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app name: The Caf Calorie Tracker
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What is our project

The Caf Calorie Tracker is an application that features a food database in The Caf. The Caf Calorie Tracker offers users a personalized interface that allows users to enter their personal information and the diet mode. There are three functions to choose from, including Healthy Mode, Self-choosing Mode and Calorie Evaluation. Provided with these information, The Caf Calorie Tracker would automatically compute the ideal nutrition intake portion depending on the current available food at The Caf, make their own diet with the support of the food database and check the review of their daily-taking calorie. Most importantly, The Caf Calorie Tracker would display the calorie and nutrition they should take in during the meal and finally generates a menu that is suitable for the user.

Why is it interesting

Our project is interesting because our app is developed specifically for the people who dine in The Caf at Residence Commons, Carleton University. By far there is no such application designed to control the calories intake at The Caf. Even though users can view the nutrition data for each dishes on The Caf website and it can also calculate the total calories, it does not provide the user a personalized choice of dishes tailored to their fitness goals and health situation. Hence, our project is an ideal app for the users seeking for a balanced, healthy, nutritious diet at The Caf.

Describe and justify your project selection.

The platform of the program is Android. The Caf Calorie Tracker is feasible because most of the students cannot pick out the healthy food from a diet list. When students click on the healthy mode, the program will create a recommended diet that only consists of healthy food which is convenient for students. This is quite helpful for the students with concerns of healthy diets.

Why does this project make sense in a mobile form factor?

This project is chosen to be present in a mobile application. It is because it would be convenient for users to check the daily menu on The Caf, regardless of where they are and time. Suppose when you are in the way from the gym to The Caf, it would be more convenient for the user to view the menu on the cell phone, rather than looking for a computer and browsing The Caf website. Consequently, a portable device that supports our project would make dining in The Caf easier.

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Functional requirement:

FR1: Users are able to log in as an administrator or a student user.

FR2: The administrator is only able to update menu.

FR3: Student users are able to gain a recommended Caf's menu for daily meals in healthy mode.

FR4: Student users are able to calculate the total calories for selected dishes in self-choosing mode.

FR5: Student users are able to receive a weekly health report in Calorie Evaluation.

FR6: Student users are able to create and edit their person profile

FR6.1: The app is able to compute the BMI and basal metabolic rate(BMR).

User scenario 1(refer to FR3, FR6)

A user installs and opens The Caf Calorie Tracker for the first time.

The user taps on student button and log in as a student user.

The APP asks for filling personal health information (including age, height, weight, e.t.c).

The APP automatically estimates the basal metabolic rate(BMR) for the student.

The APP displays three functionalities that allow the student to select(Healthy Mode, Self-choosing Mode and Calorie Evaluation).

The student tap on the Healthy mode.

The APP displays recommended dishes for each meal based on personal BMR and the Caf's daily menu.

User scenario 2(refer to FR4)

A user opens the APP.

The user taps on student button and log in as a student user.

The APP displays three functionalities.

The student taps on Self-choosing Mode.

The APP displays user's BMR and all the dishes.

The student selects several desired dishes.

The APP displays the total calories for those dishes and pops up a warning if the sum exceeds user's BMR.

User scenario 3(refer to functional requirement 5)

A user opens the APP.

The user taps on student button and log in as a student user.

The APP displays three functionalities.

The student taps on Calorie Evaluation.

The APP presents calorie report according to the student intake

User Scenario 4(refer to functional requirement 1,2)

A user opens the APP.

The user taps on administrator button and logs in as an administrator.
The APP displays the menu from last week.
The administrator taps on Clear button to clean up all the dishes from last week.
The administrator taps on Add button to add dishes to daily menu for a new week.

Why these functional properties are beneficial

These functional properties are designed to offer users a brand new perspective when it comes to food choice in The Caf. The use scenario 1 shows us how a user can gain professional recommendations on menu selection via health mode. This is particularly helpful for the users who have the concern of their physical health and fitness progress. Aside from that, if a user is curious about how much calories and nutrition they would take in during a meal, they can refer to the use scenario 4, in which they add dishes into their selection. In the meanwhile, our app will automatically analyze the total intake of this meal. It would generate a warning message if the user chooses food irrationally. Last but not least, in use scenario 3, users are able to access to a weekly calorie report, according to their historic records. All in all, The Caf Calory Tracker is a powerful tool, which cares about users' health and fitness, offering users a healthy, balanced and nutritious menu at The Caf.

Non-Functional requirement:
Usability:

NF1: Programs must be fully documented using inline comments.

NF2: Need an instruction guide for The Caf Calorie Tracker.

Implementation:

NF3: All source code must be written in Java.

Legal:

NF4: Users' information should be protected.

Why these properties are important for your system

These non-functional requirements are designed to give a basic guide for developing, helping developers adjust program configurations. In the usability category, NF1 asks for documentation in programs, that would be an important requirement to understand others' work during cooperation. Also, letting users know how to manipulate the final product is necessary, where NF2 came from. For the implementation category, due to our project is to provide a convenient calories tracker that students can use in phones, choosing Java language and implementing this APP in Android platform in NF3 will be a good choice. Last but not least, how to protect users' privacy is also the key point that we cannot ignore due to their personal information will be remembered in our APP. Hence, NF4 should be another central point that developers will focus.