Programming Lanuguages 2
Lesson 1

Information about the course

By taking the course in neptun the students accept all rules and regulations of the University and the course. The rules of the University is available online on the page of the University and the rules of the course are written below and available online on the page of the course.

Time of classes:

Thu. 10:00-12:00 IK-105 - Computer Science Engineering BSc
Tue. 14:00-16:00 IK-205 - Computer Science Engineering Bsc

Criteria to pass course (new Computer Science Engineering BSc*)*

- Students must not miss more than 3 classes in the semester
- Students must not late more than 20 minutes from classes. In the opposite case the student is registered as being absent from the class (However (s)he is still allowed to stay in the class).
- There will be three assessments during the semester, one theoretical and two practical tests. One of them will take place at half time of the semester, the other two at the end of the semester. Each of these tests is successful only if at least 50% is achieved. Grading is based on the average of the results according to the following table:
  - fail (1): if any of the three tests is failed (i.e., the result is less than 50%),
  - pass (2): if average is between 50% and 69%,
  - satisfactory (3): if average is between 70% and 79%,
  - good (4): if average is between 80% and 89%,
  - excellent (5): if average is at least 90%.
- There will be a retake test at the beginning of the exam period. Students can take the retake test in case they fail a regular test or they want a better grade. The retake test will consist of a theoretical and a practical part, and the grading is again according to the table above. If the result of any part of the retake test is worse than that of the corresponding regular test, the better result will be considered.

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Your task is to create your first Java application in NetBeans.

1. Create a new ***project*** in NetBeans the name of it should be HelloProject, the ***package*** name is helloproject.
   (File → New Project → Java / Java Application → Create main class)

2. In the ***main method*** write a statement that prints out „Hello world!”.
   (`System.out.println()`)

3. Modify the ***main method*** so that after printing out „Hello world” it prints out the natural numbers from 0 to 100.
   (`for (___;___;___)`
   Note that in Java it is allowed to declare the loop variable inside the head of the for loop)

4. In the main ***class*** create a ***static method*** that can print out numbers between two limiting values (including them). The first ***parameter*** is the starting number and the second is the last one. The name of the method should be `printNumbersBetween( ___ ).`

5. Modify the main method so that it does the same as in the previous case, but it contains only two statements.

6. Modify the `printNumbersBetween( ___ )` method so that if the first number is smaller than the second it has the same functionality as before, but in the opposite case it prints out the numbers in decreasing order.

7. Alter the main method so that it prints out „Hello world”, it prints the natural numbers from 0 to 100 and after that it prints the natural number from 100 to 0 as well.

8. ***Overload*** the `printNumbersBetween( ___ )` method so that is has a thrird int parameter named step. This tells to the method what is the step to be applied when it is counting between the limuits.

9. Modify the main method so that when it prints the numbers from 100 to 0 it prints out only the even numbers.

10. Modify the main class so that when it prints the numbers from 0 to 100 it prints out only the odd numbers.