2025-03-19

# Strings (Solutions)

## Warm-up Exercises

1. Assuming that myLastName and myFirstName are two string variables that have been initialized, write a statement that concatenates them, with a space and a comma in-between, and assign the resulting string to a variable named fullName. For instance, if the value of myLastName is “Holbertonand”, and the value of myFirstName is “Betty”, then the value of fullName after your operation should be [“Holbertonand, Betty”](https://en.wikipedia.org/wiki/Betty_Holberton).

* Solution
* string fullName = $"{myLastName}, {myFirstName}";

## Questions

1. What is string interpolation?

* Solution
* String interpolation is the use of specialized syntax ($ and curly braces) to include variables within a string.

1. What is the difference, if any, between the WriteLine and Write methods?

* Solution
* The WriteLine method appends a newline character to the end of the argument passed into it while Write does not.

1. Assume we have a variable whose name is myVariable, whose type is string, and whose value is “My message”. What would be displayed on the screen by the following statement?

* Console.WriteLine($"Here is my variable: {myVariable}");
* Solution
* “Here is my variable: My message”

1. Is the name myVariable the same as myvariable? If not, why?

* Solution
* The variable names myVariable and myvariable are different because variable names are case sensitive.

## Problems

1. Write down, on a piece of paper, a program that:
   1. Declares a string variable named userName.
   2. Displays on the screen: Please, enter your name, followed by the enter key:.
   3. Reads a string value from the keyboard and assigns the value to the userName variable.
   4. Declares an int variable named number.
   5. Displays on the screen: Please, enter your area code, followed by the enter key:.
   6. Reads an int value from the keyboard and assigns the value to the number variable.
   7. Declares a string variable named id and initializes it with the string referenced by the userName variable, followed by the number entered by the user. (Note: you can cocatenate a string and an int using the + sign.)
   8. Displays on the screen: Your id is, followed by the content of the id variable.

* Here is an example of execution, where the user input is underlined, and hitting “enter” is represented by ↵:
* Please, enter your name, followed by enter:  
  C͟l͟é͟m͟e͟n͟t͟ ↵  
  Please, enter your area code, followed by enter:  
  8͟2͟8͟ ↵  
  Your ID is Clément828  
  Press any key to continue . . .
* Solution
* string userName;  
    
   Console.WriteLine("Please enter your name, followed by enter.");  
   userName = Console.ReadLine();  
    
   int number;  
    
   Console.WriteLine("Please enter your area code, followed by enter.");  
   number = int.Parse(Console.ReadLine());  
    
   string id = userName + number;  
    
   Console.WriteLine("Your ID is " + id);

1. Write a series of statements that:
   1. Declare a string variable named favoriteColor
   2. Display on the screen a message asking the user his or her favorite color
   3. Read the value entered by the user and store it in the favoriteColor variable.

* You can combine some of the statements if you want, but do not display on the screen any information that was not explicitly asked.
* Solution
* string favoriteColor;  
    
   Console.Write("Please enter your favorite color: ");  
   favoriteColor = Console.ReadLine();