# IB Computer Science: Internal Assessment

## Criterion A: Planning

**The Scenario**

My client, which is my friend Ryan Gajarawala, has recently expressed a desire to work out at the gym. Like many other students in my grade, he wants to build the so called “beach-bod” for senior beach week. However, with very limited experience of working out and the equipment in the gym, he’s not exactly sure where to start.

With the large number of equipment in our school’s weight room, Ryan may be a little overwhelmed with which exercises to do to target specific parts of his body. And once he starts working out, he wants a quick and easy way to record his workouts to track the progress being made.

So Ryan reached out to me and asked me to create a program that he would be able to use in the gym. I decided to write the program using Java.

**Rationale for Proposed Solution**

The purpose of the program would to demystify and simplify the process of creating a workout for Ryan and allow him to not waste time debating which exercises to do in the weight room. It would also allow him to record exercises performed and workouts done with just a click of a button, again saving him a lot of time and providing him efficient way to track his progress. The third feature is that it would provide some sort of way to view his stats and the progress that he’s made over time, such as greater weight, more repetitions, or more sets.

Java will be used for this program since it’s platform-independent and therefore can be used by Mac, Windows, and other OS-users.

**Success Criteria**

Basic Functions

1. Generate daily/weekly workout routine based on user preferences
   1. Start screen asks what type/which muscles the user would like to workout
   2. Ask how many days the user can devote to working out every day
   3. Ask how long the user can devote to each workout
   4. Asks if the user has access to a full gym or no equipment
   5. Ask user’s fitness level
   6. Display workout routine(s) based on user number of days and user preferences
2. Log workouts/personal progress
   1. Allow user to input:
      1. Date
      2. Exercise performed
      3. Time Spent/Weight Used
   2. Suggest exercises based on the exercises the user has performed
   3. Allow user to track weight/height
3. Display Workout History
   1. Display number of days/time spent working out per month
      1. Milestones for certain number of days in a row worked out?
   2. Display graph for each exercised performed and weight used/time spent
   3. Display graph of user’s weight/height over time
   4. Export as a PDF

Word Count: 431