**C# Sealed**

C# sealed keyword applies restrictions on the class and method. If you create a sealed class, it cannot be derived. If you create a sealed method, it cannot be overridden.

**Note: Structs are implicitly sealed therefore they can't be inherited.**

**C# Sealed class**

C# sealed class cannot be derived by any class. Let's see an example of sealed class in C#.

1. using System;
2. sealed public class Animal{
3. public void eat() { Console.WriteLine("eating..."); }
4. }
5. public class Dog: Animal
6. {
7. public void bark() { Console.WriteLine("barking..."); }
8. }
9. public class TestSealed
10. {
11. public static void Main()
12. {
13. Dog d = new Dog();
14. d.eat();
15. d.bark();

18. }
19. }

Output:

Compile Time Error: 'Dog': cannot derive from sealed type 'Animal'

**C# Sealed method**

The sealed method in C# cannot be overridden further. It must be used with override keyword in method.

Let's see an example of sealed method in C#.

1. using System;
2. public class Animal{
3. public virtual void eat() { Console.WriteLine("eating..."); }
4. public virtual void run() { Console.WriteLine("running..."); }
6. }
7. public class Dog: Animal
8. {
9. public override void eat() { Console.WriteLine("eating bread..."); }
10. public sealed override void run() {
11. Console.WriteLine("running very fast...");
12. }
13. }
14. public class BabyDog : Dog
15. {
16. public override void eat() { Console.WriteLine("eating biscuits..."); }
17. public override void run() { Console.WriteLine("running slowly..."); }
18. }
19. public class TestSealed
20. {
21. public static void Main()
22. {
23. BabyDog d = new BabyDog();
24. d.eat();
25. d.run();
26. }
27. }

Output:

Compile Time Error: 'BabyDog.run()': cannot override inherited member 'Dog.run()' because it is sealed

**Note: Local variables can't be sealed.**

1. using System;
2. public class TestSealed
3. {
4. public static void Main()
5. {
6. sealed int x = 10;
7. x++;
8. Console.WriteLine(x);
9. }
10. }

Output:

Compile Time Error: Invalid expression term 'sealed'