shared recipe" is no longer an attribute of the Foodie Community, "foodie username" is also no longer an attribute of Recipe, which is the second object that has been revised. "Foodie username" was initially included as an attribute of Recipe because we had previously thought for users to create and post their own versions of a food's recipe on the app. However, in the process of creating prototypes, we eliminated the option to do so because it didn't fit with our current goals of the app. Respectively, "share with foodie circle/community/social media platforms" and "add new recipe" are operations that are not supported by the app anymore due to these two objects' changes.

Initial design and prototype

For our app FoodieVenture, we developed the prototype using Figma. Since we realized that the interactive whiteboard tool, Jamboard, from exercise 9 offered limited shapes, text, colors, and functionalities, we decided to transition to a software prototyping tool that supports collaboration and provides a familiar user interface. We grew even more attached to Figma after discovering its education plan that grants university students pro licenses at no cost. Our team found the application information for the education status in the main navigation menu on Figma's homepage → Admin → Education teams. Once a team member's enrollment status is confirmed, one can create a new team and add collaborators to his/her project.

The creation tools we utilized within Figma to bring our concepts to life were the shape tool for creating buttons and components, frames to depict main pages and overlays, glyphs to represent device operating system features (e.g., keyboard, device status bar), and a live prototype feature to define our project's workflow when a hotspot is tapped. Our team member, DJ, with most design experience, implemented some graphical components on our app that she created using Adobe Illustrator to ensure neat, consistent visuals. All the photographs are from google images and were placed into Figma. The user's profile pictures are stock images of random people. The images of the dishes themselves, were .png files so that the background would be transparent and the focus would be on the dish. The icons for the navbar, the map on the cuisine finder, the news feed announcements, favorite icon, flavor icons, foodie badge type icon, were mainly from google images but made into SVG files in Illustrator using image trace, expanding, ungrouping, then implemented into Figma.

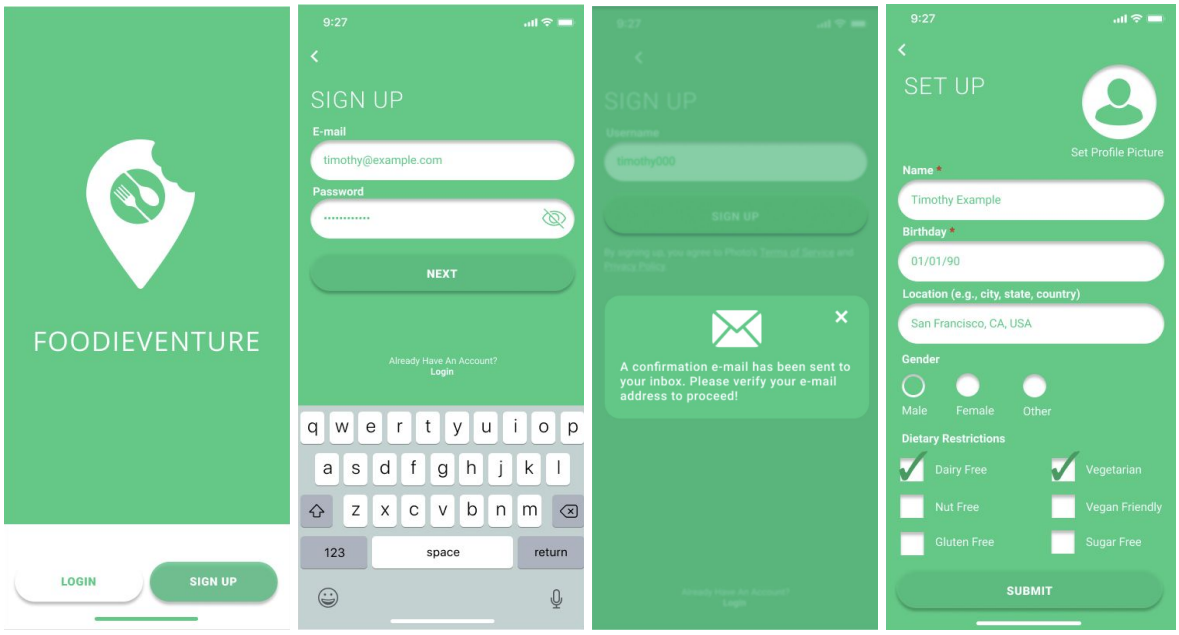

Figure 1 (L to R: A, B, C, D)

