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# Simple I/O (Solutions)

## Questions

1. The method ReadLine() reads a whole line and interprets its content as an integer (int) type.
   * Yes
   * No
2. A \_\_\_\_\_ can be used in repetition structures (such as loops) to indicate the end of data entry.
   * Property
   * using directive
   * Sentinel value
   * None of the above.
3. In C#, what is the “escape character”? Why is it useful?

* Solution
* The escape character is \. It is useful for telling the compiler that the following character should be interpreted as something other than text, such as a newline in the case of \n.

1. In C#, what is the name of the method used to read input from the user?

* Solution
* Console.ReadLine()

## Problems

1. Write a program that performs the following steps:
   1. Asks user to enter any number between 1 and 100
   2. Multiplies the number user enters by 2
   3. Displays the result of the calculation on the screen

* Here is an example of execution, where the user input is underlined, and hitting “enter” is represented by ↵:
* Hello user!  
    
  Please enter a number between 1 and 100: 3͟2͟↵  
    
  32 multiplied by 2 is 64!
* Run your program a few times and use different numbers in range 1-100 to verify the program works as intended.
* Solution
* Console.WriteLine("Hello user!");  
   Console.Write("Please enter a number between 1 and 100: ");  
   double input = double.Parse(Console.ReadLine());  
   Console.WriteLine($"{input} multiplied by 2 is {input \* 2}!");

1. Write statements that prompt the user to enter their favorite food and store the input value in a variable.

* Solution
* Console.Write("Enter your favorite food:");  
   string uInput = Console.ReadLine();

1. Write statements that prompt the user to enter 3 numbers, and then return their average.

* Solution
* decimal[] nums = new decimal[3];  
   Console.WriteLine("Please enter 3 numbers.");  
    
   for (int i = 1; i < 4; i++)  
   {  
   Console.Write($"\n{i}: ");  
   nums[i] = Console.ReadLine();  
   }  
   Console.WriteLine($"\n"The average of these numbers is: {(nums[0] + nums[1] + nums[2]) / 3});

1. Write statements that prompt the user to enter a positive number, and then output all the odd numbers between 0 and that number.​

* Solution
* Console.Write("Please enter a positive number: ");  
   int uInput = int.Parse(Console.ReadLine());  
    
   for (int i = 0; i <= uInput; i++)  
   {  
   if (i % 2 == 1)  
   Console.Write(i + " ");  
   }

1. Write a series of statements that:
   1. Declare an int variable named userAge,
   2. Display on the screen a message asking the user to enter his or her age,
   3. Read the value entered by the user and store it in the userAge variable.

* You can add statement(s) performing intermediate steps if you want.
* Solution
* int userAge;  
   Console.Write("Please enter your age: ");  
   userAge = int.Parse(Console.ReadLine());