Breazy Meal Prep

Github Link:

https://github.com/ChazArvizu/CECS491_Hexadecimators.git

Team Name: Hexadecimators
Team Leader: Chaz Arvizu
Team Members: Carlsean Claricia, Tania Adame, Tyler Kelsey

Submission Date: 09/25/2022

Version Template

Version 1.0 - Created Initially: 09/20/2022

Table of Contents
Page Number

1. Background

Some of the main reasons that people fail a diet program are a poor meal structure and poor planning. In an online health article written by Neil Hill, a world renowned bodybuilding coach, he stated, "...they tend to have days where they have little or no structure and end up making poor food choices…"(Hill, 2019). We are going to help eliminate such factors of variation with our single page web application. This application will enhance the user's meal preparation by providing a personalizable and convenient experience that will make meal preparation simple and fun.

2. Project Scope

The application that will be delivered is a meal preparation application designed to make the user's meal preparation more customizable and convenient. The finished application will be directed towards people who want to either gain or lose weight, people who already meal prep and want a more organized experience, and nutritionists. The application that will be developed is a single page web application designed to run on Chrome 104.x (64 bit). The language and units of measurements will be made using U.S. english and the common U.S. measurement standard.

3. Project Projections

This section will contain project projections that examine the timeline, resources and potential risks that could be encountered.

3.1 Timeline

Validation Date TBD
- Work as a group to complete this proposal and get approved in a timely manner so we can begin work on Milestone 1

Due October 5th - Milestone 1 / Team Review 1
- BRD, HL design, and Project Plan due
- Work towards completing milestone 1 after project proposal validation
- Once we have our project plan properly built we can work on correcting our design and begin working towards the barebones of our project to submit for the Team Review 1 deadline

Due November 11th - Milestone 2 / Team Review 2
- Network Diagram, LL design, Registration, and Logging due
- After completing Milestone 1 we will improve upon whatever mistakes we might have made in the first team review then proceed to build upon it to begin working towards Milestone 2 with code submission

Due December 15th - Milestone 3 / Team Review 3
- Authentication, Authorization, Account Recovery BoM
- Following the completion of Milestone 2 we will review our code and try to rework any pieces we had gotten wrong to rebuild and improve upon them for our other Account based resources that utilize registration and logging
- Following Milestone 3 we will continue to work through the winter break to stay on top of our timeline until we gain new due dates for the new months to come following winter break.

3.2 Resources

All of the technologies that will be used in the development of this application will be free to use and widely available. For the Integrated Development Environment (IDE), we will be using either Visual Studio Code 1.70+ or Visual Studio 2022 Community edition. The back end will be constructed using the .NET 6.x framework. The languages that will be used are C# 10/11, ECMAScript 11+ / TypeScript 4.x+. The data will be stored in Sql Server 2019 Developer/Express Edition as the database engine and SQL Server Management Studio as the database client. The web server will be IIS 10+.

3.3 Risks

One of the possible risks to our team is the fact that our development team is relatively small. If any of the group members are unable to work on the project due to unforeseen circumstances, this will slow the production of the application down. Another possible risk is that our development team has little experience with some of the technologies given. To minimize this risk we must do research on the given technologies to see how they work.

4. Product Scope

In this section we will discuss all the common and unique features that will be included in this application.

4.1 Common Features

Login - Users can log into an account with proper authentication with a username and password.

Logout - Users can sign out of their session which will refresh back to a normal page without any personal and private user information.

User Access Control - Each registered user uniquely has access to their private features and information.

Logging - recording logins of users, logins that failed, log of the events that occurred before an error happened, how long users are tabbed into our webpage, and what users click on the most.

Log Archiving - logs will be updated within a database and offload every log after exactly a year since they were added.

User Management:

User Registration - users can create their own account by coming up with their own username and password, then their email to register.

Delete User - If the user wishes to delete their account, then there will be an option to and it will completely remove them from our database alongside any information in the logs tied to them.

Update Profile - Users may change their username, email, and password, as well as their stats which include their weight and height.

Update Permissions - The user is able to update their private features and information.

