Introduction to Java for C++ Programmers
JAC 444
Assignment 01

Please read the following guidelines very carefully before answering any questions:

- Please make sure to read all the questions and guidelines very carefully before asking any questions.
- You will at least define a class with the main method for each question.
- You must keep the class name requested in each question.
- You must hold the naming conventions requested in this document and each question.
- All deliverables are defined at the end of this document. You must upload them as requested.

*It will be up to a **20%** mark deduction if you do not follow the abovementioned guidelines.*

1) (Class Name: *SmallestFactors*, Java File Name: *SmallestFactors.java*)
Write a program that reads a positive integer and displays all its smallest factors in decreasing order. For example, if the input integer is 120, the output should be as follows: 5, 3, 2, 2, 2. Here is a sample run: [30 Points]

```
Enter a positive integer: 120
5, 3, 2, 2, 2
```

2) (Class Name: *MySorting*, Java File Name: *MySorting.java*)
Write a method with the following header to display three numbers in increasing order:

```
public static void displaySortedNumbers(double num1, double num2, double num3)
```

In the main method, write a testing code that prompts the user to enter three numbers and invokes the method to display them in increasing order. [30 Points]

3) (Class Name: *Palindrome*, Java File Name: *Palindrome.java*)
Write a program that prompts the user to enter an integer and determines whether it is a palindrome integer. An integer is a palindrome if it reads the same from right to left and from left to right. A negative integer is treated the same as a positive integer. Here are a few sample runs of this program: [40 Points]

```
Enter an integer: 123
123 is not a palindrome
```

```
Enter an integer: -123
-123 is not a palindrome
```

```
Enter an integer: 121
121 is a palindrome
```

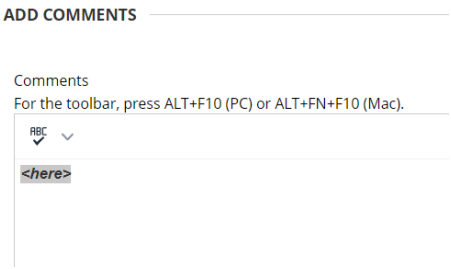
```
Enter an integer: -121
-121 is a palindrome
```

```
Enter an integer: 123321
123321 is a palindrome
```

```
Enter an integer: -123721
-123721 is not a palindrome
```

Deliverables:

A) Create an up to **15 minutes** video explaining your answers, upload it on YouTube, and put the link of your video in the "Comments" section of your assignment submission.



See "How to make a video and upload it on YouTube?" under the "Course Information" on the Blackboard.

Your video must at least contain the following content:

a. Explaining the key components of your code and how they work.
b. Showing three different runs and outputs of your code.

Note: There is no mark if you just read your code. You must explain your code, not read it.

Note: Please DO NOT upload the original video file into Blackboard.

B) You must upload all requested Java files (i.e. "*.java") as they are.

There is no mark of you submitting any compressed file (e.g. zip, RAR, etc.)

There is no mark of you submitting "*.class" files.