**Methods:**

A method is a group of statements that together perform a task. Every C# program has at least one class with a method named Main.

To use a method, you need to −

* Define the method
* Call the method

**Defining Methods in C#**

When you define a method, you basically declare the elements of its structure. The syntax for defining a method in C# is as follows −

<Access Specifier> <Return Type> <Method Name>(Parameter List) {

Method Body

}

Following are the various elements of a method −

* **Access Specifier** − This determines the visibility of a variable or a method from another class.
* **Return type** − A method may return a value. The return type is the data type of the value the method returns. If the method is not returning any values, then the return type is **void**.
* **Method name** − Method name is a unique identifier and it is case sensitive. It cannot be same as any other identifier declared in the class.
* **Parameter list** − Enclosed between parentheses, the parameters are used to pass and receive data from a method. The parameter list refers to the type, order, and number of the parameters of a method. Parameters are optional; that is, a method may contain no parameters.
* **Method body** − This contains the set of instructions needed to complete the required activity.

**Example**

Following code snippet shows a function *FindMax* that takes two integer values and returns the larger of the two. It has public access specifier, so it can be accessed from outside the class using an instance of the class.

class NumberManipulator {

public int FindMax(int num1, int num2) {

/\* local variable declaration \*/

int result;

if (num1 > num2)

result = num1;

else

result = num2;

return result;

}

...

}

**Calling Methods in C#**

You can call a method using the name of the method. The following example illustrates this −

[Live Demo (Links to an external site.)](http://tpcg.io/vhdOSt)

using System;

namespace CalculatorApplication {

class NumberManipulator {

public int FindMax(int num1, int num2) {

/\* local variable declaration \*/

int result;

if (num1 > num2)

result = num1;

else

result = num2;

return result;

}

static void Main(string[] args) {

/\* local variable definition \*/

int a = 100;

int b = 200;

int ret;

NumberManipulator n = new NumberManipulator();

//calling the FindMax method

ret = n.FindMax(a, b);

Console.WriteLine("Max value is : {0}", ret );

Console.ReadLine();

}

}

}

When the above code is compiled and executed, it produces the following result −

Max value is : 200