Criterion A-Planning

Word Count: 472

FitnessApp

Defining the Problem

My client, Shilpa Manghat, is my mother. She is extremely health conscious and tries to be as healthy as possible. For a while now she has been using a notebook to keep track of all her activity and calorie intake. She uses the diary to write down the calorie intake of each meal of the day and records her weight regularly to track progress. She does this for every meal she eats and on a daily basis. However, since manually keeping track of her calorie intake and weight can be time-consuming and inefficient, she asked me to make her an app to perform this function.

During our conversation, Mrs Shilpa Manghat expressed her frustration with the tedious and inefficient process of manually tracking her calorie intake in a notebook. She also mentioned that carrying the book around with her when she goes out to eat is a hassle. Additionally, we discussed how the task of maintaining the book and adding records has become increasingly challenging as life returns to normal after the pandemic and work responsibilities pile up. **(See Appendix A)** Besides these points, I noted a few points from my end as well. Storing data in a book poses a risk of physical damage that could result in the loss of all information. Moreover, misplacing a book is a common occurrence that could lead to the loss of important data.

Seeing this problem I volunteered to build an application to address her problems and add a few more features for the sake of convenience.

Rationale for Proposed Solution

After consultation with my client, I have decided to make an app as it is more readily accessible than a book as my client almost always has a phone on hand. An app makes the storage of data easier and reduces the manual labour done by the client. It also reduces the calculations done by her and the risk of loss of data by physical damage.

To make this app I plan on building a program using JAVA on Android Studio. Android Studio is the official Integrated Development Environment (IDE) for Android app development. It is a platform that will help me build the frontend of the app while I can focus on the backend of my application. Android Studio will help with coding the XML files of the app while I can focus on programming the database and software. I have decided to use Java for several reasons. Firstly, Java is a very popular programming language and hence it is compatible with several operating systems and can be used on android studio. Secondly, since Java is one of the most commonly used languages, there are many resources on the internet from which I can get help in case I get stuck at

some point. Lastly, the object-oriented nature of Java will help me with troubleshooting, problem-solving and code reuse.

Success Criteria

Functional Requirements (See appendix C)

1. Ability to calculate their BMI(Body Mass Index).

2. Ability to check if BMI is in the healthy, underweight, overweight or obese range.

3. Ability to input food items with their nutritional facts.

4. Ability to view a list of all imputed food items and their respective nutritional facts.

5. Ability to enter information about the user's age, weight and height.

6. Ability to scan QR codes on the back of food item packs to get information about their nutritional facts.

7. Ability to input the calories eaten in a meal

8. Ability to recommend food items based on the user's age, weight and height.

9. Ability to track the calorie count of each food item, portion size and the date of consumption of each food item the user has eaten.

10. Ability to check for errors and display an appropriate error message if there is one.
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Non-Functional Requirements

11. A home page to easily navigate through the app.