The lecture 6

TYPES OF CLASSES

Sealed classes

Classes can be declared as sealed. This is accomplished by putting the sealed keyword before the keyword class in the class definition Sealed classes are used to restrict the inheritance feature of object oriented programming. Once a class is defined as sealed class, this class cannot be inherited. A sealed class cannot be used as a base class. For this reason, it cannot also be an abstract class. Sealed classes are primarily used to prevent derivation. Because they can never be used as a base class, some run-time optimizations can make calling sealed class members slightly faster.

Sealed classes

class Program

```
static void Main(string[]
args)
    {
        Dogs dog = new Dogs();
```

sealed class Animal

public string name;

class Dogs : Animal // you will need to remove the sealed keyword in order for inheritance to work

public string dogBreed;

Sealed classes

When an instance method declaration includes a sealed modifier, that method is said to be a sealed method. A sealed method overrides an inherited virtual method with the same signature. A sealed method shall also be marked with the override modifier. Use of the sealed modifier prevents a derived class from further overriding the method.



class A public virtual void First() Console.WriteLine("First Class A"); public virtual void Second() Console.WriteLine("Second Class A"); class B : A public sealed override void First() Console.WriteLine("First Class B"); public override void Second() Console.WriteLine("Second Class B"); class C : B public override void Second() Console.WriteLine("First Class C");

Partial classes

- We were declaring a class in a single file but Partial class is a feature which allows us to write class across multiple files.
- The partial indicates that the parts of the class, struct, or interface can be defined in the namespace. All the parts must be used with the partial keyword. All the parts must be available at compile time to form the final type or final class. All the parts must have the same accessibility level, such as public, private, protected, and so on.
- If any part of the class is declared abstract, then the whole type is considered to be as abstract.
- If any part is declared sealed, then the whole type is considered to be as sealed.
- If any part declares a base type, then the whole type inherits that class.

Partial classes

namespace PartialClasses

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

Animals animal = new Animals();

animal.GetName();

partial class Animals

public string animalColor; public string animalName;

public void GetName()

Console.WriteLine("My name is max, I am a dog"); partial class Animals

public DateTime birthDate; public string animalBreed;

public void SayHi()