

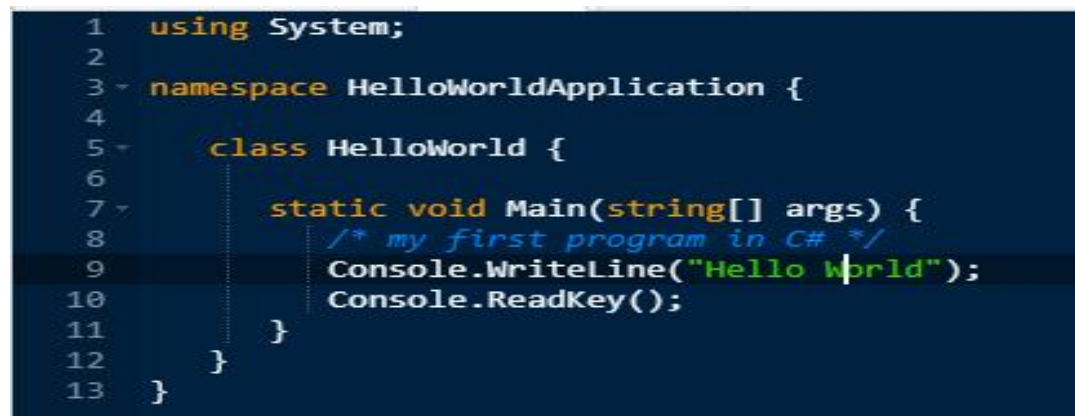
C# – Program Structure

Before we study basic building blocks of the C# programming language, let us look at a bare minimum C# program structure.

A C# program consists of the following parts:

- Namespace declaration
- A class
- Class methods
- Class attributes
- A Main method
- Statements and Expressions
- Comments

Creating Hello World Program

A screenshot of a code editor showing a C# program. The code is as follows:

```
1  using System;
2
3  namespace HelloWorldApplication {
4
5      class HelloWorld {
6
7          static void Main(string[] args) {
8              /* my first program in C# */
9              Console.WriteLine("Hello World");
10             Console.ReadKey();
11         }
12     }
13 }
```

When this code is compiled and executed, it produces the following result: **Hello World**

Parts of the “Hello World Program”

- The first line of the program **using System;** – the **using** keyword is used to include the **System** namespace in the program. A program generally has multiple **using** statements.
- The next line has the **namespace** declaration. A **namespace** is a collection of classes. The *HelloWorldApplication* namespace contains the class *HelloWorld*.
- The next line has a **class** declaration, the class *HelloWorld* contains the data and method definitions that your program uses. Classes generally contain multiple methods.

- Methods define the behavior of the class. However, the *HelloWorld* class has only one method **Main**.
- The next line defines the Main method, which is the entry point for all C# programs. The Main method states what the class does when executed.
- The next line */*...*/* is ignored by the compiler and it is put to add comments in the program.
- The Main method specifies its behavior with the statement `Console.WriteLine("Hello World");`
- `WriteLine` is a method of the `Console` class defined in the `Systemnamespace`. This statement causes the message "Hello, World!" to be displayed on the screen.
- The last line `Console.ReadKey();` is for the VS.NET Users. This makes the program wait for a key press and it prevents the screen from running and closing quickly when the program is launched from Visual Studio .NET.

It is worth to note the following points:

- C# is case sensitive.
- All statements and expression must end with a semicolon (;).
- The program execution starts at the Main method.
- Unlike Java, program file name could be different from the class name.