Project Plan - Heman, Williams, Blake - ITWS 1100, Group 10

Our Project will be "The Calorie Guru". This is a calorie tracker app that is intended to serve individuals who want to learn more about what they are feeding their body. This application will allow a user to track what they eat in meals by adding food entries to a meal grouping. When a food entry does not exist, we web scrape to find average nutritional information (of the first 3 sites with no privacy protection) to write to our database and present to the user. If it does exist, we read its nutritional facts from our database and display it. If a food entry does not exist, we invite the users to add the nutritional information of the food, including the calorie count and quantity. We would add this into our database and remember it for future uses.

This will be different from existing applications partly due to its scraping functionality. We are differentiating this application from other calorie trackers by allowing users to keep recipe books, which contain food entries with attached recipes to calculate nutritional facts. Most calorie trackers ask for a user to add in nutritional values for meals, lacking specifications on ingredients used & are very subjective. We want to make a prediction for the user by using ingredient entries (specially tagged food entries). When a user adds a food entry for a meal, these recipe book options should show up as well.We intend to use an outside API to provide suggestions for these nutritional values for users, significantly streamlining the process of tracking nutrition. For users who have previously manually inputted nutrition facts, we intend to include those in the page's suggestions. We would also want to make ourselves even more unique by allowing for new food entries to be created via scanning/uploading nutritional labels. This would likely be done with a standalone API.

The inspiration for this application came from the concept of the "Freshman 15", where college freshmen tend to have a weight fluctuation of 15lb either gained or lost either gain or lose about 15 pounds in their first semester or two. This made us curious: how does our diet change from before college such that this large of a weight fluctuation comes about? We wanted to use this calorie tracker to Our target audience is primarily target incoming freshmen; we want to help them examine how their diet, and monitor how it changes is balanced with the introduction of dining hall food, or homemade meals.

Primary Area: Reading from the Database and presenting the data in a concise manner.
Secondary Area: Pulling Data from various means, whether by static database, nutrition label scanning, or parsing data from websites. User sign-in page to track days.

Goals:

- Basic Calorie Tracker Functionality
    - Populate a Database

        - User add their own food
    - Meal-by-meal organization + Daily nutritional summaries
- User Sign-In
    - Stores Past Meal Info
- Recipe Book Implementation (is user-specific)
    - Ingredient Entries
    - Calorie Count Predictor
- Web Scraper (*Stretch*)
    - Web scraping indeed would be a stretch, as we do not have the time for that. We have decided to use an API, specifically api ninja, to find the calories and nutritional information of the food item
- Nutritional Label Scanner (*Stretch* | Hard Stop @ 3/12)
    - We have decided that the nutritional label would be impractical as we have not met our hard stop of 3/12, so instead we are adding a page where a user can enter the nutrition.

IA:

- Python
    - ImageScanner.py - To scan in nutrition label
- C++
    - Potential web scraping software
- src
    - PHP
        - HomePage.php
        - Scanner.php
        - Results.php Nutrition-screen.php
        - Form.php - for manually inputting data
        - Sign-in-Page.php
        - Resources
            - Request.js - for api requests
                - https://api-ninjas.com/api/nutrition According to its robots.txt, we should be able to use it
            - Pictures, photos, images, css maybe
    - MySQL
        - DB-recipes.sql
        - userlogins.sql

I realized we probably don't need SQL-specific files as all things SQL-related can be done in the PHP files. Also since we are not initializing the SQL files, we are just adding on top of the existing SQL database

Roles:

Williams: I would like to try to scan images in order to read the nutrition label (not priority). I would also be doing at least two of the php files, a scanner, one more, or maybe just help out on the nutrition screen and part of the recipe and login SQL code. I feel that the SQL code should be worked together by all 3 group members.

Heman: The two parts I would like to focus on are the sign in and the recipe book function. This will mean that I will focus a lot on reading from / writing to databases. I will work on the web scrape tool as a stretch objective with the others. Additionally, I will make some contribution to the basic functionality of the calorie tracker with data visualization.

Blake: I plan to focus primarily on building and managing our databases, will probably end up contributing to frontend/UI, and will shift focus to the Nutrition Label Scanner if we have time to develop and implement it before the deadline. I intended to contribute to the Nutrition Label Scanner, but we have decided as a group that we will probably be unable to complete it in time.

Kanban Board:
https://github.com/orgs/RPI-ITWS/projects/42/views/1