Since the mobile app landing page is a point-of-entry into the app's primary concept and begins the user journey, we felt the need to ensure our app's purpose is clear at first-glance and provokes potential users' curiosity. As a result, our logo — the location bitten symbol with eating utensils laid on a plate — is displayed on the landing page to give the user a better sense of the services the app supports (**Figure 1 A**, 4). The motivation behind our logo design is to include shapes and tools common to the food search and dining experience. We also realize a quick and simple registration process is crucial to keep users engaged. Thus, the app first prompts the user to enter their email address and a username and password of their choice (**Figure 1 B**, 4). Unlike most social media apps, the username attribute is not displayed as the user's public face in our app. Instead, the username is a unique identifier that verifies whether the user has a preexisting account. A pop-up message then requires the user to confirm their email

before using any of the app's services (**Figure 1 C**, 4). When users successfully log in to their newly created account, they are directed to the Set-Up page for efficient customization of their foodie journey. The Set-Up page accomplishes this operation by using text fields to represent users' general personal information, radio buttons for identifying a specific gender, and checkboxes to indicate one or more dietary restrictions (**Figure 1 D**, 4).

When users have submitted their profile entries, they are finally greeted by the app's homepage. There, users have access to the bottom navigation bar that allows movement between primary destinations in the app. As seen in **Figure 2 E**, the five primary destinations from left to right are the Home, Activity, Discover, News Feed, and Profile pages. Besides setting the stage of what a foodie journey is like, our homepage contains a slideshow component that brings users weekly food-related news on a global, national and local level. By displaying this component on the page where users first land after launching the app, we hope to alert users of life-threatening news such as reading about a food or ingredient recall.

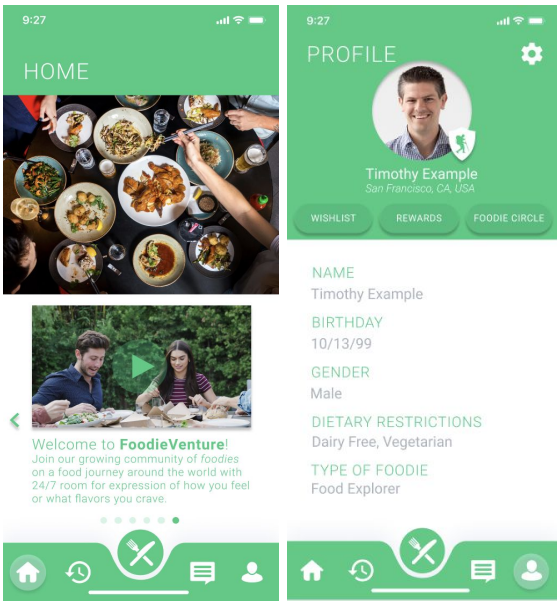

Figure 2 (L to R: E, F)

As mentioned earlier, users can view all the personal and dietary restriction information they provided during setup by navigating to their profile (**Figure 2 F**, 5). On this page are also three buttons that represent the conceptual objects users are likely to frequently visit when using the app: Wishlist, Rewards, and Foodie Community. They can edit their profile, select a different display theme, set a different language, and find other general account settings by interacting with the Settings function at the top right corner of the screen.

