



ADNAN MENDERES UNIVERSITY

CSE 203 Object-Oriented Programming

Lab 04

- You should submit **ONLY solutions of Homework**. Submit **whole java project file in zipped format** and named project file as *studentNo_NameSurname_AssignmentX*. X is the number of Lab, for this lab: Assignment4.
- Do your homeworks in **ECLIPSE IDE**.
- Do not use Turkish Characters(ç,ğ,ı,ö,ş,ü) for naming project, methods, classes.
- Late submissions are not allowed.
- You should do homework **YOURSELF**. Group working is not allowed.
- Copy homework will be evaluated as 0.
- **DO NOT upload a screenshot or something else.**
- Use Google Classroom for your questions. Do not send private messages.

HOMEWORK

1- Design a class named **BMI** that contains:

- A private **String** data field named **name** that stores name of person
- A private **int** data field named **age** that stores age of person.
- A private **double** data field named **weight** in pounds for person.
- A private **double** data field named **height** in inches for person.
- A public **static final double** data field named **KILOGRAMS_PER_POUND** and its value: 0.45359237 (constant value).
- A public **static final double** data field named **KILOGRAMS_PER_INCH** and its value: 0.0254 (constant value).
- A **no argument constructor** (constructor with no parameters) that creates a BMI. Assign default values to data fields in the constructor. The default values for name, age, weight and height fields are respectively: "John Black", 25, 100 and 50.
- A second constructor that creates a BMI with the specified **name**, **weight** and **height (default age is 20)**.
- A third constructor that creates a BMI with the specified **name**, **age**, **weight** and **height**.
- The accessor (getter) and mutator (setter) methods for **name**, **age**, **weight** and **height**.
- A method named **getBMI()** that returns the BMI.(You may use Math.round() for returned value.)
- A method named **getStatus()** that returns the BMI status (e.g. normal, overweight, etc.)
- Note that one pound is 0.45359237 kilograms and one inch is 0.0254 meters.
- Do not use "**this**" keyword in the implementation of homework.

2- Write a test class named as **BMItest**.

- Do not use "**this**" keyword in the implementation of homework.

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- In the class, create a BMI object using no argument constructor.
- Create a BMI object with a name of Sara King, a weight of 215 and a height of 70.
- Create a BMI object with a name of Kim Young, an age of 18, a weight of 145 and a height of 70.
- Using getName(), getBMI(), getStatus() methods for each object, print following outputs:

```
The BMI for John Black is 28.12 Overweight  
The BMI for Sara King is 30.85 Obese  
The BMI for Kim Young is 14.35 Underweight
```