Lab 2

GROUP PROJECT

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Abstract

Summary

Keeping track of daily intake and exercise can be cumbersome. Providing a lightweight app will provide users with a single location to store and view this information. This information can be used to stay on top of goals, view information about the food they ingest or provide information to a personal trainer.

Without a convenient place to view and store this information, users may misplace or misrepresent the data they have collected, leaving them with an incomplete representation of their daily routines. Without an accurate description of their data, users may believe that their efforts are going to waste and could be confused as to why they aren't hitting their goals.

Identifying the goals

Our goal for this project is to make a user-friendly fitness app that will satisfy a wide range of user's fitness and lifestyle goals. The app users would be able to monitor eating habits and be set up for success in reaching their weight goal by tracking their daily diet and exercises.

Project Requirements

Functional Requirements

- Create an account with the system
    - Can create an account by connecting with Facebook
    - Can create an account by connecting with AppleID
    - Can create an account by connecting with Email
- Set up what your goal is in terms of weight. (Decide if you want to lose, maintain, or gain weight.)
- Enter info about yourself like (height, weight, age, job, proficiency, about)
- Enter how fast you want to achieve your goal weight.
- Enter food articles that you eat throughout the day. (breakfast, lunch, and dinner) (including snacks in between)
    - You can enter a food item by browsing through their enormous selection of food articles.
    - You can scan a barcode to enter a food item.
    - You can enter home recipes or custom foods that you don't see in their selection.
- View all kinds of nutrition facts about the food that you eat.
- Take progress pictures of yourself that become part of your private progress diary.
- Enter your daily weight to keep track of your progress on achieving your goal weight.
- View a graph that shows your weight progress overtime.
- Enter different exercises that you've done throughout the day.
- Read all kinds of helpful health articles.
- Browse through a bunch of healthy new recipes to try out.
- Watch videos on how to perform individualized exercises/stretches.

Non-Functional Requirements

- Fast load times between different pages.
- Fast load time of articles and videos.
- Smooth playtime of workout videos (no buffering time).
- The app is available for use 24/7 365 days a year, even while offline (not connected to the internet).
- Personal data, diary entries, progress pictures are kept secure and private.
- The data related to the food/calories the user intakes should be reliable, meaning that the data that they input stay the same based on their inputs. The entries the user makes should not randomly change one day due to some app failure.

Requirements Gathering

User Research Audience

The target audience is anyone 18 and older who is looking to lose weight through diet and exercise; specifically, target people over the age of 18 since they believe that this method of losing weight is not appropriate for children. It is also widely used by people who need a simple tool to help keep track of their calorie intake and the number of macronutrients they receive from their meals.

Accomplishing tasks

When?	Where?	How?	Why?
MyFitnessPal can be accessed and used offline, so users can input their food entries whenever they want. They can choose to accomplish their task of making entries either before they eat their meals or after. They can even make their entries later into the day if they remember the exact food and serving size of the meal they ate.	Users can enter information anywhere, again since MyFitnessPal doesn't require an internet connection. This means users can make entries while out at restaurants or the gym.	Users put precise entries about what they eat by browsing through an extensive list of foods around the world or by scanning barcodes. After finding the right food item, users then specify the correct serving size of what they ate. They can find the right size by looking at the food item container or using a food scale to weigh the amount of food they are about to consume.	Users complete these tasks to get a clear idea of how much they're eating in comparison to how much they're supposed to eat. The desired number of calories that users are meant to eat is based on their weight goals and other health stats related to losing/gaining/maintaining weight.

Conducting expert evaluation of the existing systems

Conducted using the Heuristic NNG Principles for Fitness App:

Rule of Thumb	Is this rule being applied? How so?	Is this rule violated? How so?	How can this rule further improve usability, utility, and desirability?
1. Visibility of system status	Yes. Every time users add an entry, changes to their daily totals are immediately made visible	No	
2. Match between system and the real world	Yes. Any time you're adjusting your goal or current weight the system shows a visual of a scale.	No	
3. User control and freedom	Yes. Any food item mistakenly added to the entry can be immediately edited. the goals and pace to reach that goal can also be changed at any time.	No	Make it easier to get rid of an entry. Rather than having to set the servings consumed attribute to 0. Just give the option to 'X' an entire entry.
4. Consistency and standards	Yes. When showing workout videos, they make the layout look like watching videos on YouTube. Adding water consumed, and different exercises performed are like adding food.	No	
5. Error prevention	Yes. Users are only allowed to choose from a pre-set list of realistic serving sizes dependent on the food entry.	No	
6. Recognition rather than recall	Users can pick from a history of previously chosen	No .	Add pictures for each food item to make it easier to recognize food items rather than just solely basing it off the title of the food.
7. Flexibility and efficiency of use	Yes. Users can save custom recipes. So that they can add it with ease in the future.	No	

