

Criterion A

Defining a problem

Recently, my friend Mr. Zan(who is a fitness influencer) approached me and said that during his meetings about the importance of physical health, he came up with the idea of how to encourage his clients to be more active. Then he presented the whole idea and in my opinion, it was wonderful. When I asked what his main goal was, he said that he wanted to have something he can give his clients that would encourage them to be more active. That was the moment when we came up with an idea for the Fitness app.

Mr. Zan presented to me everything he thought could be in the app. These include the BMI(Body Mass Index) calculator with BMI categories(also indicator of how close a person is to different BMI categories), the Nutrition value calculator(also showing how long person needs to do certain activities in order to burn given calories), and a one-rep max calculator with ranges of reps and weights in order to improve endurance, hypertrophy, and strength. Food available to choose in the Nutrition value calculator would be taken from diets that my Client creates. He also said that he knows that some adults enjoy drinking alcohol once in a while, so he proposed adding a BAC(Blood Alcohol Concentration) calculator. As for those under 18 years old, he said that not many underage people take part in his courses, but there is still a part of his clients that is underage. Thus, we came to the conclusion that the whole app would have two menus, one for those over 18 years old and one for those under that age. Whole conversation regarding that can be seen in Appendix A.

Rationale for the proposed product

I decided that the most optimal way to create that program would be to write it as an app in Java. I was also thinking about developing it in python, or as a website in HTML. However, I rejected python because Java has more available libraries that are more capable of creating a user-friendly GUI (Graphical User Interface) than python. Moreover, I gave up the idea of creating it as a website, because then users might need internet access to use it, and as Mr. Zan mentioned (conversation can be seen in Appendix A) - during their meetings, they do not have stable internet connection. Thus, Java was the best fit for developing the app because not only does it work offline, but it also provides options to create a user-friendly Graphical User Interface. There are numerous Java libraries, some of which can be very useful for the development of that app, as it opens a lot of possibilities. That is, for example, creating buttons, and labels, allowing for users to input their data, or display images.

Other reasons for me deciding to develop the app in java are for instance it being a very dynamic programming language, being free, or being portable on any platform.

Success Criteria

1. Clients will be able to check their BMI and BMI category based on their input
2. There will be a chart showing BMI's category and how far is it from being bigger or lower
3. Clients will be able to see the macronutrients and caloric value of an inputted amount of snacks from my client's diet.
4. Clients will be able to see for how long they need to do certain activities in order to burn calories eaten from their snacks.
5. Clients are going to be able to check their possible one rep max weights
6. Clients will be able to see the best reps amounts and weight in order to improve their endurance, hypertrophy, and strength.
7. Clients will be able to see how drunk they are(represented in both per mile and mg of alcohol per 100ml of blood) based on the amount of alcohol consumed and the time passed.
8. The menu of the app will be available in two different versions - for people over 18 and under 18 years old
9. The program will be able to detect input errors (such as detecting whether all necessary data is inputted and whether all values are integers)

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