**C# Enum**

Enum in C# is also known as enumeration. It is used to store a set of named constants such as season, days, month, size etc. The enum constants are also known as enumerators. Enum in C# can be declared within or outside class and structs.

Enum constants has default values which starts from 0 and incremented to one by one. But we can change the default value.

**Points to remember**

* enum has fixed set of constants
* enum improves type safety
* enum can be traversed

**C# Enum Example**

Let's see a simple example of C# enum.

1. using System;
2. public class EnumExample
3. {
4. public enum Season { WINTER, SPRING, SUMMER, FALL }
6. public static void Main()
7. {
8. int x = (int)Season.WINTER;
9. int y = (int)Season.SUMMER;
10. Console.WriteLine("WINTER = {0}", x);
11. Console.WriteLine("SUMMER = {0}", y);
12. }
13. }

Output:

WINTER = 0

SUMMER = 2

**C# enum example changing start index**

1. using System;
2. public class EnumExample
3. {
4. public enum Season { WINTER=10, SPRING, SUMMER, FALL }
6. public static void Main()
7. {
8. int x = (int)Season.WINTER;
9. int y = (int)Season.SUMMER;
10. Console.WriteLine("WINTER = {0}", x);
11. Console.WriteLine("SUMMER = {0}", y);
12. }
13. }

Output:

WINTER = 10

SUMMER = 12

**C# enum example for Days**

1. using System;
2. public class EnumExample
3. {
4. public enum Days { Sun, Mon, Tue, Wed, Thu, Fri, Sat };
6. public static void Main()
7. {
8. int x = (int)Days.Sun;
9. int y = (int)Days.Mon;
10. int z = (int)Days.Sat;
11. Console.WriteLine("Sun = {0}", x);
12. Console.WriteLine("Mon = {0}", y);
13. Console.WriteLine("Sat = {0}", z);
14. }
15. }

Output:

Sun = 0

Mon = 1

Sat = 6

**C# enum example: traversing all values using getNames()**

1. using System;
2. public class EnumExample
3. {
4. public enum Days { Sun, Mon, Tue, Wed, Thu, Fri, Sat };
6. public static void Main()
7. {
8. foreach (string s in Enum.GetNames(typeof(Days)))
9. {
10. Console.WriteLine(s);
11. }
12. }
13. }

Output:

Sun

Mon

Tue

Wed

Thu

Fri

Sat

**C# enum example: traversing all values using getValues()**

1. using System;
2. public class EnumExample
3. {
4. public enum Days { Sun, Mon, Tue, Wed, Thu, Fri, Sat };
6. public static void Main()
7. {
8. foreach (Days d in Enum.GetValues(typeof(Days)))
9. {
10. Console.WriteLine(d);
11. }
12. }
13. }

Output:

Sun

Mon

Tue

Wed

Thu

Fri

Sat