

CSCI 1301 – Lab 16

March 11, 2019

1 While With Complex Conditions

Consider the code we just studied:

```
1  int c;
2  string message;
3  int count;
4  bool res;
5
6  Console.WriteLine("Please, enter an integer.");
7  message = Console.ReadLine();
8  res = int.TryParse(message, out c);
9  count = 0; // The user has 3 tries: count will be 0, 1, 2, and then we default.
10 while (!res && count < 3)
11 {
12     count++;
13     if (count == 3)
14     {
15         c = 1;
16         Console.WriteLine("Using the default value 1.");
17     }
18     else
19     {
20         Console.WriteLine("The value entered was not an integer.");
21         Console.WriteLine("Please, enter an integer.");
22         message = Console.ReadLine();
23         res = int.TryParse(message, out c);
24     }
25 }
26 Console.WriteLine("The value is: " + c);
```

1. As always, start by creating a blank project, copy-and-paste that “snippet” into the `Main` method, compile it and execute it.
2. Then, copy and, comment it out, and adapt your copy so that the number of attempts (3, in this case) is stored in a variable instead of being “hard-coded” in the program. Make sure your program works as expected by changing its value to 4, 2, then back to 3.
3. Re-do the previous step, but change the program so that the number of attempts taken so far to enter a correct value will be displayed every time the user enters an incorrect value.
4. Re-do the previous step, but change the program, so that the number of *remaining attempts* is displayed.

A sample output could be:

```
Please, enter an integer (Attempts left: 3).
No!
Please, enter an integer (Attempts left: 2).
/<->/<->*/-*
```

Please, enter an integer (Attempts left: 1).
Nope.
Using the default value 1.

2 do...while Loops

Rewrite the following code using a do...while loop:

```
1 Console.WriteLine("Enter an integer between 1 and 10.");
2 int value = int.Parse(Console.ReadLine());
3 while (value < 1 || value > 10)
4 {
5     Console.WriteLine("Enter an integer between 1 and 10.");
6     value = int.Parse(Console.ReadLine());
7 }
8 Console.WriteLine("The value entered is " + value + ".");
```

Make sure what you obtained behaves exactly the same way as the code you were given.

3 do...while Loops With Complex Condition! (Optional)

Re-write the code from the first part of this lab (the one that was given, or the version you wrote, that displays the number of attempts taken) as a do...while loop. You may want to take the if statement out of the loop.