**BCS 450 C# Lab – Introduction and Debugging**

***Overview***

Create a project in C# using Visual Studio. Write a simple program to calculate a tip. The program should ask the user to

***Part 1 – Create the project***

Create a C# console application in Visual Studio. Name the project Lab-IntroAnDebugging.

***Part 2 – Write the program***

Write C# code calculate a tip based on a bill amount and tip percentage. The program should ask the user to enter a bill amount and a tip percentage. The program should print out the bill amount, tip percentage, and tip amount.

***Part 3 – Use the debugger***

Do each item in this section in order. It is great practice.

1. Add a breakpoint to the program somewhere after the user enters the bill amount.
2. Run the program in Debug mode.
3. Close the watch window at the bottom of the IDE.
4. Reopen the watch window at the bottom of the IDE.
5. Type in the name of each variable you used in the program into separate lines in the watch window. Check the values of each variable to make sure they are reasonable.
6. Delete all variables in the watch window.
7. Drag and drop all variables in the program from the text editor into the watch window.
8. Step through a few lines of code one at a time. The values of some variables should change (this assumes calculations were done in the lines that you stepped through).
9. Let the program run to completion.

***Part 4 – Use the debugger again***

Do each item in this section in order. It is great practice.

1. Remove the breakpoint that was added in part 3.
2. Add a CONDITIONAL breakpoint to the program somewhere after the user enters the bill amount. The program should break if the bill amount is > 100.
3. Open the watch 2 watch window. Yes there is more than one watch window.
4. Put the tip percentage in the first watch window.
5. Put the rest of the variables in the watch 2 watch window.
6. Run the program in Debug mode at least twice. Make sure you try it once with a bill amount > 100 and once with a bill amount less than 100.