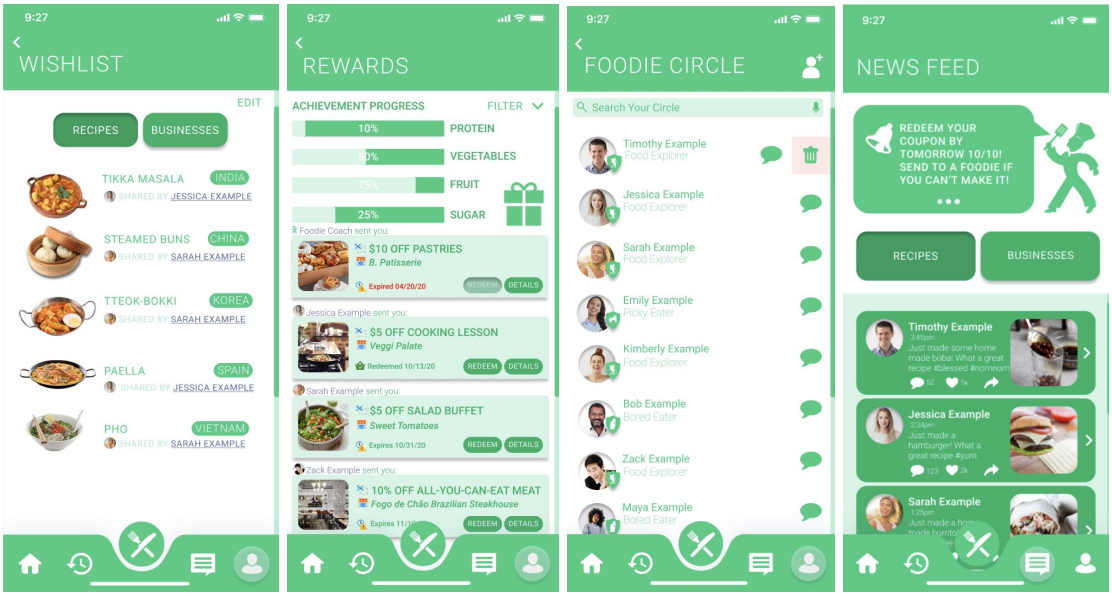

Figure 3 (L to R: G, H, I, J)

The Wishlist feature, presented as the leftmost button in their profile, enables users to conveniently save and view a collection of desired foods without having to order or try them immediately (**Figure 3 G**, 6). Users can view the recipes and local businesses of their saved foods later by interacting with their respective tabs, Dine In and Dine Out. This personalized list is mutually beneficial as it gives consumers an easy way to remind themselves of viewed foods and helps businesses measure product interest beyond sales. As seen in **Figure 3 H**, the Rewards feature right of the Wishlist strives to encourage foodies to engage in a healthy diet while earning points for the quantity of protein, fruit, vegetable, and sugar foods the user explored via interacting with the Dine In/Out mode. The system awards users with coupons to businesses of foods frequently accessed or any food events relative to their food interests, so they will inevitably experience them in real life. Users can send awarded coupons to other foodies if they cannot make it by the expiration date. Since coupons are only valid for some time, users can filter their available rewards by redeemed, expired, or offered.

The Foodie Circle and News Feed pages convey the app's primary social aspect (**Figure 3 I** & **J**, 6). Though the News Feed allows for sharing food adventures, unique cultural dining experiences, and personalized recipes, interaction is not limited to likes and comments. The search bar in the Foodie Circle page allows users to easily message their foodie circle friends and observe how they are doing based on their most up-to-date foodie type represented by the plaque. Since most communication occurs in the News Feed, the Foodie Coach appears at the top of the page to inform users of important notifications, serving as a reminder for the soonest call-to-action. These include a food recall or offered rewards expiring soon.

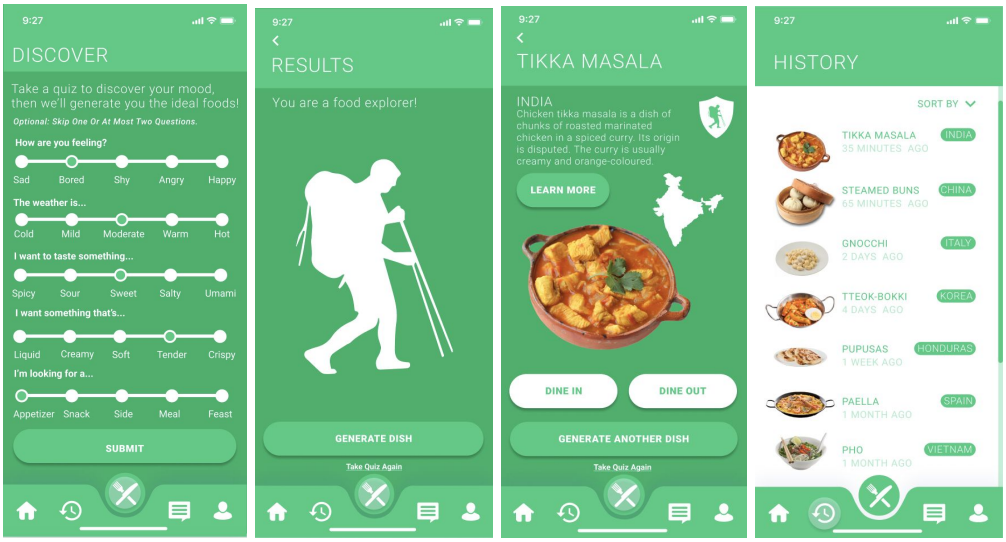

Figure 4 (L to R: K, L, M, N)

