Group 5: Project Plan
Assignment 1

Members: John Zheng, Juey Yu, Vincent Yu, Feng Wu, Justin Lew

App Name: Mealtracker

Group Website: https://mealmules.github.io/

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Revision History

Revision	Status	Publication/Revision Date	By
1.0	Created	May. 30, 2018	John Zheng
2.0	Modified	June. 01, 2018	John Zheng, Juey Yu, Vincent Yu, Feng Wu, Justin Lew
3.0	Plan Changed	June. 03, 2018	John Zheng
4.0	Plan Changed	June. 06, 2018	John Zheng, Juey Yu, Vincent Yu, Feng Wu, Justin Lew

Project Summary

Mealtracker targets people who need help improving their meal plans for healthy eating, and need help finding food suited for their meal plan. The food content taken per week or month can be sent to dietitians via Mealtracker and receive useful feedback. The food asset map can be filtered to find locations that suit your meal preference (vegan, vegetarian, gluten-free, ketogenic, pescatarian). Mealtracker motivates you to eat healthier, with a twist. Members will have their calories intake compared with the Canadian estimate[1], and give feedback based on your performance. Members can also compete with other individuals with the same meal plan to motivate them to continue the meal plan.

Project Overview

Problem:

There are many times where people are mindlessly eating food and not giving it a single thought of what exactly is in the recipe. Perhaps they have a diet plan they want to follow. There should be a way to track the amount of nutrients in each meal in one central application to help the users achieve their health resolutions.

Culture drives individuals to have different eating habits and it might impact individual's diet plan.[2] For example, asian eating culture mainly consists of carbohydrates and vegetables.[3] A high-protein diet that contains large portion of meat and less carb might be hard for asians to adapt. This may frustrate users when they are facing a diet plan that doesn't fit to their culture. Dr. Edward from Global Healing Center says: "...as a society where cheap is good and fast is better, we've welcomed super-sized, low-cost fast food that has paved the way for a massive increase in the rate of obesity."[4] Individuals also might be frustrated when eating outside and give up the whole diet plan.

Solution:

Our app is designed to recommend diet plans based on different cultures. In the beginning we will give a test to figure out user's eating habit and recommend diet plans based on eating habit, goal, and duration. User can use our App to track daily food consumption, create long term plan and get diet plans based on their eating habits. Users can share diet plans with their friends and track progress together. Which create a sense of competition to finish the diet plan together. Also, when user eat outside of home, they can look at food map and get healthy food recommend based on their destination restaurant.

Users/Stakeholders:

1. Individuals wants to eat healthy and care about their diet
2. Individuals who wants to lose weight
3. Individuals who wants to start a diet plan with their friends[5]
4. Individuals who has difficulties to keep on a diet plan because of eating habit / culture

Possible features:

1. A test to determine user's eating habit, daily calories and how much nutrition the user should take each day.
2. Recommend recipes and healthy diet plan based on eating habit[6]
3. User can input food to track daily calories, nutritions, ect.
    a. Tracks nutrient intake (fat, carbohydrates, protein, etc.)[7]
    b. User can sync information/data from Apple's HealthKit App (using the Apple's HealthKit) which would include the number of steps taken, amount of sleep, and heart related statistics
    c. User can comment on the daily about their health condition which could then be forwarded to a registered dietitian for feedback and advice
    d. The app would send data on the meals eaten the week of and its overall daily nutritional intake which would help the dietitian with any inquiries
    e. Users can directly consult a dietitian registered to the application
    f. Information from above will allow dietitians to give accurate and useful feedback to our users
4. Calendar to help individuals schedule their daily meal plan and track their friend's diet progress
5. Graph that shows weekly or monthly data of nutrient intake, and can compare with friends
6. A food map that shows healthiness of each restaurant, so user can stay on diet plan when they eat outside of home
    a. Map can filter options, such as gluten-free options, organic, etc.
    b. Map also shows price of dishes
    c. Location schedule, directions, contact information
    d. Food menu from Zomato API[8]
7. A page dedicated to popular diet plans such as ketogenic, vegetarian, vegan, pescatarian, and gluten-free.
    a. Each would include further information, possible meal plans, and its benefits
8. AR function that shows the actual food from restaurant
    a. ARKit 2 also adds the ability to detect known 3D objects like sculptures, toys, or furniture.[9] This can be used to analyse the food in the restaurant and displayed via our app.

