C# Function

Function is a block of code that has a signature. Function is used to execute statements specified in the code block. A function consists of the following components:

Function name: It is a unique name that is used to make Function call.

Return type: It is used to specify the data type of function return value.

Body: It is a block that contains executable statements.

Access specifier: It is used to specify function accessibility in the application.

Parameters: It is a list of arguments that we can pass to the function during call.

C# Function Syntax

```
1. <access-specifier><return-type>FunctionName(<parameters>)
2. {
3. }
```

Access-specifier, parameters and return statement are optional.

Let's see an example in which we have created a function that returns a string value and takes a string parameter.

C# Function: using no parameter and return type

A function that does not return any value specifies **void** type as a return type. In the following example, a function is created without return type.

```
1.  using System;
2.  namespace FunctionExample
3.  {
4.     class Program
5.     {
6.        public void Show()
7.        {
8.           Console.WriteLine("This is non parameterized function");
9.        }
10.       static void Main(string[] args)
11.       {
12.          Program program = new Program();
13.          program.Show();
14.       }
15.    }
16. }
```

Output:

```
This is non parameterized function
```

C# Function: using parameter but no return type

```
1.  using System;
2.  namespace FunctionExample
```

```
3.  {
4.      class Program
5.      {
6.          public void Show(string message)
7.          {
8.              Console.WriteLine("Hello " + message);
9.          }
10.         static void Main(string[] args)
11.         {
12.             Program program = new Program();
13.             program.Show("Rahul Kumar");
14.         }
15.     }
16. }
```

Output:

```
Hello Rahul Kumar
```

A function can have zero or any number of parameters to get data. In the following example, a function is created without parameters. A function without parameter is also known as **non-parameterized** function.

C# Function: using parameter and return type

```
1.  using System;
2.  namespace FunctionExample
3.  {
4.      class Program
5.      {
6.          public string Show(string message)
7.          {
8.              Console.WriteLine("Inside Show Function");
9.              return message;
10.         }
11.         static void Main(string[] args)
12.         {
13.             Program program = new Program();
14.             string message = program.Show("Rahul Kumar");
15.             Console.WriteLine("Hello "+message);
16.         }
17.     }
18. }
```

Output:

```
Inside Show Function
Hello Rahul Kumar
```