



Sir Syed University of Engineering & Technology, Karachi

This Keyword C# Static Class

Course Code : CS-127

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This Keyword

In C# programming, this is a keyword that refers to the current instance of the class. There can be 3 main usage of this keyword in C#.

- ✓ It can be used **to refer current class instance variable**. It is used if field names (instance variables) and parameter names are same, that is why both can be distinguish easily.
- ✓ It can be used **to pass current object as a parameter to another method**.
- ✓ It can be used **to declare indexers**.

C# This Example

Let's see the example of this keyword in C# that refers to the fields of current class.

```
using System;
```

```
using System.Collections.Generic;
```

```
using System.Text;
```

```
namespace ConsoleApplication56
```

```
{
```

```
    class Employee
```

```
    {
```

```
        public int id;
```

```
        public string name;
```

```
        public int salary;
```

```
        public Employee(int id, string name, int salary)
```

```
        {
```

```
            this.id = id;
```

```
            this.name = name;
```

```
            this.salary = salary;
```

```
        }
```

```
        public void display()
```

```
        {
```

```
            Console.WriteLine(id+ " " +name+ " " +salary);
```

```
        }
```

```
    }
```

```
class Program
{

    static void Main(string[] args)
    {

        Employee ali = new Employee(11," Ali Ahmed ",1000);
        ali.display();
        Employee Zia = new Employee(12, " Zia Khan ", 3000);
        Zia.display();
        Employee Asad = new Employee(13, " Asad Ahmed ", 4000);
        Asad.display();
        Console.Read();

    }

}
```

C# Static Class

The C# static class is like the normal class but it cannot be instantiated. It can have only static members. The advantage of static class is that it provides you guarantee that instance of static class cannot be created.

Points to remember for C# static class

- ✓ C# static class contains only static members.
- ✓ C# static class cannot be instantiated.
- ✓ C# static class is sealed.
- ✓ C# static class cannot contain instance constructors.

C# Static Class Example

Let's see the example of static class that contains static field and static method.

```
using System;
using System.Collections.Generic;
using System.Text;

namespace ConsoleApplication56
{
    static class Mymath
    {
        public static int result;
        public static int cube(int n)
        {
            result = n * n * n;
            return result;
        }
        static Mymath()
        {
            Console.WriteLine(" Static Constructor Invoked... ");
        }
    }
}
```

```
class Program
{

    static void Main(string[] args)
    {

        Console.WriteLine(" Cube of 3 is " + Mymath.cube(3));
        Console.Read();

    }

}
```