Project Planning:

Our communication plan is to meet once a week on Wednesday at 8:20pm. There will also be additional online meetings throughout the week to report on our progress. Another way for us to communicate is through Facebook messenger, or discord. This way, we have online communication and online meetings for situations where meeting in person is undesirable.

For communicating our code and files, we will use GitHub as our version control system. We will push our code into the repository when it is ready, and the team will look over the code and also test the code. The team website is made and will be updated frequently by Feng Wu. The website will contain information about our project such as our team members, our meetings, our assignments, and our project repository. Contact information will also be on the website if an individual wish to know more about the project app. If an individual is interested in the members working on the app, there are bios, photos, and roles of each member. Every time we finish an assignment, the PDF file of that assignment will also be posted on the website for all to see. Our meetings will also be posted on the website in detail. Each meeting on the website will have information regarding the roles of the facilitator, the note taker, the time keeper and who they are assigned to. In addition, the meetings on the website will also state the attendees, the type of meeting, what every member should read and bring, and the agenda. The link to the website is https://mealmules.github.io/.

In term of task managing, we are using Jira to assign tasks. Tickets will be created with points and ticket number that directly relates to branch number on GIT. Everyone in the team can track the progress of tickets. When a ticket is finished, team member need to input testing scenario and regression details to help QA testing. For any external communications, our app has a feature that requires sending information to dietitians. Our team would have to have constant communication to dietitians for the feature to function.

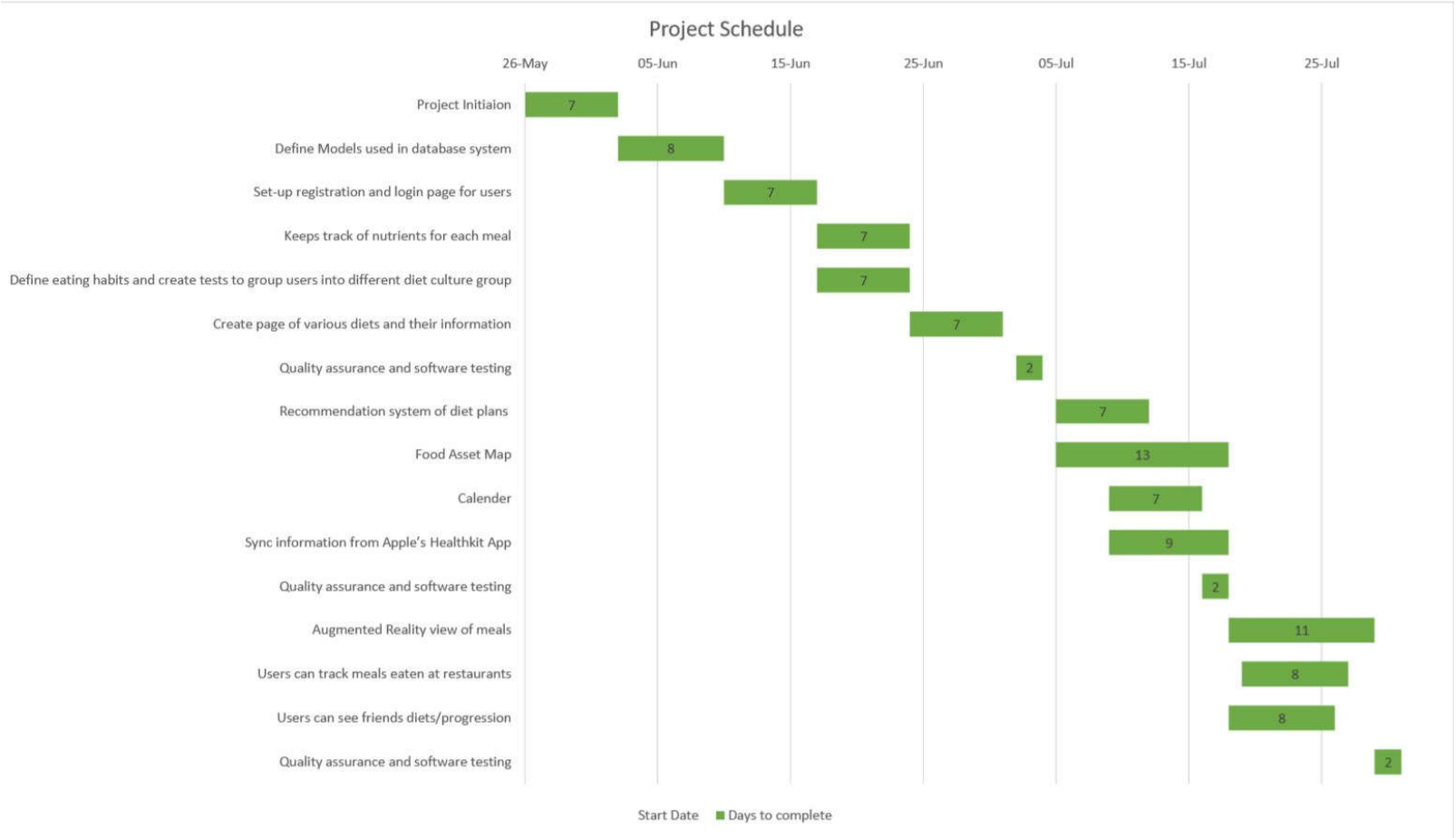
In terms of budget, we are using Jira for $10/ month. The only people we will be working with are members within our group, and dietitians. For labor costs, some calculations are considered. There are five people in our group total. Assuming we work on this project 9 – 12 hours a week for 10 weeks at 15 dollars an hour, then our hourly cost would be 75 dollars an hour and 750 dollars a week. The labor budget range would be between 6750 and 9000 dollars and assuming the average between the minimum and maximum budget, we would have 7875 dollars as our total budget for labor. If we want to keep this app on the app store after release, we would need to provide 100 dollars a year.