Error Handling

Input Validation - prevent users from inputting wrong and/or irrelevant characters

Runtime Error Handling - prevent errors to crash the system as a whole.

User Feedback - display the user a friendly message regarding the error that occured.

Analytics - use information from the log archive database to further improve our web application throughout the future.

4.2 Unique Features

Meal scheduling - Displays a calendar where each day of the week contains the individual days worth of food along with scheduled eating times.

Recipe Database - A user can search up different foods to find the recipes available as well as the related nutritional information and how it will account into their current daily goals for nutritional macros.

Shopping List - A user can create a ingredient shopping list aiming for a certain nutritional goals based around specific meals while staying within a designated budget based on user input

Caloric and macronutrient recommendation - Takes in the users' body mass index (BMI), targeted weight, timeline, and the body type they are aiming to become to give recommendations on their caloric and macronutrient intake.

5. Target Audience

Our work aims towards a target audience of those who wish to either bulk or cut their body mass.This will be achieved either through gaining muscle, burning fat, or a mix of both as we will attempt to cater towards the nutritional needs dependent on the individuals' body. The application will provide recommendations based on a number of factors as we try to help sustain a consistent methodology to eating healthy through meal prep suggestions. The user will be able to track their progress and see the progressive change through a system of numbers made easy to read.

6. Value

This application will enable users to create their own custom meal structure that will fulfill their diet goals. Users will be able to create a personalizable experience that will fit their food preferences and caloric goals. Users will be able to enter in their height and weight to calculate their BMI to give them the most optimal recommendations on how many calories they need to consume. Many meal preparation applications don't offer a customizable experience for users which is where the

7. Identify Competitors

Eatthismuch.com

Eatthismuch.com uses a recipe and ingredient database for their website. They have a meal planner that lets users put in their own meals or generate meals based on their daily target and price limit. Grocery lists with pantry and meal planning future weeks cannot be accessed unless the user pays to upgrade their account to premium. Users can create collections of meals and add any meal to each collection.

We plan on out competing Eatthismuch.com by providing more personalizable meals by taking the user's input on their preferred foods. When a user enjoys the foods that they eat they will be more inclined to stick with a meal preparation plan. Another competitive edge our application will have is that we will take the user's fitness goals and make caloric recommendations based on the user's goals.

Prepear app

Users can create their own recipes, save a recipe from the web, create a meal plan where you can add recipes through each day, each week for however many weeks the user wants to have in the meal plan. The discover page on the app lets you see different recipes of different categories that you can also filter out. Has a shopping list that generates a grocery list based on the recipes you added in the meal planner. Also has a pantry for the grocery list so it will consider what you already have and what you do not.

Unlike the Prepear app, our users will be more personalized in meals they are suggested by using their daily target of calories and macronutrient needs. When a user is able to set their certain fitness goals the meals that they eat have to reflect what they would like to accomplish. We will also include a budget for users' shopping lists as the user may want to save money on ingredients.

8. Product Vision

Our vision is to create a web application for users like bodybuilders, nutritionists, and the daily gym-goer who are looking for a personalized web application to meet their body goals. The Breazy Meal Prep keeps track of all calorie in-takes makes recommendations based on the user's inputs and a personalized regimen for easy growth in users life's. Unlike other apps that don't give personalized regimen our product will provide an easy, organized web application to meet user body goals.

9. Glossary of Terms

Body Mass Index (BMI) - Body Mass Index takes in a person's height and weight to determine what weight category they fall into. The equation to calculate BMI is: $BMI = 703 * ((weight(lb.)) / (height(in.))^2)$.
Macronutrient - includes the main three nutrients your body needs for energy; carbohydrates, fat and protein.

10. References

Hill, N. (2019, March 26). Top seven reasons 95% of diets fail. Inspired Health. Retrieved September 22, 2022, from https://inspiredhealth.co.uk/blogs/wellness/top-seven-reasons-95-of-diets-fail

Eat This Much. (n.d.). Retrieved September 23, 2022, from https://www.eatthismuch.com/

Prepear. (2021, May 6). Retrieved September 23, 2022, from https://www.prepear.com/