

Lab exercises 7

Exercise 1

Create public interface **ATMInterface** with the following methods:

- Public method *depositMoney* with no return value, and the money to be deposited as its input parameter (e.g., 123.45 RSD)
- Public method *withdrawMoney* with no return value, and the money to be withdrawn as its input parameter (e.g., 123.45 RSD)

Create public class **ATM** that implements the *ATMInterface* and has:

- Private attribute *balance* that represents the current amount of money in the ATM machine; the initial balance is 5000.0 RSD
- Implementation of the *depositMoney* method; this method deposits money in the ATM, that is, adds the input amount to the current balance; this is done only if the input amount is greater than zero; otherwise, the method prints an error message to the screen.
- Implementation of the *withdrawMoney* method; this method withdraws money from the ATM, that is, subtracts the given amount from the current balance; this is done only if the given amount is greater than zero and if there is enough money in the ATM machine; otherwise, the method prints an error message to the screen.
- Public method *printBalance*, which prints the current amount of money in the ATM machine.

Create the **TestATM** class. In the *main* method of this class, create an object of the *ATM* class, but represent it using a variable of the *ATMInterface* type; call the methods of this object. In addition, create one variable of the *ATM* type and assign to it the previously created ATM object; call the same methods but through this new variable.

Exercise 2

Create the **Person** class in the **people** package; the class should have:

- Private attribute *name*; the initial value of this attribute is "N".
- Private attribute *surname*; the initial value of this attribute is "N".
- *Get* and *set* methods for the two attributes; these methods are public.
- Redefined *toString* method of the class *Object*; this method should return a string consisting of the name and surname of the given person
- Redefined method *equals* of the class *Object*; the method returns true if both name and surname of the compared *Person* objects are the same; otherwise, it returns false.

Create the **TestPerson** class in the **test** package; test package is a sub-package of the people package. In the *main* method of the *TestPerson* class, create two objects of the type *Person*; assign name "John" and surname "Smith" to both persons, and check if they are equal; finally, print the name of the first person.