CSCI 1301 – Lab 14

February 27, 2019

1 Increment and Decrement Operators

Execute (a variation of) the code we just reviewed to make sure you understand the mechanism of the increment and decrement operators.

```
1     int a = 0, b = 0;
2     Console.WriteLine("Before changing their values:");
3     Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");
4     Console.WriteLine("Incrementing, using postfix and prefix operators:");
5     a++;
6     ++b;
7     Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");
8     Console.WriteLine("Decrementing, using postfix and prefix operators:");
9     a--;
10    --b;
11    Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");
12    Console.WriteLine("When combining decrementing and incrementing operators with other
      ↪ operations,\nit makes a difference to use postfix or prefix operators!");
13    int c = a--, d = ++b;
14    Console.WriteLine($"\ta is {a} (the decrementing took place as expected)\n\tb is {b}
      ↪ (the incrementing took place as expected)\n\tc is {c}" +
15    $"  (c got its value *before* a was decremented)\n\td is {d}  (d got its value
      ↪ *after* b was incremented)\n-----------");
```

2 First While Loops

1. Write a `while` loop that displays the integers between 1 and 100 at the screen, with a space between them.
2. Write a `while` loop that displays the "*" character 100 times at the screen.
3. Modify your previous loop, so that a new line character is displayed on the screen every time 10 "*" has been displayed on the screen. That is, your program should display on the screen:

```
**********
**********
**********
**********
**********
**********
**********
**********
**********
**********
```

3 User Input Validation

3.1 Integer Validation

Consider the code we just studied:

```
Console.WriteLine("Please enter a positive number");
int n = int.Parse(Console.ReadLine());
while (n < 0)
{
    Console.WriteLine($"You entered {n}, I asked you for a positive number. Please try
 ↪  again.");
    n = int.Parse(Console.ReadLine());
}
```

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 user will be asked to enter an integer between 0 and 100, and asked again as long as (s)he does not comply.
3. Re-do the previous step, but change the condition, so that the user has to enter an even number.

3.2 String Validation

Adapt the code above to perform string validation: ask the user to enter a string, and as long as the user does not enter "Yes" or "No", ask him/her again to enter a value.