By interacting with the third icon in the bottom navigation bar, users have arrived at the Food Generator feature (**Figure 4 K**, 7). The idea of encouraging users to complete a short quiz for global foods that best match their emotions and surroundings when unsure of what to eat is a concept that sets us apart from other mainstream food apps such as Yelp. Rather than providing users with a list of businesses to explore first thing, we realize from our daily experiences that an emphasis on the food itself may help us become less indecisive than always choosing from a broad menu. After taking the quiz, users can view findings that address their foodie type based on their continuous food and business choices on the app (**Figure 4 L**, 7). Though not shown in the initial round of prototyping, we intended to share details where users can learn more about their mood effects on taste and common ingredients to relieve users. As seen in **Figure 4 M**, users are not restricted to the first food recommendation and can generate foods until they find one of interest. As part of our target to expose and enhance users' knowledge of global cuisines and their foods' history, these details are available when interacting with the Learn More button. The Dine In button redirects users to the food's recipe, while the Dine Out button redirects users to a map + list hybrid view of local businesses that offer the recommended food. Lastly, the History page in **Figure 4 N** provides users with an ease of access to foods they may have viewed but forgot to save or reference foods they dismissed earlier but remembered seeing. Interacting with a specific food item on the History page redirects the user to its food details page reminiscent of **Figure 4 M** only without generating a new dish.

Brief description of first user test

For our first user test, we had 3 participants in total, Foodie A, Foodie B, and Foodie C. Foodie A was a Food Explorer, Foodie B was Bored With Food, and Foodie C was a Food Explorer. We devised and followed a script, observed the user in completing a list of assigned tasks, and interviewed them after they completed their tasks. We collected data by observing the participant and taking note of how long it took them to complete certain tasks as well as if they

had trouble completing a task. We took note of all our findings and wrote each participant's answers for each interview question word for word.

Based on our three interviews in the first usability test, we found that despite the first iteration of FoodieVenture's prototype being limited in its functionality, the icons we have to represent specific tabs or functionalities were intuitive to follow. As we synthesized our findings, we see that participants seemed a little stuck at times as a result of feeling like they couldn't do much with what they had. We recognize that this limitation might have impaired their ability to perform tasks without assists. Tasks that seemed to be difficult or not as easy as the rest of our listed tasks are ones that involved the Wishlist. Users seemed to be stuck or doubtful when navigating to and finding the wishlist feature on the app. One suggestion we received was to make the Wishlist feature more accessible since the participant imagined it to be something they would utilize often as a user. Overall, we hoped to get more features implemented into our prototype so that users will perform tasks efficiently without roadblocks.

Post-initial test changes

Because one of our main purposes for our first usability test was to see how intuitive the navigation of our app was, we specifically looked to editing items that dealt with the flow of our app and its main features. After debriefing as a team, we decided to make changes to two components on our app before starting our next round of usability tests: the Discover page and the Community page.

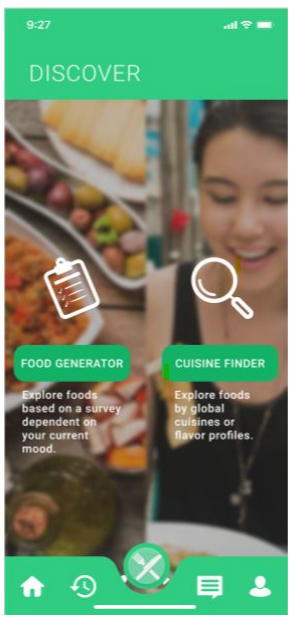

Figure O

Figure Q

Figure P

Figure R

In our first prototype iteration, the icon at the center of our navigation bar, would take the user to the Food Generator quiz page, shown in **Figure 4**. The Food Generator is one of two ways that a user could search for foods on FoodieVenture. After seeing how easy it was for participants to identify this icon when they were asked to find the Food Generator function, we

