CS102	Spring 2020/21	Project Group	G2B
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~ HealMeal ~

G2B

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Criteria	TA/Grader	Instructor
Presentation		
Overall		

Requirements Report

(Final Version)

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1. Introduction

Controlling our daily meal plans, exercises or even daily water intake has become an obstacle for contemporary societies. Therefore, it is crucial to be aware of what is being taken to our body on a daily basis and doing some exercises according to calories that we intake play a major role in order to maintain a healthy lifestyle. This project will provide a user-interactive interface to make the control and interaction in the most possible way; therefore, it will be easier to understand and make interventions to his/her menu from users' perspective. This application will ask for the user's diseases and will recommend exclusive products for them. It will give users some main options with titles such as soups, desserts and meals; then provide various subsections to enable the user to select which one he/she plans to eat. Consequently, while the user can determine what she/ he wants to eat, it will also show the user the remaining calories. Additionally, it can give warning if the user exceeds the calorie limit or takes in less calories than he/she should take. Overall, the user can acquire daily, weekly or monthly reports to follow the schedule.

2. Details

First of all, the app will ask the user for his/her gender, weight and height in order to calculate his/her daily calorie intake need. Then it will ask for their diseases about nutrients such as diabetes or ulcer so that it could avoid recommending sugar based or acidic foods. App will also ask for the user's target whether they would like to lose weight, gain weight or maintain their own weight. Then the program will start and will have the following sub sections.

2.1 Sub sections

2.1 Calorie Calculator

After getting the user information (gender, height and weight) the application calculates approximate calorie needs according to weight, height and gender obtained from the user. Then the app recommends variety of meals for user to eat in a day. For each day the app calculates calorie intake and calories burned. After that, the application calculates net calorie consumption. According to these calculations the app will decide whether the user is achieving their goal that the app asked at the beginning.

2.1.1 Gender effect: The calorie intake requirement for males is slightly higher than females so the algorithm will recommend slightly more calories for each day.

2.1.2 Height and weight effect: The program will calculate the body mass index (BMI) of the user and its recommendations will shape through this information.

2.2 Exclusive food recommendations regarding user's diseases about nutrients

The app will ask the user for their diseases when a new user enters the app which is the primary novelty of the program. Examples: If the user has ulcer the app will not recommend acidic nutrients, if they are obese it won't recommend carbohydrate based foods, if they are diabetes it won't recommend sugar based foods, if they are gout it won't recommend meat based products, if they are cirrhosis it won't recommend alcohol based or fat rich products, or if the user is allergic to any specific food there will be an option for them to choose their allergenic food.

2.3 Food Lists

There will be lists of food that the user can choose meals from (breakfast, lunch and dinner) which each one of them will have calorie information for a standard portion (1 slice of cheese = 113 kcal or 1 portion of hamburger). Another novelty of the program will be that it will target the people living in Turkey because it will be containing traditional Turkish meals such as karnıyarık, musakka etc. Also, the program will avoid recommending specific types of foods according to the user's diseases.

2.4 Activity Tracker

This feature is completely user-dependent. If the user has done any sport that day, he can choose that sport from the list. In this way, we add the calories burned in this sport to the general calories expended daily. By doing this, we take extra activities into account. The sports on the list and the calories burned will have approximate values. Thanks to this feature, the user will be able to follow the calories burned more easily.

2.5 Water Intake

The application calculates how much water that user needs. There will be an option to track the user's water intake for each day. For ease of use, a symbol of a glass of water button will be displayed, so that the user can input their information about their water intake easier.

2.6 General Warnings

General warnings in the program will indicate if the user is consuming enough water or achieving their initial goal regarding the calculations made by calorie intake and burned calories. There will be different warnings for all the features in the subsections.

2.6.1 Net calorie calculation: If the user consumes more calories than the daily calorie intake, this will appear in the general calculation section and the user will be shown a warning about excess calorie intake.

2.6.2 Excessive consumption of desserts: If the user consumes too much sugar-based products, the app will give warnings regardless of the user's targets since it is not healthy for anyone.

2.6.3 Cheat day: If the user is in the path of achieving their goal, the app will allow a cheat day which the user will be able to eat some forbidden foods (such as desserts or junk food) weekly / monthly.

2.2 Using References

(see [i] for general information and [ii] and [iii] for examples of information required for book, journal and web-based sources).

3. Summary & Conclusions

To sum up, this app allows people to calculate and regulate their calorie intake, also it allows people to calculate their calorie according to their burning calorie which is burned by their daily exercises. After this calculation, application show that whether their eating habit is healthy or not and helps people to achieve their goal that they have chosen at the beginning of the program or not.

References:

1. The Short Guide to Avoiding Plagiarism, David Davenport & Derya Davenport. URL: http://www.cs.bilkent.edu.tr/~david/plagiarism/ 2008. Last visited: 31/01/2017.

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4. Shredded Brothers. Shrainz Spor Eğitim Giyim Ticaret Limited Şirketi. https://shreddedbrothers.com/blog-detay/kalori-cetveli-hangi-egzersiz-kac-kalori-yakar. Accessed: 25.02.2021.