

CSC-120 – Computer Science I

Assignment 1

Due: January 29th, 2019 at 1:59pm (before class)

Part 1:

Write a Java program to solve the equations below. Declare **a**, **b**, **c** and initialize them with any values of your choice.

$$2a^2 + 4a + 29$$

$$\frac{4c + ac}{3b}$$

Part 2:

Write a program that takes two string variables **str1** and **str2** and performs the following tasks. Hint declare 2 String variables and initialize them with any values of your choice.

- Determine the length of **str3** and print it out
- Print out the numeric value of comparing **str1** and **str1**. Hint, between **a** and **b**, there are 3 characters)
- Print the first character of **str1**
- Print the last character of **str2**. Hint, you might use 2 functions, `charAt()` and `length()`
- Print the first 3 characters of **str1**
- Skip the first character of **str2** and print the rest (`substring()`).
For example, `str2 = "Hello" → ello`

Part 3:

The `System.out.print` (notice there is no `ln`) works slightly different than `System.out.println`. You are required to write a program that uses a combination of `System.out.println()`, `System.out.print()`, and escape sequences ("`\n`") to print the following output twice:

- The first time use 6 `System.out` statements
- The second time use one `System.out.print` and one `System.out.println` in any order. But use only one of each.

**This is a test
of the emergency
broadcast system**

Part 4 - Temperature Converter:

Write a Java program that converts a temperature from Fahrenheit to Celsius. The program should prompt/ask the user to enter temperature in Fahrenheit, then print the converted temperature in Celsius. Save your program in a class called TempConverter.

Below is the formula you will need:

```
double celsTemp = (fahrenTemp - 32) * (5.0/9.0);
```

Sample program:

```
Enter temperature in Fahrenheit
```

```
64
```

```
64 f in Celsius is: 17.7778
```

Remember, in order to prompt the user to enter a value we need to use Scanner. See below how to define it:

Make sure to import it the very top of the file: ***java.util.Scanner***;

```
Scanner scan = new Scanner(System.in);
```

```
/*
```

```
* scan.nextInt() → this will prompt the user to enter an integer
```

```
* scan.nextDouble() → this will prompt the user to enter a double
```

```
* scan.next() → this will prompt the user to enter String. It will only  
take the first word and skip the rest
```

```
* scan.nextLine() → this will prompt the user to enter a String that  
consists of multiple words. E.g., sentence or paragraph.
```

```
*/
```

Requirements/Instructions:

- Make sure your code is well documented and indented
- Include the below header at the top of the source file (.java)
- Use mnemonic variable identifiers/names
- Class name begins with upper case and variables with lower case
- CONSTANTS are all capitals (i.e., final variables)
- If your program compiles error or does not run as it is expected, include that in the block comment as well.

Please note, you will lose points for not adding the following comments/header to your source code file.

```
/**
 *
 * @author:      yourName
 * Assignment:   Assignment #x
 * Date:         submission date
 * Description:  briefly, describe what the program does
 * Input:       input that the program expects (if any)
 * Output:      what does the program return
 *
 * Bugs:        write here if there is any bug that
                causes the program to crash/terminate
 */
```

Email me and our TA with the email subject **CSC120 assignment1 the .java file(s) of your program and a screenshot of the console that shows the output (i.e., compiled code). *Hint, Eclipse, will store your source code (i.e., .java files) in the project directory/src.***