

Necati Berk Özgür
21785229

BBM104 Programming Assignment – 2 Report

Problem:

Programming Assignment – 2 was made to calculate daily calorie intake and outgoings for a person with predefined age, weight, height and daily calorie input and output, and the result relative to daily calorie need of this person.

Daily calorie need is calculated by:

$66 + 13.75 * \text{Weight} + 5 * \text{Height} - 6.8 * \text{Age}$. For men.
 $665 + 9.6 * \text{Weight} + 1.7 * \text{Height} - 4.7 * \text{Age}$. For women.

Calculations mentioned above are made by the informations supplied by files “food.txt”, “sport.txt” and “command.txt”.

After reading of all files, a command file is being started to read.

Solution:

Problem can be solved by a step by step approach which starts from the first thing to do: loading of people. After loading of people, sports and foods(i.e. calorie intake and outgoings) can also be loaded. Since we have all the information needed, we can proceed to tasks given.

Data Structure:

In this Assignment, we only used primitive data types like *int*, *double*, and *string*.

We also used Class structure to obtain a clear and readable work.

Code:

We used simple java libraries such as **.io* to read and write files

First, with the class “People”, we are assigning the attributes of a person and the methods needed to assign values to these attributes from the .txt file given. Also we assigned methods to calculate daily calorie needs and monitor these values.

In the class “Sports”, and, “Food” we assign values from text file, as well.

We store these values in the arrays in the types of concerned data.

In the class “Cmdrun” (which stands for “run commands”) we are taking commands from text file and processing these files. We also create a file named “monitoring.txt” to write out the results of these commands.

Method in this class is static to reach easily from Main class. Also running process takes four arguments to use (food, sports, people, commands) to use their attributes.

Algorithm:

After defining all the proper Classes and methods, we have a straightforward algorithm which leads us to finish. Since we store the necessary information in arrays and arrays are also classes in Java language, we can change and process the values in every Class we need. So, we just need to connect the methods properly. This connection is established in Main.java.

After all work is done, we store the results in a txt file and finish the work.