

OBJECT-ORIENTED PROGRAMMING

C#.NET BASICS2



C#.NET Basics

Functions in C#

- A function is a group of related instructions that performs a specific task.
- Types of Functions in C#:
 1. Built-in Functions
 2. User-Defined Functions
- All the predefined functions in C# are contained limited tasks only i.e. for what purpose function is designed for the same purpose it should be used.
- The User-defined functions in C# are the functions that are created by the programmer so that he/she can use it many times. It reduces the complexity of a big program and optimizes the code.

C#.NET Basics

User-Defined Function in C#

➤ Create

```
<Access Specifier> [Modifier] <Return Type> <Function Name> ([Parameter List])  
{  
    //Function Body / Method Body  
}
```

➤ Example to Create User-Defined Function in C#:

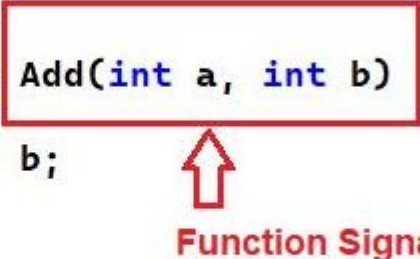
```
public int max(int x, int y)  
{  
    if (x > y)  
        return x;  
    else  
        return y;  
}
```

C#.NET Basics

➤ What is Function Signature in C#?

In C# programming language, a **Method Signature** is consisting of two things i.e. the **Method Name** and the **Parameter List**.

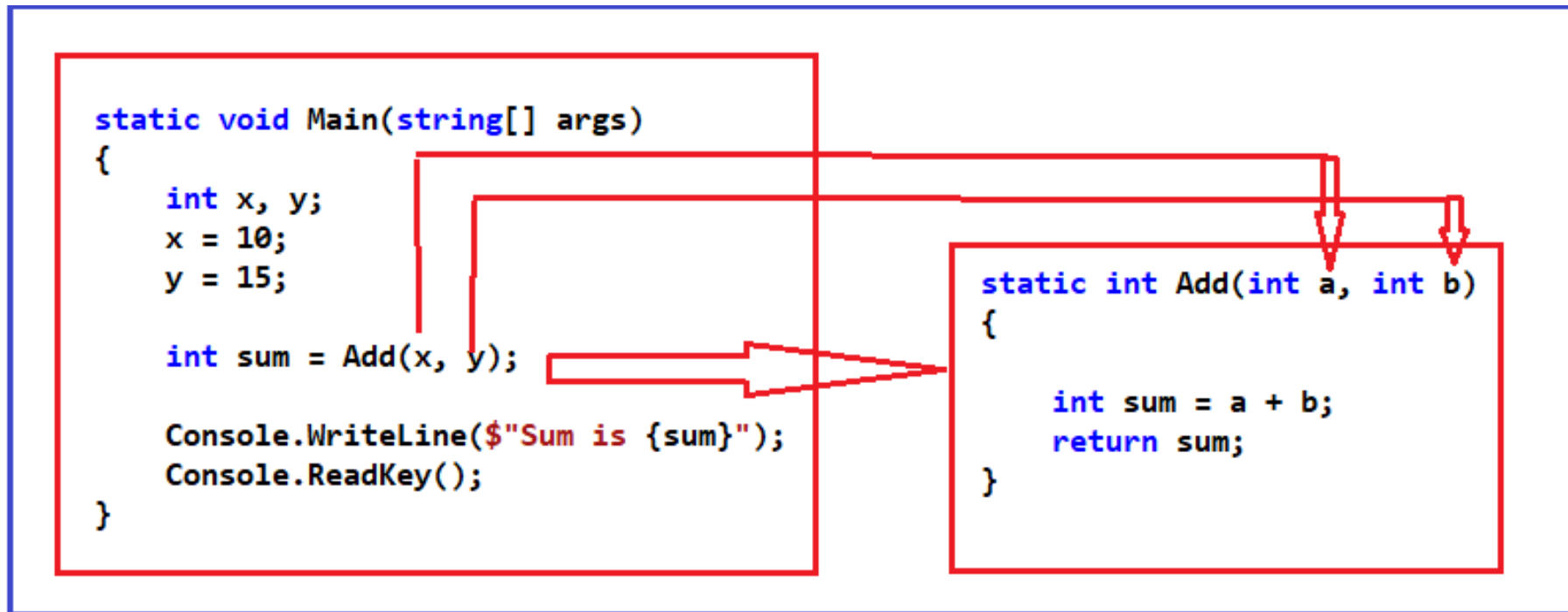
```
public static int Add(int a, int b)
{
    int sum = a + b;
    return sum;
}
```



Function Signature

C#.NET Basics

➤ How to Call a Method in C#?



C#.NET Basics

- The same thing is also happening when we pass value types to methods.

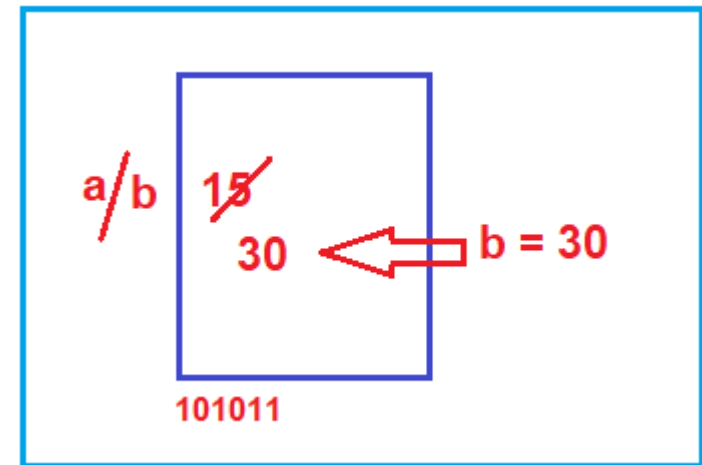
```
static void Main(string[] args)
{
    int a = 15;
    UpdateValue(a);
    Console.WriteLine(a);
    Console.ReadKey();
}
private static void UpdateValue(int b)
{
    b = 30;
}
```

C#.NET Basics

II. Call By Reference in C#

a) Call by Reference with Value Types in C#

```
static void Main(string[] args)
{
    int a = 15;
    UpdateValue(ref a);
    Console.WriteLine(a);
    Console.ReadKey();
}
static void UpdateValue(ref int b)
{
    b = 30;
}
```



Exercises 3.1

Write a program in C# Sharp to create a function to check whether a number is prime or not.

Test Data :

Input a number : 31

Expected Output :

31 is a prime number

Exercises 3.3

Write a program in C# Sharp to create a function to calculate the result of raising an integer number to another.

Test Data :

Input Base number: 3

Input the Exponent : 2

Expected Output :

So, the number 3^2 (to the power) 2 = 9