Project Schedule:

Key Tasks	Start Date (mm/dd/yy)	End Date (mm/dd/yy)	Milestones/Deliverables
Project Initiation	05/26/18	06/02/18	Github repository set-up with blank xCode project files Development environments set-up for team members Team webpage completed.
Define models used in database system	06/02/18	06/10/18	Define the user model along with their relationship to different objects Decide on multiple user types
Set-up registration and login page for users	06/10/18	06/17/18	Implement user model and perform database migrations Base the front-end portion based on a UI mockup
HW3 Iteration 1			
Keeps track of nutrients for each meal	06/17/18	06/24/18	Create a form page where user can input foods bought. Server would communicate with the Canadian Nutrient food API for nutrients. Store data in database under the user.
Define eating habits and create tests to group users into different diet culture group	06/17/18	06/24/18	Create a series of tests to define user's eating habit when user first open the APP

Create page of various diets and their information	06/24/18	07/01/18	Create a view of a list of diet plans which would provide more information and possible meals associated with that diet.
Quality assurance/software testing	07/02/18	07/04/18	Make sure information output from database is correct to the user. Make sure the UX is simple. Refactor code for iteration 2.
HW4 Iteration 2			
Recommendation system of diet plans	07/05/18	07/12/18/	Based on eating habits of the current user, the system should recommend relative diet plans to the user.
Food Asset Map	07/05/18	07/18/18	Provide users with a map of locations serving specific foods. For example, stores that sell gluten-free, local, organic products, etc.
Calendar	07/09/18	07/16/18	Shows the progress and status of user's current diet plan, also shows how user meet each day's goal.
Sync information from Apple's Healthkit App	07/09/18	07/18/18	Users can see blood pressure, heart rate and calories burnt along with the nutrient intake that day.

Quality assurance/software testing	07/16/18	07/18/18	
HW5 Iteration 3			
Augmented Reality view of meals	07/18/18	07/29/18	Users can see meals provided by restaurants using augmented reality.
Users can track meals eaten at restaurants	07/19/18	07/26/18	Instead of inputting all ingredients of meals eaten at restaurants, users can choose meals and all its ingredients will be tracked.
Users can see friends diets/progression	07/18/18	07/26/18	User will have the ability to keep each other accountable by having the ability to see meal eaten and its nutrition on calendar.
Quality assurance/software testing	07/29/18	07/31/18	Need two devices to test user-dietitian interaction.


Project Schedule
26-May
05-Jun
15-Jun
25-Jun
05-Jul
15-Jul
25-Jul
Project Initiaion
7
Define Models used in database system
8
Set-up registration and login page for users
7
Keeps track of nutrients for each meal
7
Define eating habits and create tests to group users into different diet culture group
7
Create page of various diets and their information
7
Quality assurance and software testing
2
Recommendation system of diet plans
7
Food Asset Map
13
Calender
7
Sync information from Apple's Healthkit App
9
Quality assurance and software testing
2
Augmented Reality view of meals
11
Users can track meals eaten at restaurants
8
Users can see friends diets/progression
8
Quality assurance and software testing
2
Start Date
Days to complete

Risk Management:

