

Hello World!

This lesson acquaints you with the Hello World program and gives a basic introduction to C#

WE'LL COVER THE FOLLOWING ^

- A simple Hello World Program
 - The “using” Directive
 - Class Definition
 - Body of the Main Method

A simple Hello World Program



Hello World!

There are basic elements that all C# executable programs have, and that's what we'll concentrate on for this first lesson, starting off with a simple C# program.

Warning: C# is **case-sensitive**

Below is a very simple C# application.

It is a console application that

- asks the user to enter his/her **name**
- prints out the *message* "Hello, " followed by the *name* that the person entered

```
// Namespace Declaration
using System;

// Program start class
class HelloWorld
{
    // Main begins program execution.
    static void Main()
    {
        // Write to console
        Console.WriteLine("Hello, World!");
    }
}
```



The program has **four** *primary* elements:

- a *namespace* declaration
- a *class*
- the **Main** method
- a program *statement*

Note: Since **C#** is *case-sensitive* the word **Main** is not the same as its *lowercase* spelling, **main**.

The “using” Directive

Line 2 of the above program is using a

- **Directive**
 - It declares that the *current* file can use members of the indicated *namespace* without using the member’s fully qualified name.

Without this directive, all references to the identifier **Console** would have to be preceded by **System** and a period, because **Console** is a member of the **System** *namespace*.

Class Definition

The class *declaration*, class **HelloWorld**, contains

- Data

- *Method* definitions that your program uses to execute
- Single static method named `Main`
- The **method** is the entry point of the application
- The `Main` method may be declared with a parameter to accept an *array* of *strings* and may return an *integer* value.
- The *array* of *strings* passed to the method represent the *command line* arguments used when executing the program
 - This program doesn't use *command line* arguments, and so the method wasn't declared to accept **any** arguments

Body of the Main Method

- The `Main` method specifies its behavior with the `Console.WriteLine(...)` statement
- The `Console` is a *class* in the `System`
- `namespace.WriteLine(...)` is a method in the `Console` class
- We use the “.”, dot, operator to separate subordinate program elements.

Note that we could also write this statement as

```
System.Console.WriteLine(...)
```

- This follows the pattern **namespace.class.method** as a fully qualified statement. Had we left out the using `System` declaration at the top of the program, it would have been mandatory for us to use the fully qualified form `System.Console.WriteLine(...)`. This statement is what causes the string, “**Hello, World!**” to print on the console screen.

Now that you have learned the basics of writing a simple program in C# lets look at another more complex example in the next lesson.

