

Exercise #1: Write a class with the name SimpleCalculator.

The class needs two fields (instance variables), firstNumber and secondNumber both of type double.

Write the following methods (instance methods):

- ✓ Method named getFirstNumber, it needs to return the value of firstNumber field.
- ✓ Method named getSecondNumber, it needs to return the value of secondNumber field.
- ✓ Method named setFirstNumber, it needs to set the value of the firstNumber field.
- ✓ Method named setSecondNumber, it needs to set the value of the secondNumberfield.
- ✓ Method named getAdditionResult, it needs to return the result of adding the field values of firstNumber and secondNumber.
- ✓ Method named getSubtractionResult, it needs to return the result of subtracting the field values of secondNumber from the firstNumber.
- ✓ Method named getMultiplicationResult, it needs to return the result of multiplying the field values of firstNumber and secondNumber.
- ✓ Method named getDivisionResult without any parameters it needs to return the result of dividing the field values of firstNumber by the secondNumber. In case the value of secondNumber is 0 then return 0.

TEST CODE:

```
SimpleCalculator calculator = new SimpleCalculator();
calculator.setFirstNumber(5.0);
calculator.setSecondNumber(4);
System.out.println("add= " + calculator.getAdditionResult());
System.out.println("subtract= " + calculator.getSubtractionResult());
calculator.setFirstNumber(5.25);
calculator.setSecondNumber(0);
System.out.println("multiply= " + calculator.getMultiplicationResult());
System.out.println("divide= " + calculator.getDivisionResult());
```

OUTPUT

```
add= 9.0
subtract= 1.0
multiply= 0.0
divide= 0.0
```

Exercise #2: Write a class with the name Person. The class needs three fields (instance variables) with the names firstName, lastName of type String and age of type int.

Write the following methods (instance methods):

- *Method named getFirstName, it needs to return the value of the firstName field.
- *Method named getLastName, it needs to return the value of the lastName field.
- *Method named getAge, it needs to return the value of the age field.
- *Method named setFirstName, it needs to set the value of the firstName field.
- *Method named setLastName, it needs to set the value of the lastName field.
- *Method named setAge, it needs to set the value of the age field. If the parameter is less than 0 or greater than 100, it needs to set the age field value to 0.
- *Method named isTeen, it needs to return true if the value of the age field is greater than 12 and less than 20, otherwise, return false.
- *Method named getFullName, it needs to return the full name of the person.
 - *In case both firstName and lastName fields are empty, Strings return an empty String.
 - *In case lastName is an empty String, return firstName.
 - *In case firstName is an empty String, return lastName.

To check if s String is empty, use the method isEmpty from the String class. For example, firstName.isEmpty() returns true if the String is empty or in other words, when the String does not contain any characters.

TEST EXAMPLE

TEST CODE:

```
Person person = new Person();
person.setFirstName("");
person.setLastName("");
person.setAge(10);
System.out.println("fullName= " + person.getFullName());
System.out.println("teen= " + person.isTeen());
person.setFirstName("Yaman");
person.setAge(18);
System.out.println("fullName= " + person.getFullName());
System.out.println("teen= " + person.isTeen());
person.setLastName("Alashqar");
System.out.println("fullName= " + person.getFullName());
```

OUTPUT

```
fullName=
teen= false
fullName= Yaman
teen= true
fullName= Yaman Alashqar
```