	Rather than having to re-enter all the ingredients every time you eat that dish.		
8. Aesthetic and minimalist design	No	Yes. The app is quite complicated to use as a first-time user. There are many menu options and it seems overwhelming at first glance.	• Clean up the menu bar to add less clutter. For example, all fitness related items should go in a fitness category • Make the home screen more minimal. Reduce the blog content and add more personalized content.
9. Help users recognize, diagnose, and recover from errors	No.	No errors show up at all. Even if you go over your daily limit of calories. The system shows little warning.	Make it more apparent when you're nearing your daily limit for calorie consumption.
10. Help and documentation	Yes, there is a help page for common questions asked.	No	

User Wishlist

Top priority items that users have listed to have a more enjoyable experience using MyFitnessPal:

- Clean up the menu bar to add less clutter.
- Make it easier to get rid of an entry.
- Add pictures for each food item to make it easier to recognize food items
- Make it more clearly when you're reaching your caloric limit for the day

Use Case

Below are two separate use cases conducted using MyFitnessPal. The first sample is the highest priority use case sample that demonstrates how to create an account. Followed by a medium priority use case sample to demonstrate how to make an entry with the application. Lastly, a user diagram image of all the use cases that are involved in using MyFitnessPal.

Figure 1: creating an account use case sample

| **Use Case Name:** Creating an account	**ID:** 01	**Priority:** High
Description: Use case of user creating an account		
Trigger: A user has downloaded the app and now wants to use it		
Preconditions: • A user knows how to access their own email, apple account, or Facebook account • A user knows their height and weight • A user has a goal in mind in terms of their weight • A user has internet connection		
Normal Course: 1. User opens app 2. User hits 'Sign Up with Email' 3. User selects what their goal is in terms of weight (lose, maintain, gain) 4. User selects how active they are in their everyday life 5. User selects their sex, date of birth and country 6. User selects their height, weight, and goal weight 7. User selects how much weight they want to lose/gain a week 8. User inputs email address, password, and username 9. User consents to all terms of service 10. User hits continue		

Alternative Course:
2b. User hits 'Sign up with Facebook'
    • User inputs their Facebook credentials
2c. User hits 'Sign up with Apple'
    • User inputs their Apple credentials		

Post-Conditions: • User's account is created • User gains access to fitness/meal plans		
Exceptions: • User cancels registration process (e.g. exits window)		

Summary Inputs	Source	Summary Outputs	Destination
• Server-side error • User loses internet connection			
• Weight Direction **(**Lose**/**Maintain**/**Gain**)** • Sex • Date of Birth • Country • Height • Weight • Goal Weight • Speed at achieving goal • Email Address • Username • Password	User (For all inputs)	• Account creation	Webpage account database

Figure 2: Making an entry use case sample

Use Case Name: Making an entry	**ID:** 02	**Priority:** Medium	
Description: Use case of making an entry for a meal			
Trigger: A user has eaten a meal, or is about to eat a meal and they want to input it into the app			
Preconditions: • A user must know what they ate • A user must know how much they ate			
Normal Course: 1. User opens app 2. User hits plus icon 3. User hits food icon 4. User selects which meal this entry is for (Breakfast, Lunch, Dinner, Snack) 5. User uses search bar to enter food 6. User selects the food item 7. User inputs the serving size 8. User inputs the number of servings 9. User hits check mark button on top right of the page			
Alternative Course: 5b. User uses camera to scan barcode of food article 5c. User selects from their list of personal recipes they've created in the past			
Post-Conditions: • Entry is created			
Exceptions: • User cancels making an entry (e.g.: goes to another page) • Server-side error • User loses internet connection			
Summary Inputs	**Source**	**Summary Outputs**	**Destination**
• Food name • Serving size • Number of servings	User (For all inputs)	Deduction from the daily calorie allowance	User home screen