decided to designate the icon to lead to a Discover page instead so that it could house *both* of our food searching functions. In our initial plans, we kept the Food Generator and Cuisine Finder separate because we were more focused on making the Food Generator the default way to find foods. However, after taking a look at the outcome of our first test and revisiting the different types of users we will potentially have, we decided to create a central Discover page, which is shown in **Figure O.** By creating a page that houses both of these search functions, we hope to streamline our app's flow and make it easier on users to find the functions they are interested in. We also decided that it would be most effective to display the two functions on different halves of the page with distinct icons and small descriptions accompanying them. These can also be seen in **Figure O.** To accompany the edit, we also implemented our alternative route of exploring foods, the Cuisine Finder page found in **Figure Q.** As seen in **Figure P,** we decided to make the suggested color change from a dark green background to a lighter shade of green such that the text is easier to read for those who may not be able to distinguish colors well. Additionally, the incomplete quiz results that confused test participants in the initial test as mentioned earlier were completed in this round of revisions (**Figure R**, 8).

After looking at our first test's feedback and realizing a common theme on making sure the app's functionalities are clearly understood via the icons and buttons available, we decided to edit our News Feed page next. Despite the News Feed page being a place for users to share with other users, we did not have an action button for users to tap when they wanted to share something or create a post. As a result we edited the top half of **Figure 3 J** by adding a textbox with radio buttons to designate whether they dined in or out and an option to attach a photo of their food. These changes can be seen in **Figure S.** A less obvious error we resolved in our post-initial test is the color opacity of the progress bars on the Rewards page. Contrary to **Figure 3 H**, the darker shade of green in **Figure T** clearly shows the user their weekly progress per category and about how much consumption is still needed to maintain a healthy weekly diet.

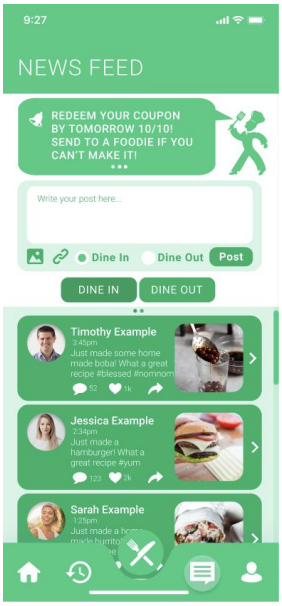

Figure S

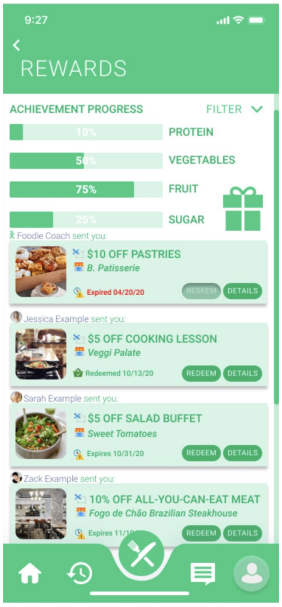

Figure T

Final usability test

For our final usability test DJ who is in CS 283 conducted the test on two participants who were two new people that were not in the first usability test. Foodie E's participant type was a Food Explorer while Foodie S's participant type was also a Food Explorer. They both enjoy trying new foods. DJ gave the users the same tasks to do as the first usability test and also interviewed them with the same questions at the end of the test as the first test.

Overall both participants were brutally honest with their experience while testing the app. Some of the changes they suggested were to have a rank system versus foodie types from the quiz for the badges. We did not implement this change, but it's an interesting idea to promote engagement kind of like the Yahoo Answers badges. Another suggestion was to make the achievement progress more clear for the rewards, and who gives the rewards. They also both didn't understand the rewards section, didn't understand the progress bars, and thought that it should be altered to be more like Retailmenot. We did not implement this change because we don't want to be too similar to other coupon apps, but it's an interesting idea. They suggested we add a shortcut to the rewards, foodie contacts, etc. on the home page, or change the home page, change the newsfeed to be more like yelp reviews, or news from the restaurants, make more than one recipe option unless it's branded like the app has its own recipes for stuff like betty crocker or the cooking network channel and consider changing the dine-in option to a different name, because dine-in sounds like Postmates or UberEats, and they did not know that it would be making their own dish. They also suggested we consider changing the questions on the food generator because both participants did not understand why some of the questions were in the survey and how they were necessary to generate a dish–for example, the weather and mood. Lastly, they wanted us to consider adding descriptions to the flavors in the cuisine finder, or explaining what they mean for some people that might not know or understand.

