

# CSCI 201 – Computer Science 1

## Introduction to classes.

**Due on Tuesday March 26**

**Objectives:** *Employ the object technology provided by C++ to embed a functional (or imperative) program into a method of a class, and then invoke that method to execute the program.*

The lab assignment for this week is to convert an imperative (not having classes and objects) program into an object-oriented program. This is done by writing the original program as the `run()` method of a class, and write a small main program that creates an object of that class, and invokes the `run()` method on that object. Following the example of the object-oriented version of **colorcounter** class in the CourseFiles folder, we will rewrite the calculator program from Lab 3 as a class. (This is the simple version of the calculator, i.e., without functions.)

### Question 1.

Re-write the calculator program so that it has a function `run(istream&)`, and write a program that allows the user to specify the input source, and calls the function with the appropriate parameter.

### Question 2.

Study the process used in the lecture to change the `colorCounter` program to an object-oriented version. We have to apply the same process to the program created in Question 1. What will be placed in the `.h` and `.cpp` files? What will the main program contain?

### Question 3.

Implement the calculator program with 3 files: the header file, the body of the class, and the main program.

**What to submit.** Upload Script showing all the code files (the re-written program for Question 1, the `.h`, `.cpp` and `main()` defined in Question 2), compilation of the class, compilation of main, and tests to the Lab9 folder in Github.