

Quiz 2

Subject : Introduction to Java

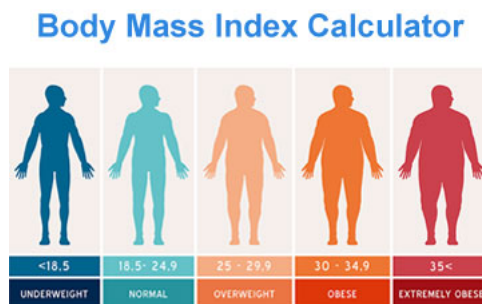
Advisor : RA. Bahar GEZİCİ

Due Date : 01.04.2019 23:59

Problem

Write an object oriented program that allows users to manage the members of HU Fitness Center. The program should store all members information (i.e. memberid, name, surname, height, weight, etc.).

Body Mass Index (BMI) is a measure of body fat based on height and weight. BMI is a simple calculation using a persons height and weight. The formula is $BMI = \frac{kg}{m^2}$ where kg is a persons weight in kilograms and m^2 is their height in metres squared.



Requirements

Create a **Member** class with:

- Several attributes: memberid, name, surname, height, weight etc.
- One constructor method which receives all parameters
- Get / Set methods
- Display method
- BMI method (calculates Body Mass Index of the member)
- WeightStatus method (returns the weight status of the member by calling BMI method)

If we want to calculate BMI, following equation is used.

Body Mass Index Calculation Formula:

$$\text{Body Mass Index} = \frac{\text{Weight (in kg)}}{\text{Height}^2 \text{ (in m)}}$$

Create a **SportCenter** class with:

- Several attributes: name of the sport center, Member[] members, count, etc.
- Length of Member[] list is limited by 10.
- One constructor
- addMember(Member m) method
- search(String name, String surname) method
- printAllMembers() method

Write a **main method** that

- displays menu
- According to the user selection, the program should take parameters from the user and it should call related methods.

The menu of the program should be like this;

```
1-Add a new member
2-Display all members
3-Search
4-Exit
Enter your choose|
```

(**search** a person according to name & surname and get his/her weight-status)

Sample output of program:

```
1-Add a new member
2-Display all members
3-Search
4-Exit
Enter your choose
1
Enter name
bahar
Enter surname
gezici
Enter weight
58
Enter height
1.69

1-Add a new member
2-Display all members
3-Search
4-Exit
Enter your choose
2
Id:0 Name:bahar Surame:gezici Weight:58.0 Height:1.69

1-Add a new member
2-Display all members
3-Search
4-Exit
Enter your choose
3
Enter name
bahar
Enter surname
gezici
Normal

1-Add a new member
2-Display all members
3-Search
4-Exit
Enter your choose
```

Notes

- Do not miss the submission deadline.
- Save all your work until the quiz is graded.
- You can ask your questions via Piazza and you are supposed to be aware of everything discussed on Piazza.
- You must submit your work with the file hierarchy as stated below:

```
→ src
  - Main.java
  - *.java
```