Due: Monday, October 1, 2018, 8:00 AM (submit to BlackBoard, under Assignments)

File Type: PDF

Team 6

Team Members: Jules Garrett, Coltyn Gatton, Katie Hrenchir, Austin Juhl, Menita Vedantam

Project Name (1-3 words)

- Green Prep

Project Synopsis (1-25 words)

- Meal preparation web application that determines the optimal serving sizes of user selected foods in order to meet user selected nutrient goals for a meal. Our tool will make dieting easy, enjoyable, and maintainable.

Project Description (150-250 words)

- Introduction:
    - The three main nutrients in all foods are called macronutrients and include protein, carbohydrates, and fat. To maintain a healthy diet, you want to have a meal plan based on your specific macronutrient goals. Your macronutrient goals can be calculated using your gender, age, height, weight, activity level and your fitness goal for your diet whether it be losing fat, maintaining weight, or gaining muscle.
- Problem:
    - Maintaining a healthy and balanced diet is difficult for many reasons. Most people are unaware of the nutritional makeup of the foods they eat everyday. Without knowing the nutritional value of the food you eat it is impossible to determine your daily nutrient intake and equally as difficult to determine what your body actually needs in a day. For those who are aware of the nutritional makeup of the foods they eat, determining the appropriate serving sizes depending on your personal needs is challenging and time consuming. Also, a byproduct of the difficulty related to meal preparation is the absence of variety and the miscalculation of quantity. Both of which can lead to last minute take-out or food waste. If eating healthy is tedious, unenjoyable, and wasteful you're not putting yourself in a position to achieve your nutritional goals.

    - Current Products:

        - Currently, there are nutrient apps that will tell you whether or not you met your goals after journaling what you ate at the end of the day. This reactive approach to dieting does not give you a plan to eat well rather it informs you whether or not your ate poorly.

- Objective:

    - Main function:

- The main function of our nutrition app will be to optimize meals that meet the user's nutrient goals. This will be accomplished by creating a system of equations that corresponds to the nutrient break down of each food and includes lower and upper bounds. Once the system is defined we will use the Simplex Method to generate the optimal meal.

  o Secondary functions:

  - Macronutrient calculator.

  - Produce accurate grocery lists to reduce waste.

  - Make food recommendations to create more optimal meals and utilize leftover food.

  - Dynamic plans that adjust when deviation occurs.

  - Restrict food bank for dietary restrictions.

  - Share plans.

Project Milestones

- First Semester:
  - Architecture Design - November 2018
  - Wireframe - November 2018
  - UI Design - December 2018
  - Database Setup - December 2018
- Second Semester:
  - Back End/ Front End Integration - January 2019
  - User Testing - February 2019
  - Revisions - March 2019
  - Deployment - April 2019

Project Budget

- Domain Name: $12
- Webpage Hosting: depends on usage

Work Plan

- Katie: UI, Team Status Reporter
- Menita: Core Development, Testing
- Jules: Core Development, Database
- Austin: Core Development, Database
- Coltyn: UI, Security