[0310] C#: The Basics, Input, Output

Anatomy of a Simple C# Program

```
using System;

namespace LWTech.ChipAnderson.HelloWorldApp
{
   class Program
   {
      static void Main(string[] args)
      {
         Console.WriteLine("Hello World!");

         Console.ReadLine();
      }
   }
}
```

Notes

- C# is case-sensitive
- namespace ensure each program has a unique "fullname"
- Console programs always contain a Main() method
    - Must be static
    - Can return a void or an int (for error codes)
    - Can take an optional array of strings as a parameter
- To ensure that the terminal window stays open, always include "Console.ReadLine();" at the bottom of every Main() method.

System.Environment

- Provides information about the runtime environment
- ShowEnvironmentDetails()
- Properties
    - ExitCode
    - MachineName

- UserName
- Version

NOTE: Also Environment.TickCount which is very useful for timing programs!

System.Console

- The "console" is the keyboard and the text display window for your computer. For console applications, all input and output happens via the Console.
- Console.WriteLine() - outputs strings onto the program's window
  - Can use "{0}", "{1}", etc. in strings for variables
  - Can use "{0:d}", "{1:f2}", etc. for formatted variables
    - Side Note: string.Format() can format strings in this same way
- Console.ReadLine() - returns a line of input from the user as a string
- Additional Console Properties
  - Title
  - BackgroundColor
  - ForegroundColor

Try it yourself!

Write a C# program that asks for the user's name and the prints out "Hello " followed by the user's name followed by an exclamation point.
After you have tried it for yourself, click on this link to see one possible solution: **[310a] Try it yourself: Answer (https://lwtech.instructure.com/courses/1841516/pages/310a-try-it-yourself-answer)**