

Inheritance and Sealed keyword

Friday, May 10, 2024 1:33 PM

What are different type of inheritance?

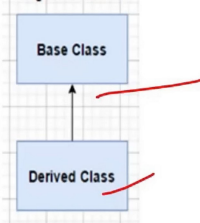
Single Inheritance	You have one base class and one derived class.
Multiple Inheritance	Remember in c#, multiple inheritance can only be achieved with the help of interfaces
Multilevel Inheritance	Like Grand Child Class
Hierarchical Inheritance	Is mostly used inheritance type.

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What are the different types of Inheritance? **V. IMP.**

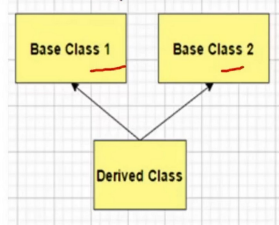


single Inheritance



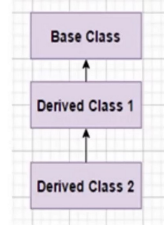
```
class BaseClass
{
    public void Animal()
    {
        Console.WriteLine("Animal");
    }
}
class ChildClass : BaseClass
{
    public void Dog()
    {
        Console.WriteLine("Dog");
    }
}
```

Multiple Inheritance



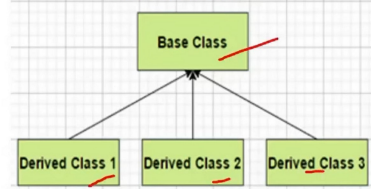
```
class BaseClass1
{
    public void Animal()
    {
        Console.WriteLine("Animal");
    }
}
class Interface1
{
    public void Fly();
}
class ChildClass : BaseClass1, Interface1
{
    public void Eagle()
    {
        Console.WriteLine("Eagle");
    }
}
```

Multilevel Inheritance



```
class BaseClass
{
    public void Animal()
    {
        Console.WriteLine("Animal");
    }
}
class ChildClass : BaseClass
{
    public void Dog()
    {
        Console.WriteLine("Dog");
    }
}
class SecondChildClass : ChildClass
{
    public void Labrador()
    {
        Console.WriteLine("Labrador");
    }
}
```

hierarchial Inheritance



```
class BaseClass
{
    public void Animal()
    {
        Console.WriteLine("Animal");
    }
}
class ChildClass : BaseClass
{
    public void Dog()
    {
        Console.WriteLine("Dog");
    }
}
class SecondChildClass : BaseClass
{
    public void Cat()
    {
        Console.WriteLine("Dog");
    }
}
```

How to prevent a class from being inherited?

Use Sealed access modifier now the question is why would you want to do that?
I have very good example for example Microsoft paint has a class for color red, it's implementation is to paint in red color, But if you do not seal it, someone can inherit and change it color definition to something that is not red.
That could be a good example for using Sealed.