

CSC 220 – Lab 5

March 26, 2013

Due: Friday, March 28, 11:59pm

Objective:

Exercise variables, input, output, and loops in Java.

Task:

Write a single Java program that performs the following:

- Requests an initial Fahrenheit temperature from the user, which should be provided as an integer. It continues asking for a new integer until the value is in the range from -459 to 212. **(25 points)**
- Prints a list of temperatures in Fahrenheit, and the corresponding temperatures in Celsius. The list starts from the initial temperature provided and increases by 10 degrees of Fahrenheit for each successive pair. It stops after 20 pairs are printed. **(30 points)**
- Each pair of temperatures should appear on its own line, separated by a 'tab' character. You should use a single loop to print all temperatures, using the appropriate formula. The Celsius temperature should be printed as a real number, with two digits in the fractional part (two decimal places). **(25 points)**

Hints:

- The while and for loops look and behave exactly the same in Java as in Processing.
- Use the DecimalFormat class to limit the decimal places of your numbers.
- Verify your numbers using an online converter.

Start your program with a comment that has your name, the name of the course, and the title of the assignment **(5 points)**:

```
/** John Smith  
    CSC220-X  
    Lab 5      */
```

Continue with a comment that describes its capabilities (be specific, below is just a generic example) **(3 points)**:

```
/** This program draws a grid of squares, each of which ... blah blah... */
```

Put more comments in strategic places in your program **(2 points)**.

Indent your program **(5 points)**.

Upload your processing program on *canvas*, under the 'Lab 05' assignment. Your file should be named as follows: LastnameFirstname_Lab05.java **(5 points)**. Substitute 'Lastname' with your last name, and 'Firstname' with your first name! For example, if I submit this assignment, my file will be named as PapamichailDimitris_Lab05.java.

Note:

Try to do most of your work in class. Make sure you show me your progress at least once.

If you're not done before the end of the class, you have until the deadline to finish and upload your work to *canvas*. No extensions.