Object class

Object class is the ultimate base class for all classes in .Net framework.

The Object class has five methods:

1. GetType
2. Equals
3. ReferenceEquals
4. ToString
5. GetHashCode

GetType() :
Returns type of the object.

Equals() :
Compares two object instances. Returns true if they are equal, otherwise false.

ReferenceEquals() :
Compares two object instances. Returns true if both are same instances, otherwise false.

ToString() :
Converts any instance to a string type.

GetHashCode() :
Returns hash code for an object.

As all classes are derived from Object class so that we can use any of the above method in any user defined class.

Application program which demonstrates all methods from Object Class

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

namespace Marvellous
{
   class Base
   {

   }
   class Derived : Base
   {

   }

   class Program
   {
      static void Main(string[] args)
      {
```

```
// Use of GetType method
Object ob1 = new Object();
System.String s1 = "Marvellous Infosystems";
Derived dobj = new Derived();

Type type1 = ob1.GetType();
Type type2 = s1.GetType();
Type type3 = dobj.GetType();

Console.WriteLine("Demonstration of GetType method");

// Object class output
Console.WriteLine("Information of object class");
Console.WriteLine(type1.BaseType);
Console.WriteLine(type1.Name);
Console.WriteLine(type1.FullName);
Console.WriteLine(type1.Namespace);

// string output
Console.WriteLine("Information of string class");
Console.WriteLine(type2.BaseType);
Console.WriteLine(type2.Name);
Console.WriteLine(type2.FullName);
Console.WriteLine(type2.Namespace);

// Derived output
Console.WriteLine("Information of Derived class");
Console.WriteLine(type3.BaseType);
Console.WriteLine(type3.Name);
Console.WriteLine(type3.FullName);
Console.WriteLine(type3.Namespace);

// Demonstration of equals and ReferenceEquals

Base obj1 = new Base();
Base obj2 = new Derived();
Base obj3 = new Base();

string str1 = "String";
string str2 = "String";
string str3 = "String New";

Console.WriteLine("Caparison of two object");
Console.WriteLine(Object.Equals(obj1, obj2));
Console.WriteLine(Object.Equals(str1, str2));

Console.WriteLine(Object.ReferenceEquals(obj1, obj2));
Console.WriteLine(Object.ReferenceEquals(obj2, obj2));
Console.WriteLine(Object.ReferenceEquals(obj1, obj3));
Console.WriteLine(Object.ReferenceEquals(str1, str2));
Console.WriteLine(Object.ReferenceEquals(str1, str3));
```

```
            Console.WriteLine(str1.GetHashCode());
            Console.WriteLine(str2.GetHashCode());
            Console.WriteLine(str3.GetHashCode());

            Console.WriteLine("Demonstration of toString method");
            int salary = 12000000;
            float percentage = 89.50f;

            string str4 = salary.ToString();
            string str5 = percentage.ToString();

            Console.WriteLine(str4);
            Console.WriteLine(str5);
        }
    }
}
```