Object Oriented Software Development Lab

ATTENTION! Please, register for the Moodle course!

MoodleFHO -> All courses -> E+I -> Courses L-Goryaynova -> CME Object Oriented Software Development WS 2018/19

Start Eclipse Development Environment:

Eclipse Configuration is available under JVM – OOSD WS2018/19. You can start the Eclipse Development Environment directly from that location. Icon to start Eclipse you can find on the desktop. It can take some time by the first time on your machine.
During the start procedure you will be asked for the workspace. Workspace – it's a location, where you will create your own programs. That's why take attention and place your workspace on the network drive, where your account has some space, normally H-drive, NOT LOCAL on C drive!!!
For those, who want to use private computer:
Be sure that your computer has at least Java Runtime installed. Otherwise download the actual version of JDK, 1.8, Eclipse should not be installed. It's enough to download Eclipse Luna from http://www.download.eclipse.com and unpack it to some folder.

Eclipse Tutorial:
http://www.vogella.com/tutorials/eclipseide.html

Java Tutorial:
http://www.vogella.com/tutorials/java.html
https://docs.oracle.com/javase/tutorial/

Some explanation:

In order to have some user input in your first Java program use following operation of JOptionPane:

```
String input = JOptionPane.showInputDialog(null, "Please type something in: ");
```

Normal output is of type String. If you need to convert user input in some numbers use following examples:

```
int i = Integer.parseInt(input);
double d = Double.parseDouble(input);
```

Use for output print function to the console, f. e.:

```
System.out.println(input);
```

Exercise 1 (19 points):

1. Implement the Java program which reads 2 numbers given by user and calculates the sum of those 2 numbers. Print the result of calculation at the console. (1 point)
2. Implement the Java program which reads 2 numbers given by user and gives to the console out which of them is greater then the other. (1 point)
3. Following loop is given:

```
int number = 20;
while (number > 5) {
	System.out.println(number);
	number = number - 1;
}
```

Please rewrite this loop in one do-while and in one for-loop. (2 points)

4. Implement the Java program which prints all numbers up to 100 dividable by 7 (1 point)
5. Implement the Java program which calculate the sum of the given integer array and prints the result out in the console. (1 point)
6. Write the program for the meal choice. Start it like this:

```
System.out.println("Please choose your meal!");
System.out.println("a: Schnitzel with Pommes and Salad");
System.out.println("b: Kaesespaetzle with Salad");
System.out.println("c: Balls from vegetables");
```

Then implement the action with user in order to choose some meal from above. Use JOptionPane-call for it. Further implement the reaction for the choice: “You selected …” (2 points)

7. Implement the Java program which checks whether the year is a leap year or not (3 points)
8. Implement the Java program that checks for a character whether it is a vocal or consonant (switch-case) (2 points)
9. Implement the Java program which sorts an array of numbers (4 points)
10. Implement a program which calculates the balance of an account for the next hundred years (interest rate: 1.5% in a year). (1 point)
11. implement a program which calculates the square numbers from 1 to 1000 (square numbers: 1,4,9,…,1000000) (1 point)

Upload

Once your program works correctly, please pack your source code (only Java-files) and upload it to Moodle (exercise1 upload).