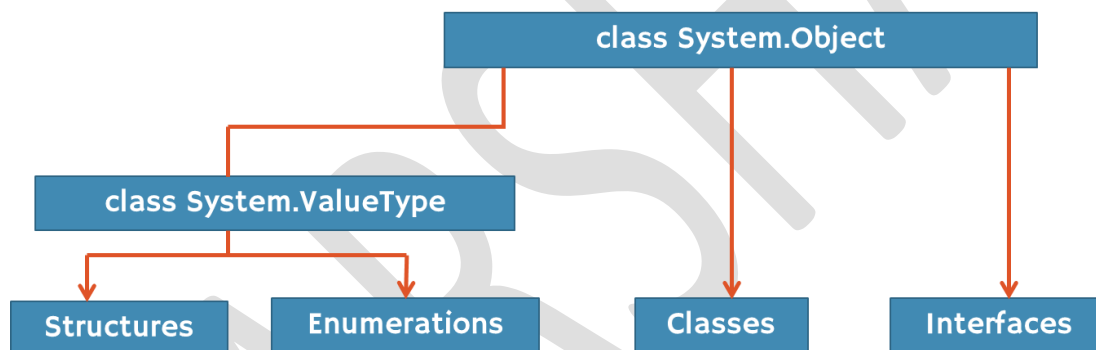## 24

System.Object class

Introducing System.Object class

› The "System.Object" is a pre-defined class, which is the "Ultimate super class (base class)" in .net.

› All the classes and other types are inherited from System.Object directly / indirectly.

```
                          class System.Object

      class System.ValueType                Classes        Interfaces

  Structures    Enumerations
```

Methods of 'System.Object' class

```
System.Object Class [Pre-defined]

namespace System
{
    class Object
    {
        virtual bool Equals( object value );
        virtual int GetHashCode( );
        Type GetType( );
        virtual string ToString( );
    }
}
```

1. **bool Equals(object value)**

   › Compares the current object with the given argument object; returns true, if both are same objects; returns false, if both are different objects.

2. **int GetHashCode(object value)**

   › Returns the a number that represents the object. It is not guarantee that the hash code is unique, by default.

3. **Type GetType( )**

   › Returns the name of the class (including namespace path), based on which, the object is created.

4. **string ToString( )**

   › By default, it returns the name of the class (including namespace path), based on which, the object is created.

   › It is virtual method, which can be overridden in the child class.

› All C# classes, structures, interfaces, enumerations are children of System.Object class.

› Every method defined in the Object class is available in all objects in the system as all classes in the .NET Framework are derived from Object class.

› Derived classes can override Equals, GetHashCode and ToString methods of Object class.

› System.Object class is meant for achieving "type safety" in C#.