Figure 3: use case diagram
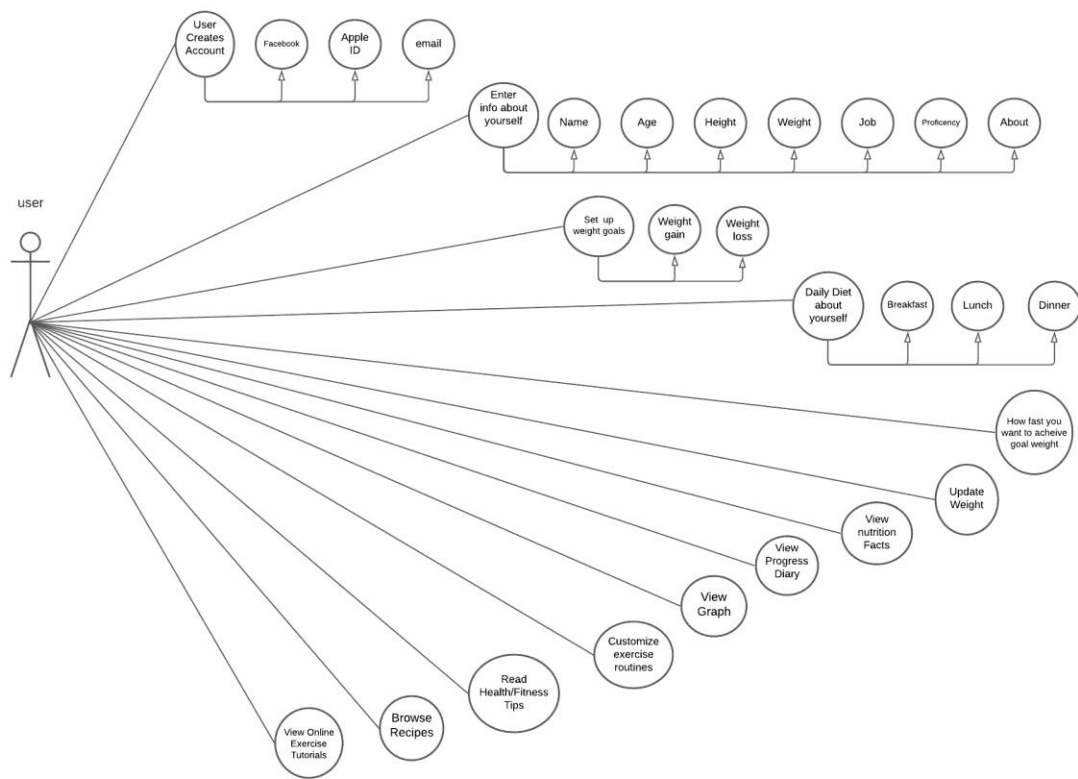
Identifying the users of the system

Primary Users:

Primary users of this app include mainly the users who download the premium version of the app but could easily include users who use the free version. The users who use the premium version are more likely to frequently interact with the system over users who decide to use the free version due to financial investment which would often indicate higher interest in the app. Due to their higher interest, premium users would use the app daily and track all their food, exercise, and water intake and may even join challenges and compete with friends.

Secondary Users:

Secondary Users are casually using the app to add in their information for dietary/fitness purposes. The secondary user may or may not be a frequent user of the app, but they have an interest in achieving results. The app can assist a secondary user in shaping their fitness goals by adding the food they consume and exercises they partake in. A Secondary user can consist of a wide range of athletic types from casual to professional. The user may consider purchasing a premium version of the app, but only after they have fully become comfortable with the application and are satisfied with the results.

Tertiary Users:

Tertiary users may include food brands, merchandising companies, and athletic companies. Users of the app may begin to choose different brands of their favourite foods as they are now easily able to view the calories, carbohydrates, proteins, and fat of everything they eat. A user who is committed to their goal would likely change their habits if the contents of their food do not align with their daily intake goal. This app could display ads on the main page giving merchandising companies a good place to place their products, possibly gaining an increase in sales if the product matches the interests of the users who use the app. A personal trainer would also be considered a tertiary user of the app. The information provided by the app would help a personal trainer to customize a user's workout and diet plans.

User Profiles

User Profile	
Name:	Ethan Klein
Age:	34
Height:	5 feet 9 inches
Weight:	220 lbs
Job:	Data Analyst

Technology Proficiency:				
	Bad	Average	Excellent	Professional
				X

About:
- Orders food everyday for lunch and dinner
- Always has sugary cereals for breakfast
- Big sweet tooth
- Job involves him sitting in a chair for prolonged hours
- Not much exercise other than:
  - Going out every now and then to give the dog a walk
  - Going on bike rides with his wife once a week
- Wants to lose weight to assure a healthy future for his kids
- Goal weight is 180 lbs

User Profile	
Name:	**Pablo Escobar**
Age:	**41**
Height (ft):	**5 feet 10 inches**
Weight (lbs):	**200**
Job:	**Professional Mover**

Technology Proficiency:	Bad	Average	Excellent	Professional
	X			

About:
- **Only eats homemade meals**
- **Loves snacking on fruits**
- **Job involves vigorous and non-stop lifting and movement.**
- **Participates in a local soccer program where he competes with other middle-aged men and women**
- **Ran for politics**
- **Wants to lose a little bit of weight to lessen the strain of his job**
- **Goal weight is 190 lbs**

User Profile

Name:	**Bella Blaese**
Age:	**26**
Height (ft):	**5 feet 6 inches**
Weight (lbs):	**130 lbs**
Job:	**Artist/Social Media Influencer**

Technology Proficiency:

