CPSC 298: Introduction to C++
Interterm 2020
Programming Assignment 2: Loops, Arrays & Functions
Due: Jan 30th, 2020 11:59pm

Reading

This assignment assumes you have read Ch. 3-6 of the ZyBook.

The Assignment

By now you should all know how to compile and run C++ programs within a Linux environment, so let's keep driving home the basics of the C++ language. Your assignment is to implement the following programming projects:

Problem 1 (intarray.cpp): Write a program that will read up to ten nonnegative integers into an array called numberArray and then write the integers back to the screen (console output). For this exercise you need **not** use any functions.

Problem 2 (2darray.cpp): Write code that will fill the array a (declared below) with numbers typed in at the key- board. The numbers will be input five per line, on four lines (although your solution need not depend on how the input numbers are divided into lines).

int a[4][5];

Problem 3 (zeroboth.cpp): Implement a void function called zeroBoth that has two call-by- reference parameters, both of which are variables of type int, and sets the values of both variables to 0.

Problem 4 (salestax.cpp): Implement a function called addTax. The function addTax has two formal parameters: taxRate, which is the amount of sales tax expressed as a percent; and cost, which is the cost of an item before tax. The function returns the value (**float**) of cost so that it includes sales tax.

Problem 5 (conversion.cpp): Write a program that will read in a length in feet and inches and output the equivalent length in meters and centimeters. Use at least **three** functions: **one for user input,** one or more for calculating, and one for output(**console**). Include a loop that lets the user repeat this computation for new input values until the user says he or she wants to end the program (**user has to type exit).** There are 0.3048 meters in a foot, 100 centimeters in a meter, and 12 inches in a foot.

So your deliverables are 5 .cpp files and a README.

A README is a text file that includes your name, student id # and any references you used for the assignment (i.e. textbook, online, colleague).

Due Date

This assignment is due at 11:59pm on 1-30-2020. Submit all source code to GitHub and a link to your repository to Blackboard. Please make sure to include all the required files (i.e. README, source files).

Grading

Assignments will be graded on correctness, adherence to style, and the inclusion of meaningful comments.