

Assignment 1

In the package *labs12.assignment1*, create the *Person* class, which can be serialized and has:

- Private attribute *name*.
- Private attribute *surname*.
- Appropriate get and set methods for these attributes.

In the same package, create the *Group* class with:

- Private attribute *members* that represents a list of objects of the *Person* class; the list should be initialized right away.
- A public method that receives an object of the class *Person*, and adds it to the list.
- A public method that writes (serializes) all persons from the group (i.e., elements of the *members* list) to the file "group.ser".
- A public method which reads (de-serializes) all persons from the file "group.ser", and adds them to the *members* list; before adding persons from the file, the list should be cleared.
- A public method that prints the group's members to the console.

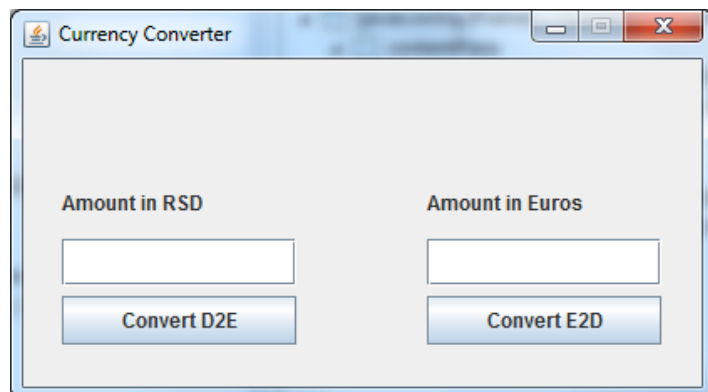
In the *labs12.assignment1.test* package, create the *TestGroup* class. In the main method of this class, create an object of the class *Group* and call its methods.

Assignment 2

In the *labs12.assignment2.business_logic* package, create the *CurrencyConverter* class with:

- public static method that converts the given amount of dinars into euros (1EUR = 120RSD). The amount in dinars is the method's input parameter; the converted value is its output.
- public static method that converts the given amount of euros into dinars. The amount in euros is the method's input parameter; the converted value is its output.

In the *labs12.assignment2.gui*, create the *ConverterGUI* class as shown on the picture below. When a user clicks the Convert D2E button, the amount in dinars from the text field on the left should be converted to euros, and shown in the text field on the right. When a user clicks Convert E2D, the amount in euros from the text field on the right should be converted to dinars, and shown in the text field on the left.



Assignment 3

(students do on their own)

In the *labs12.assignment3.business_logic* package, create the public class *BMI Calculator* with:

- public static method *calculateBMI* that gets weight and height of a person as its input arguments (real numbers); the method calculates and returns Body Mass Index (BMI) according to the following formula:
$$\text{BMI} = \text{weight (kg)} / [\text{height(m)}]^2$$

In the *labs12.assignment3.gui* package, create the *BMI Calculator GUI* class that represents graphical interface as shown on the picture below. When the user enters his/her height and weight, and clicks the button, the BMI value should be shown in the BMI text field.

