Mr. Bellavia

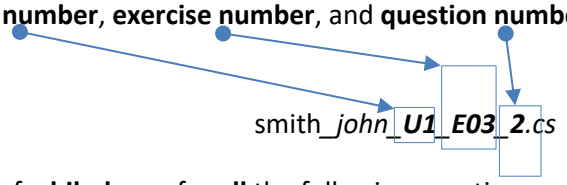
EXERCISE 01 – WHILE LOOPS

IMPORTANT: Before submission, make a copy of your **'Program.cs'** file for each question and then rename each file to the following:

File Names:

- *last_name_first name*_U3_E01_1.cs
- *last_name_first name*_U3_E01_2.cs
- *last_name_first name*_U3_E01_3.cs
- *last_name_first name*_U3_E01_4.cs
- *last_name_first name*_U3_E01_5.cs

Note: Along with last name and first name, make sure the end of the filename (i.e., before the **.cs**) has the **unit number**, **exercise number**, and **question number.** For example:



IMPORTANT: Make use of **while-loops** for **all** the following questions:

1. Output the following to the screen:

```
Hello World!
Hello World!
Hello World!
Hello World!
Hello World!
Hello World!
```

2. Write a program that asks the user for 5 integers and then calculate the average of these numbers (make sure you output message indicates the integer number currently being inputted). **Note:** This question is very similar to the example in the lesson.

3. Write a program that asks the user for a set of options like the following:

```
Please select a course:
-----------------------
1)    ICS
2)    BTT
3)    IDC
4)    BTA
-----------------------
```

Your program should ask for an integer and if none of the options have been selected, your program should be using a while-loop to ask again. Once the user has made a valid choice your program should break out of the while-loop and print the option they selected to the console.

4. Output the following patterns to the terminal using **while-loops. Note:** For each pattern, **each line is 1 iteration:**

Pattern 1:	Pattern 2:	Pattern 3:
1 2 3 4 5	2 4 6 8 10	A B C D E

5. **[THINK]** Write a program that asks the user how many numbers they wish to add together (name this variable 'count'). Using a while-loop, have the user enter all the integers they requested then output the total and average of these integers once the loop has completed.

   Hints:

   - Make use of a **counter** variable
   - Your while-loop **condition** should compare the above **counter** variable to the 'count' variable initially entered by the user.
   - Make use of an **accumulator** variable when calculating the total.

6. **[THINK]** Modify **question 2** above so that along with the average, the program outputs the largest and smallest numbers that were inputted by the user. **Hint:** You can use the following code to store the largest and smallest possible integers allowed in C#:

```
int maxInt = Int32.MinValue;
int minInt = Int32.MaxValue;
```

   Once you have these values, you can compare them to what is being inputted by the user inside your while-loop.