Bad	Average	Excellent	Professional
	X		

About:
- **Only buys organic groceries**
- **Juices healthy fruits and vegetables every morning**
- **Pescatarian Diet**
- **Does a variety of exercises 5 times a week. These exercises include:**
  - **Yoga**
  - **Zumba**
  - **Spin Class**
  - **General light weight cardio exercises**
- **Wants to maintain her weight**

User Scenarios

Ethan

Ethan has noticed he has been gaining weight recently but has little motivation to workout after a long monotonous day at work. In addition to having little motivation to exercise, Ethan finds himself unmotivated to cook for his family and decides to order food most, if not all days of the week. Ethan decided it's time to lose some weight and save some money so that he can ensure a good future for his children. Not knowing where to start he heads over to a gym to have a meeting with a personal trainer. The trainer suggests some basic workouts as well as downloading the YourFitnessApp, to help understand his current diet and exercise practices. Ethan finds the app provides a lot of useful information and begins to understand how to start eating healthier.

Pablo

Pablo works long and tiring days at his job as a professional mover. He's getting a lot older, so his job is taking more of a toll on his body. To temporarily relieve himself of pain, his wife cooks him these grandiose meals that become the highlight of his day. These big meals add up. Pablo has been getting heavier than when he and his wife were first married. The number of calories he loses each day because his job is a lot, but not enough to completely validate the amount of food he eats when he gets home. His wife complains to him one day, that she wishes she could hold and feel the younger version of himself. This makes Pablo feel bad since he wants to make his wife happy. He goes to his child about the problem and the child recommends this app he saw on an ad called YourFitnessApp. The child helps Pablo install and create an account with the app. Once Pablo is given his phone back to use the app on his own. He is instantly put into a state of confusion. Since he's new to this idea of smartphones, Pablo is daunted by the number of buttons and features available. After numerous attempts to try and figure out what the app does, he eventually gives up on the app and deletes it.

Bella

Bella has been worried about gaining weight recently, so searched up fitness and diet tracking apps and found YourFitnessApp. She created an account and set her weight goal to "maintain" since she also doesn't want to look too skinny. She had some minor issues when it came to make a diet entry but got more used to it after doing it a few more times. Because of her good diet, she found she had no trouble keeping close to the calorie limit per day but rather had trouble eating enough. After a couple of weeks, she became used to the diet and found it easier to hit her goal.

Survey Results

Part I: Written Answers

| **What did you like about the interface?**	**What would you improve?**

- I thought it looked really visually appealing. I really liked the colour design
- Plenty of information available!
- Tons of information
- I liked the colors
- Everything. beautiful and simple
- I can see how many calories I have left
- Many options
- Simple and clean

- Make food items less broad while searching.
- Easier to find what I'm looking for.
- Categorize menu items more efficiently
- Make it easier to add items
- Clarity of where to go
- Less clutter
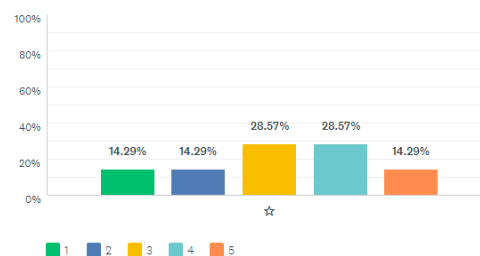- Easier way to remove entries

Part II: Rating Answers

How easy was it add an item?

42.86%
14.29% 14.29%
28.57%

1 2 3 4 5
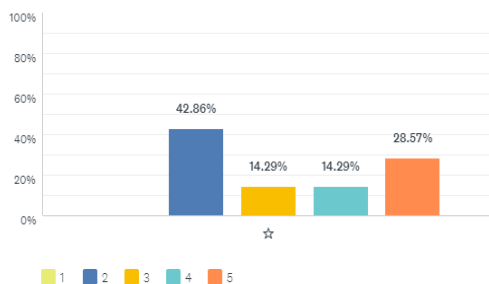
How would you rate your overall experience?

28.57% 28.57% 28.57%
14.29%

1 2 3 4 5
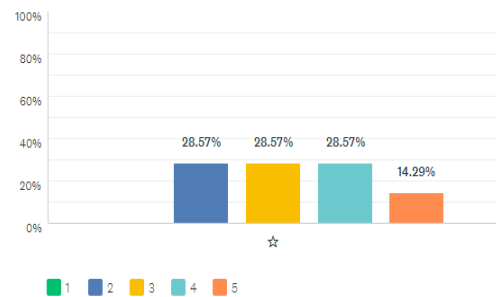
How easy was it to navigate from task to task?

14.29% 14.29%
28.57% 28.57%
14.29%

1 2 3 4 5

Table of Figures

References

Diomari Fortes, E. G. (2020, October 7). *Survey Monkey*. Retrieved from YourFitnessApp:
        https://www.surveymonkey.com/r/GT6CTN5