

JAVA PROGRAMMING – FINAL ASSIGNMENT 2024-25

Java Programming ends with no exam, but with practical Final Assignment. The FA is a small project in Java, with three level of difficulty. You are to choose just one.

Level A: most challenging, but you can score 5.0 grade.

Level B: mediocre. The maximum grade is 4.0.

Level C: basic (just pass...). The maximum grade is 3.0.

The code should be send to me in an email (see below). **Deadline is 31 December.**

Final Assignment projects (choose only one!):

Level A: Create class representing Points in 3D space. Create class representing cubes initiated by two points on opposite vertices. Implement method calculating total area of the cube. Implement methods for cube movement in space and rotation around the center.

Level B: Create a program that implements the Singleton design pattern. The task is to manage application settings (e.g., brightness, volume, language). These settings should be available from a single, globally accessible instance. Create a Settings class that: contains private fields to store values: brightness (int), volume (int), and language (String). Implements the Singleton pattern, i.e., a private constructor and a getInstance() method to access the single instance.

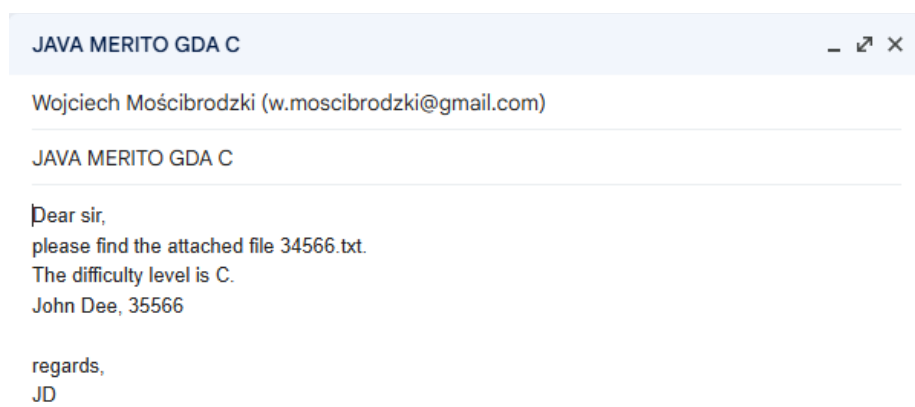
Level C: implement a class with an array of 10 random integers. Implement the methods for presenting the class in a console. Implement methods: sort (implement bubble sort), reverse (change the order), randomize (generate random values).

How to deliver:

Write and email to **w.moscibrodzki@gmail.com**. The subject should be: **JAVA MERITO GDA [X]** where [X] is the level of difficulty (exactly this, no more, no less!). So, for instance, the subject could be **JAVA MERITO GDA B**.

The code should be attached to email as a text file named with your Student ID, e. g. 34556.txt. In the mail body you must specify your first name, surname and Student ID.

So, the email should look like:



Students who asked for a grade assignment on basis on different courses/professional achievements please send me a reminder note with the subject as described above.