Lab Exercise using different data-types

# Question 5-9 is due at the beginning of next class (no hardcopy submission, just demonstration of your code)

The objective of these exercises is to do IO using the five native data types (**int**, **double**, **char**, **bool** and **string**). Some of the problems might not have an intelligent business purpose, but all that is necessary is to for you to read from user input from the keyboard and display program output to the screen using all of the five primitive data types.

You are reminded about the coding practices that should be adhered to for this course regarding solution name, project name, identifiers and also pasting a copy of the problem at the top of your c# file.

You MUST use placeholders and where necessary format specifiers.

1. Create a program that prompts the user for her first name, middle initial and last name. The program will display the user name three times using the following three formats:   
   first name and last name  
   first name middle initial and last name  
   last name, first name and middle initial  
   For inputs Barack H Obama  
   Barack Obama  
   Barack H Obama  
   Obama, Barack H

The index in the placeholder is zero-based i.e. the first data value is 0 and the next is 1.

Because you are not doing any arithmetic on the input, it does not have to be an int.

1. Write a program that prompts the user for the number of siblings his has. The program should display a message, “I also have 4 siblings” (assuming that the user enters 4).
2. Write a program that prompts the user for two integers. The program will display the result of summing and finding the difference. (If the user enters 8 and 3, the display should be 8 + 3 = 11 and 8 – 3 = 5).

Use the **Convert.ToInt32()** method to obtain an int from an input.

1. Write a program that prompts the user for the number of siblings his has. The program should display a message, “I have 4 siblings” (assuming that the user enters 3).
2. Write a program to prompt the user to enter a single character. The program should display a message like “Your response was y”. For this question, you must use a variable of type **char**.

Use the **Convert.ToChar()** method to obtain a char from an input.

1. Write a program to ask the user about the validity of a simple statement. The program should accept the response then display the statement as well as the response. The response should be true or false. For this question, you must use a variable of type **bool**.

Use the **Convert.ToBoolean()** method to obtain a bool from an input.

1. Write a program to calculate the area of a circle. The user will enter the radius of the circle and the program will calculate and display the area according to the formula (area = 3.14 \* radius \* radius). You must accept fractions as the input. If the user enters 1.2 for the radius then the area will be 4.52. . (Use the **"F"** format-specifier for floating point values).

Use the **Convert.ToDouble()** method to obtain a double from an input.

1. Write a program to calculate and display the potential difference between the ends of a wire. The program will prompt the user for the current flowing and the resistance of the wire. (Potential difference is the product of the current and the resistance of the wire and may include a fractional part).
2. Adult ticket cost $3.75 and child ticket cost $2.25. Write a program to prompt the user for the amount of adult and child ticket that she needs. The program will display a user friendly message of the number of tickets brought as well as the total cost. (Use the **"C"** format-specifier for currency).