Implementing many of these changes would alter the whole app and its functions more than we have time for this assignment but there were some insightful suggestions for what we might do if this were a real product. Foodie S concluded by saying that people would prefer to use already existing social media apps versus this one as a social media app. If we were just starting and didn't have many users I think that might be true, however, if we had a large enough audience and user database I think the social aspect might actually work well. Overall, these were interesting critiques and insights that were helpful for us to consider. Although we don't want to change every aspect of our app, it was useful to see people's thoughts, insights, and opinions.

Assessment

In every different stage of our project, we have found ourselves to have more improvements to include after each usability test and prototype iteration. Our app's basic premise started off as a lifestyle food app but as we went through different labs and analyses, we found ourselves incorporating more social aspects and devised ways to make the resources available to users more personalized for their food adventure. A change that we believe is a significant design

improvement to FoodieVenture is our user History page. Now referred to as the Activity page, we believe we've designed this page to be something functional and easy to navigate. At first, we were too focused on mood tracking to even realize that most users would probably use the app to view and find new foods so including mood tracking in the History would not be user friendly. As our prototypes developed and we learned more about users wanting to be more engaged with the foods they're viewing, we came up with our current prototype, which allows users to access all their wishlisted, shared and interactive content all in one place. We also think that our Discover page is another big improvement. As we mentioned, we were so focused on connecting moods to foods that we didn't think about the big idea, which is to help users find new foods to venture to. By revising our Discover page to be a page that houses our two food searching utilities, we believe we've made it easier for users to find what they're looking for, which hopefully keeps them coming back to find more food with our app. If there is one aspect we think we could have done more with, it would be the Recipes of our app. We had initially thought to allow users to share their recipes. However, after getting the ball rolling on our prototype, this fell down our priority list as improving the app flow became of more significance.

If we were making a real product we would have more time to make adjustments to our conceptual model and overall design of our app. We would probably be able to conduct more usability tests on hopefully hundreds if not thousands of people so that we could see which features people liked or disliked the most. We might implement a rank system to either replace or be concurrent with the foodie types from the quiz that is displayed on a badge on the users profile. With more time if this were a real app in the rewards section, we would probably make it more clear to the user how the achievement system works. Having users more aware of what the progress bars look like, and then have our back-end algorithm "Reward them with this coupon" based on their progress. Things like changing the name of the dine-in option to a different one, is something we could easily change now, but if this were a real app we might get more usability tests to see what name would make the most sense to a large group of people, or see if this issue even arises for the vast majority. If this were a real app we would probably also have a sociological, or food psychology team to create more in depth and research based questions for the survey that generates dishes based on the users' mood. Since some people also did not understand the flavors in the cuisine finder, maybe we would implement a page or way for the user to briefly read about what each flavor means.

The social media aspect on the newsfeed is another prominent facet of our app. It would probably depend on the popularity of our app for the social media aspect to be necessary or successful, but this is something we would have to do more user testing and maybe even alter while the app is published based on the response we get from the community, would people want to have a food journey alone or do they want a social aspect? If we had a large enough audience on our user database I think the social aspect would work. Another suggestion from our usability testing was to have more than one recipe option available, so as we mentioned earlier, we might want to have an option for our users to add a recipe to a dish (rather than searching recipes on Google). So basically we would want the option to add recipes or source them from existing food

lifestyles or recipe sharing apps so that it's more comprehensive. We would also want to add a feature for users to submit entirely new dishes to the app that aren't already on it, this was another suggestion from our usability testing. In the case where this social aspect of our app is promoted and better fleshed out for a real-world release, we also hope to have better security preferences and protocols set in place for users. With users sharing pictures, recipes and adding one another to their foodie circles, having more purpose for usernames might also be more efficient in making sure there are no duplicate accounts and in helping users identify one another more confidently.