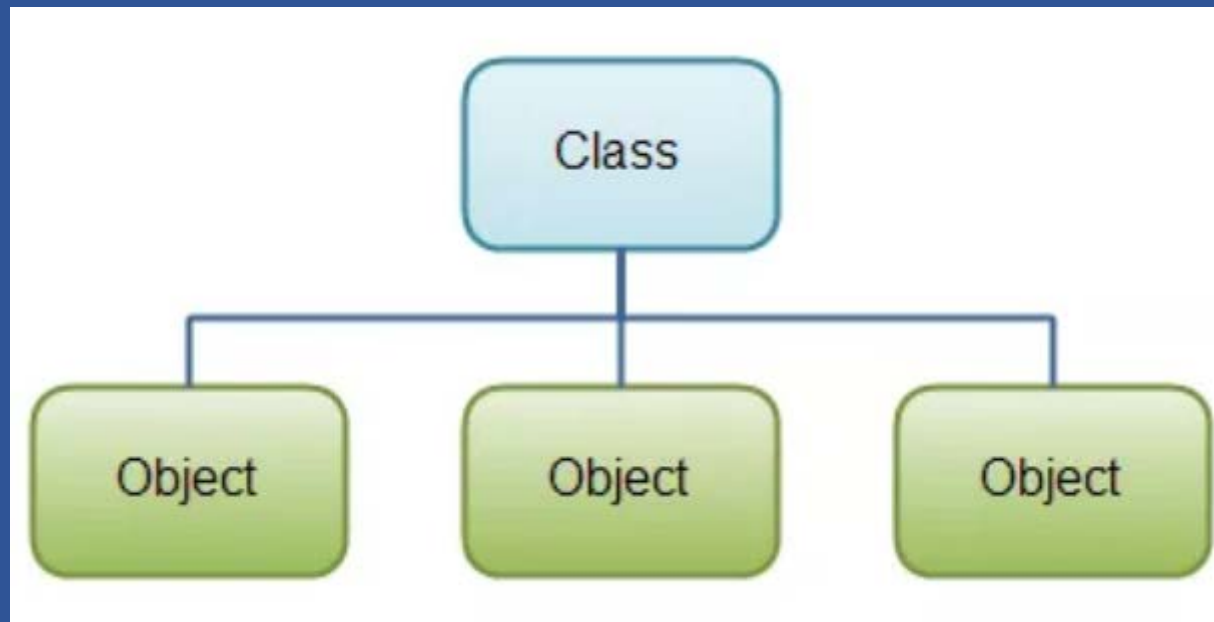


# Classes

# What is Class?

- Class and OOP
- Class vs Struct
- Instance vs Static class



# Shortest code for Class

```
1 namespace test
2 {
3     class foo
4     {
5     }
6 }
7 class Program
8 {
9     static void Main(string[] args)
10    {
11        foo myFoo = new foo();
12    }
13 }
14 }
```

2 references

0 references

0 references

# Field member

```
1  using System;
2
3  namespace _0110_Class_field
4  {
5      class Foo
6      {
7          public int a = 0; // public field = bad
8          private int b = 1; // private field = good
9      }
10
11     class Program
12     {
13         static void Main(string[] args)
14         {
15             Foo myFoo = new Foo();
16             Console.WriteLine(myFoo.a);
17             // directly access to class field is bad.
18         }
19     }
```

# Properties member

```
1  using System;
2
3  namespace _0120_Property
4  {
5      2 references
6      class Foo
7      {
8          public int a = 0;
9          private int b = 1;
10         1 reference
11         public int B { get => b; set => b = value; }
12     }
13     0 references
14     class Program
15     {
16         0 references
17         static void Main(string[] args)
18         {
19             Foo myFoo = new Foo();
20             Console.WriteLine(myFoo.B);
21             // Access class field via property is good.
22         }
23     }
24 }
```

# Method member

```
1  using System;
2
3  namespace _0130_Method
4  {
5      class Foo
6      {
7          public string GetName()
8          {
9              return "Laploy";
10         }
11     }
12     class Program
13     {
14         static void Main(string[] args)
15         {
16             Foo myFoo = new Foo();
17             Console.WriteLine(myFoo.GetName());
18         }
19     }
20 }
```

# Constructor

```
1  namespace _0140_Constructor
2  {
3      class Foo
4      {
5          public Foo()
6          {
7          }
8      }
9  }
10 class Program
11 {
12     static void Main(string[] args)
13     {
14         Foo myFoo = new Foo();
15     }
16 }
17 }
```

3 references

1 reference

0 references

0 references

# Object and value

```
1  using System;
2
3  namespace _0150_Object_value
4  {
5      4 references
6      class Foo
7      {
8          string name;
9          4 references
10         public string Name { get => name; set => name = value; }
11     }
12     0 references
13     class Program
14     {
15         0 references
16         static void Main(string[] args)
17         {
18             Foo myFoo1 = new Foo();
19             myFoo1.Name = "Laploy";
20             Foo myFoo2 = new Foo();
21             myFoo2.Name = "Alice";
22
23             Console.WriteLine(myFoo1.Name);
24             Console.WriteLine(myFoo2.Name);
25         }
26     }
27 }
```



# Exercise