Class Programs

1. **using** System;
2. **public** **class** Student
3. {
4. **int** id;//data member (also instance variable)
5. String name;//data member(also instance variable)
7. **public** **static** **void** Main(**string**[] args)
8. {
9. Student s1 = **new** Student();//creating an object of Student
10. s1.id = 101;
11. s1.name = "Sonoo Jaiswal";
12. Console.WriteLine(s1.id);
13. Console.WriteLine(s1.name);
15. }
16. }
17. **using** System;
18. **public** **class** Student
19. {
20. **public** **int** id;
21. **public** String name;
22. **public** **void** insert(**int** i, String n)
23. {
24. id = i;
25. name = n;
26. }
27. **public** **void** display()
28. {
29. Console.WriteLine(id + " " + name);
30. }
31. }
32. **class** TestStudent{
33. **public** **static** **void** Main(**string**[] args)
34. {
35. Student s1 = **new** Student();
36. Student s2 = **new** Student();
37. s1.insert(101, "Ajeet");
38. s2.insert(102, "Tom");
39. s1.display();
40. s2.display();
42. }
43. }

Properties

1. **using** System;
2. **public** **class** Employee
3. {
4. **private** **string** name;
6. **public** **string** Name
7. {
8. **get**
9. {
10. **return** name;
11. }
12. **set**
13. {
14. name = value;
15. }
16. }
17. }
18. **class** TestEmployee{
19. **public** **static** **void** Main(**string**[] args)
20. {
21. Employee e1 = **new** Employee();
22. e1.Name = "Sonoo Jaiswal";
23. Console.WriteLine("Employee Name: " + e1.Name);
25. }
26. }

Single Inheritance

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace MyAplication {

   class Demo {

      static void Main(string[] args) {

         // Father class

         Father f = new Father();

         f.Display();

         // Son class

         Son s = new Son();

         s.Display();

         s.DisplayOne();

         Console.ReadKey();

      }

      class Father {

         public void Display() {

            Console.WriteLine("Display");

         }

      }

      class Son : Father {

         public void DisplayOne() {

            Console.WriteLine("DisplayOne");

         }

      }

   }

}

Multiple

using System;

interface IShape

{

    double GetArea();

}

interface IColor

{

    string GetColor();

}

class Rectangle : IShape, IColor

{

    private double length;

    private double breadth;

    private string color;

    public Rectangle(double length, double breadth, string color)

    {

        this.length = length;

        this.breadth = breadth;

        this.color = color;

    }

    public double GetArea()

    {

        return length \* breadth;

    }

    public string GetColor()

    {

        return color;

    }

}

class Program

{

    static void Main(string[] args)

    {

        Rectangle rect = new Rectangle(5, 10, "blue");

        Console.WriteLine("Area of rectangle: " + rect.GetArea());

        Console.WriteLine("Color of rectangle: " + rect.GetColor());

    }

}

Hierarchical

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

namespace Inheritance {

   class Test {

      static void Main(string[] args) {

         Father f = new Father();

         f.display();

         Son s = new Son();

         s.display();

         s.displayOne();

         Daughter d = new Daughter();

         d.displayTwo();

         Console.ReadKey();

      }

      class Father {

         public void display() {

            Console.WriteLine("Display...");

         }

      }

      class Son : Father {

         public void displayOne() {

            Console.WriteLine("Display One");

         }

      }

      class Daughter : Father {

         public void displayTwo() {

            Console.WriteLine("Display Two");

         }

      }

   }

}

Readonly

using System;  
  
namespace Tutlane  
{  
    class User  
    {  
       // Initialize Read Only Fields  
       public readonly string name = "Suresh Dasari";  
       public readonly string location;  
       public readonly int age;  
       public User()  
       {  
          location = "Hyderabad";  
          age = 32;  
       }  
    }  
  
    class Program  
    {  
       static void Main(string[] args)  
       {  
           User u = new User();  
           // This will throw compile time error  
           //u.name = "Rohini Alavala";  
           Console.WriteLine("Name: {0}", u.name);  
           Console.WriteLine("Location: {0}", u.location);  
           Console.WriteLine("Age: {0}", u.age);  
           Console.WriteLine("\nPress Enter Key to Exit..");  
           Console.ReadLine();  
       }  
    }  
}

Indexer

using System;

class SampleCollection<T>

{

// Declare an array to store the data elements.

private T[] arr = new T[100];

// Define the indexer to allow client code to use [] notation.

public T this[int i]

{

get { return arr[i]; }

set { arr[i] = value; }

}

}

class Program

{

static void Main()

{

var stringCollection = new SampleCollection<string>();

stringCollection[0] = "Hello, World";

Console.WriteLine(stringCollection[0]);

}

}

// The example displays the following output:

// Hello, World.