ECCS 1611 – Programming 1

Pre-Lab 3 – Selection

**Small Group Problem Solving + Individual Coding**

One of the things that you will need to do with the MP1 assignment is to correctly calculate the sales tax. Fortunately, the Ohio Department of Taxation is here to help. Distributed with this lab assignment is their document entitled, “ST 2005-05 – Sales and Use Tax Calculation and Rounding Change Effective 01/01/2006” that explains how the calculation of sales tax is to be performed, as such calculations need “to ensure that no less than the statutory tax rate” is collected on any sale.

Discuss the following in your small group – be sure to reference ST 2005-05 as appropriate:

1. Why is tax calculation a potential problem?
2. How should the tax calculation be implemented as part of a C++ program?
3. What would be the pseudocode for a program that demonstrates our answer to question 2?
4. What would be an effective way of validating our answer to question 2?

Write, as a group, pseudocode, flowchart, or diagram for the program.

Next, **individually** write the C++ program that implements your C++ tax calculation. However, you can work together to debug and discuss implementation. Once the programs are complete, share your solutions with each other and look at the similarities and differences

Submission:

* Answers to the above questions
* Pseudocode, flowchart, or diagram for the program
* 2 .cpp files of the working C++ program
* Write a sentence or two about the similarities and differences between your two .cpp files