CSC 112 - Assignment #1

Purpose and Goals

The purpose of this lab is to expose you to the programming environments that will be used in the course, introduce you to the C++ programming language, and provide an opportunity to refresh yourself on basic programming ideas.

By the end of the lab, you will have:

- Experience with the zyLab and CLion programming environments
- Written 3 programs in C++, making use of input/output, variables, arithmetic and relational operators, arrays, and random number generation, and following the desired style guidelines
- Dealt with special case programming scenarios where a solution needs to be arrived at differently due to some property of the data provided

Instructions

1. Read the syllabus, available in Sakai.
2. Watch the zyBook Introduction video. The link is in Resources on Sakai.
3. Start clion and play. Write down any questions you have about the software. It should be very similar to IntelliJ and PyCharm, software you likely have used at WFU before for writing programs in Java or Python.
4. Review the C++ style guide. The link is also in Resources on Sakai.
5. **Read Chapter 1 in the zyBook and perform all exercises, etc.** You may need to read ahead in other chapters for additional C++ syntax for this lab as well.
6. In the zyBook, go to Chapter 14 (WFU Labs) and read the instructions for and then do Lab #1, Parts 1, 2, and 3. See below for more information before getting started. If labs are hidden, they will be released shortly.
    - The first part of the lab, Part 1, is a zyLab, meaning the work can be done all within the zyLab textbook in-line coding system, including compiling, running, and checking the program for correctness.
    - For Part 2, we'll ask that you develop a C++ `main.cpp` file using clion and then to submit the developed file to the zyLab textbook for testing.
    - For Part 3, we'll go back to just using the zyLab textbook in-line coding environment.

The lab throws you in the deep end for C++ use right off. You should have enough experience, from working with other languages and given the reading you are asked to do, to make sense of the code and to modify as requested, as the C++ instructions used primarily make use of material from Chapter 1 of the zyBook (which you should read before getting to the programming components of the lab) and material that is very related to the Java instructions for doing the same tasks.

You are welcome to get help with this, so bring questions to the lab session. However, you should work through this as much as possible on your own. In your career, you will see many changes in programming languages, systems, IDEs, etc. You will be required to learn them, and you might be the first. Being a good debugger, especially of code that is not your own, is a critical and highly valued skill.