Criterion A – Planning

Application Objectives

The purpose of this project is to create an application that will assist the general population in keeping physically healthy. To this end, monitoring and tracking a user's daily step count and amount of sleep is a method of health tracking that balances simplicity and accuracy. This program will also export its stored data to a easily accessed text file, which is freely accessible and easily adaptable by many other health tracking platforms.

Although this program will offer good general indications of a user's health habits through sleep and step tracking, accuracy will be limited due to the information collected. For a more specific indication of a user's health, additional data, such as body mass index, exercise activity, or even heart rate monitoring can be considered.

Justification

This application offers a more open source variation on similar health tracking applications that are commercially available. Using step and sleep count as a method of measuring healthiness offers a good balance between ease-of-use and accuracy. Additionally, the open-source nature of the program and the storage of data in a plaintext format allows for a solution that can be easily ported to other platforms in the future.

This application will be designed and written in the Java Development Environment, because it is the official programming language of the Advanced Placement Exams. This allows for additional practice, discovery, and enrichment with the programming language, which can prove to be very valuable as preparation for the exam.

Additionally, Java is known for its cross platform compatibility, because of its integrated virtualized operating environment. This again allows for increased portability and usability for the proposed programming solution.

Developmental Priorities

1. Program will be able to store and update user-inputted step count and sleep information reliably in an external text file.
2. Program will be able to retrieve user-inputted step count and sleep information from a specified date.
3. Program will be able to detect incorrectly formatted data that the user attempts to save (for example, an attempt to enter 13 as the month).
4. Program will be able to accept and store user-defined step and sleep goals, and indicate whether or not the user has met these goals for a specified date.
5. Program will be offered and displayed in an easy to use and intuitive GUI implementation, with multiple tabs and intuitive function groupings.