Increment and Decrement Operators, First Loops

<https://csci-1301.github.io/about#authors>

June 12, 2021 (09:36:01 PM)

Table of Contents

# Increment and Decrement Operators

Copy and paste this code into a new Visual Studio project and execute it. Study the output carefully to make sure you understand the mechanism of the increment and decrement operators.

int a = 0, b = 0;  
Console.WriteLine("Before changing their values:");  
Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");  
Console.WriteLine("Incrementing, using postfix and prefix operators:");  
a++;  
++b;  
Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");  
Console.WriteLine("Decrementing, using postfix and prefix operators:");  
a--;  
--b;  
Console.WriteLine($"\ta is {a}\n\tb is {b}\n-----------");  
Console.WriteLine("When combining decrementing and incrementing operators"  
 + " with other operations,\nit makes a difference whether you use"  
 + " postfix or prefix operators!");  
int c = a--, d = ++b;  
Console.WriteLine($"\ta is {a} (the decrementing took place as expected)\n"  
 + $"\tb is {b} (the incrementing took place as expected)\n"  
 + $"\tc is {c} (c got its value \*before\* a was decremented)\n"   
 + $"\td is {d} (d got its value \*after\* b was incremented)\n"  
 + $"-----------");

# First While Loops

1. Write a while loop that displays the integers between and on the screen, with a space between them.
2. Write a while loop that displays the \* (asterisk) character 100 times on the screen.
3. Modify your previous loop, so that a new line character is displayed on the screen every time 10 asterisks have been displayed on the screen. That is, your program should display this 10 x 10 grid on the screen:

\* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*  
 \* \* \* \* \* \* \* \* \* \*