**CST-105: Exercise 2**

The following exercise assesses your ability to do the following:

* Document a simple algorithmic process
* Get data from the keyboard
* Utilize Java arithmetic operators
* Output result data in a specified format
* Select appropriate variable types for a calculation
* Demonstrate and explain your work

1. Design a flowchart for the following program:

Write a program that prompts the user to enter a temperature in degrees Fahrenheit and converts the temperature to degrees Celsius. Then, prompt the user to enter a temperature in Celsius and convert the temperature to degrees Fahrenheit. The formulas needed are **C = (F – 32) \* 5/9** and **F = 9/5\*C + 32.**

Here is a sample run of the program with user input shown in red.  
  
Enter a Fahrenheit temperature: 100  
100F is equivalent to 37.777…C  
Enter a Celsius temperature: 100  
100C is equivalent to 212F

1. Write a Java program that implements your solution. Use the logic in your flowchart as a guide.
2. Test your results for each program carefully. Your programs should compute the correct result for a variety of inputs, not just the ones shown here.
3. Create a video in which you explain your variable choices and any calculations in your programs. Execute (run) both programs in your video. Address any challenges encountered and new information learned while completing the assignment. Your video should not exceed 5 minutes.
4. Submit the following items in the digital classroom:
   1. Your flowchart (a .png file)
   2. Java program source code (the .java file you wrote)
   3. A link to your video