Risk	Potential Risk	Likelihood of Occurrence	Impact Area	Mitigation Strategy
Type: Project				
Team Member Dropping Course	4 Significant	Low	Likely to produce more work amongst the remaining team members	To start early in the development process and to find strengths of each team member and utilize them.
School exams/other work	1 Low	High	May delay deployment of features for each iteration	Plan ahead and implement difficult features during less busy times.
Type: Project and product				

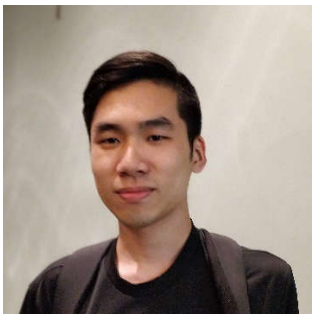
Team members implementing on same file	2 Minor	High	Files may conflict amongst team members on our local repository, thus making and commits difficult to mitigate.	Good communication of where and when a team members write code. Prevents code conflicts between different versions of the same file.
Lack of experience with iOS	2 Minor	High	Source code may not abide by industry standard	To learn best practices early on in the development process. To read multiple tutorials and Apple's official documentation for iOS' UIKit and Swift
Regression issue	4 significant	high	Merged code can impact other parts of project	Need to specify the regression when the programmer is changing / developing the feature, so QA team member can test it,.
Type: Business				
Similar to other apps already in production	4 Significant	Moderate	The overall value of the application and user retention.	To find what our competitors are missing from their applications and implement their weaknesses into our application

Team Organization and Staff Planning

Feng Wu

- Team Role: tech lead
- Feng is proficient in web development with technologies such as Node.js, Express and MongoDB. His interest are video games, eating, travelling and DogeCoin mining.
- E-mail: wufengw@sfu.ca

Vincent Yu



- Team Role: project manager
- Vincent is knowledgeable in many programming languages such as Python, C and C++. His biggest strength is being able to coordinate and communicate with others effectively, problem solving, adaptable to new working environment and able to work in a team. Vincent's hobbies are hiking, biking and camping.
- E-mail: vdy@sfu.ca

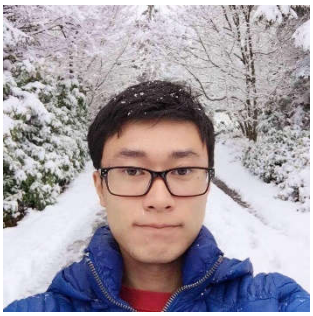
Juey Yu

- Team Role: visual designer
- Juey specializes in front-end web development with many languages and frameworks such as HTML, CSS, Angular, JavaScript and Java. Her hobbies include designing and gaming.
- E-mail: Seijuy@sfu.ca

Justin Lew

- Team Role: quality assurance
- Justin excels in web development with various MVC frameworks including Rails, Laravel, and Express. He is currently in the process of learning React Native for his current co-op position as a software developer. His hobbies include photography, streetwear, and machine learning.
- E-mail: jylew@sfu.ca

John Zheng



- Team Role: scrum master
- John is proficient in many languages such as Python, C, C++, Unity, HTML, CSS and JavaScript. His interest are video games, all kinds of sports and not sleeping.
- E-mail: yza366@sfu.ca

Reference

[1]*Canadian Calorie Requirement:* https://www.canada.ca/en/health-canada/services/food-nutrition/canada-food-guide/food-guide-basics/estimated-energy-requirements.html

[2]*How Culture and Society Influence Healthy Eating:* https://www.globalhealingcenter.com/natural-health/how-culture-and-society-influence-healthy-eating/

[3]*9 Asian Eating Habits Westerners May Never Understand:* https://www.youtube.com/watch?v=s62mzPfLkfI

[4]*How Sociocultural Factors Influence Healthy Eating:* https://www.globalhealingcenter.com/natural-health/how-culture-and-society-influence-healthy-eating/#references

[5]*Choosing a Weight Loss Buddy:* https://www.webmd.com/diet/obesity/features/choosing-weight-loss-buddy#1

[6]*NIH Menus based on culture*: https://www.nhlbi.nih.gov/health/educational/lose_wt/eat/menus.htm

[7]*Canadian Food Nutrient database:* https://www.canada.ca/en/health-canada/services/food-nutrition/healthy-eating/nutrient-data/canadian-nutrient-file-2015-download-files.html

[8]*Zomato Food Menu API:* https://developers.zomato.com/api

[9]*ARkit 2:* https://developer.apple.com/arkit/