Object Oriented Programming

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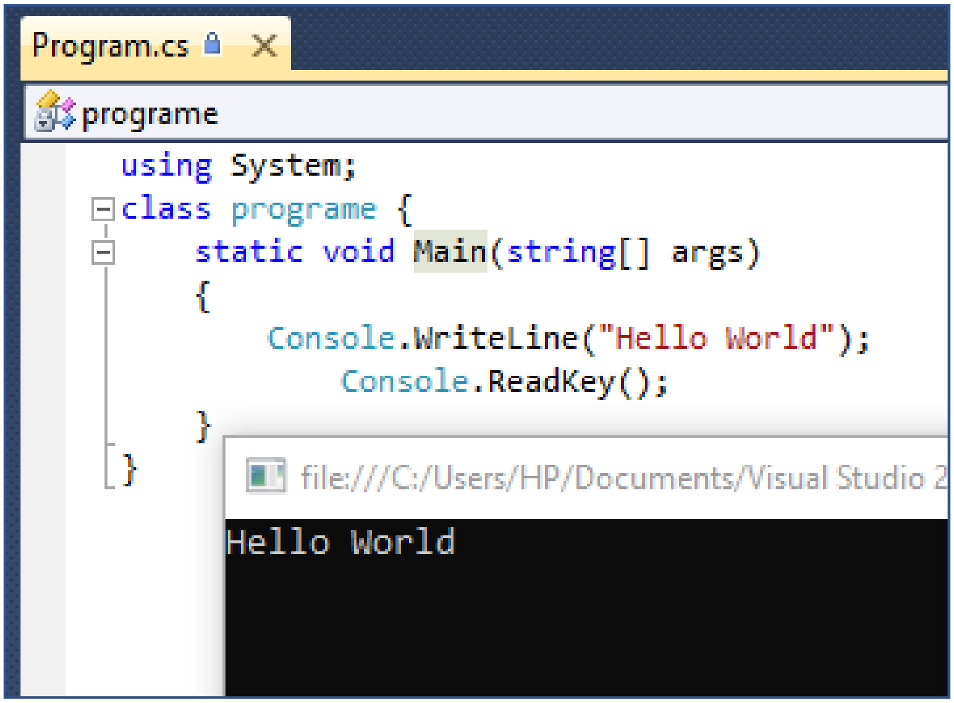
CMT 4th, 2nd Shift

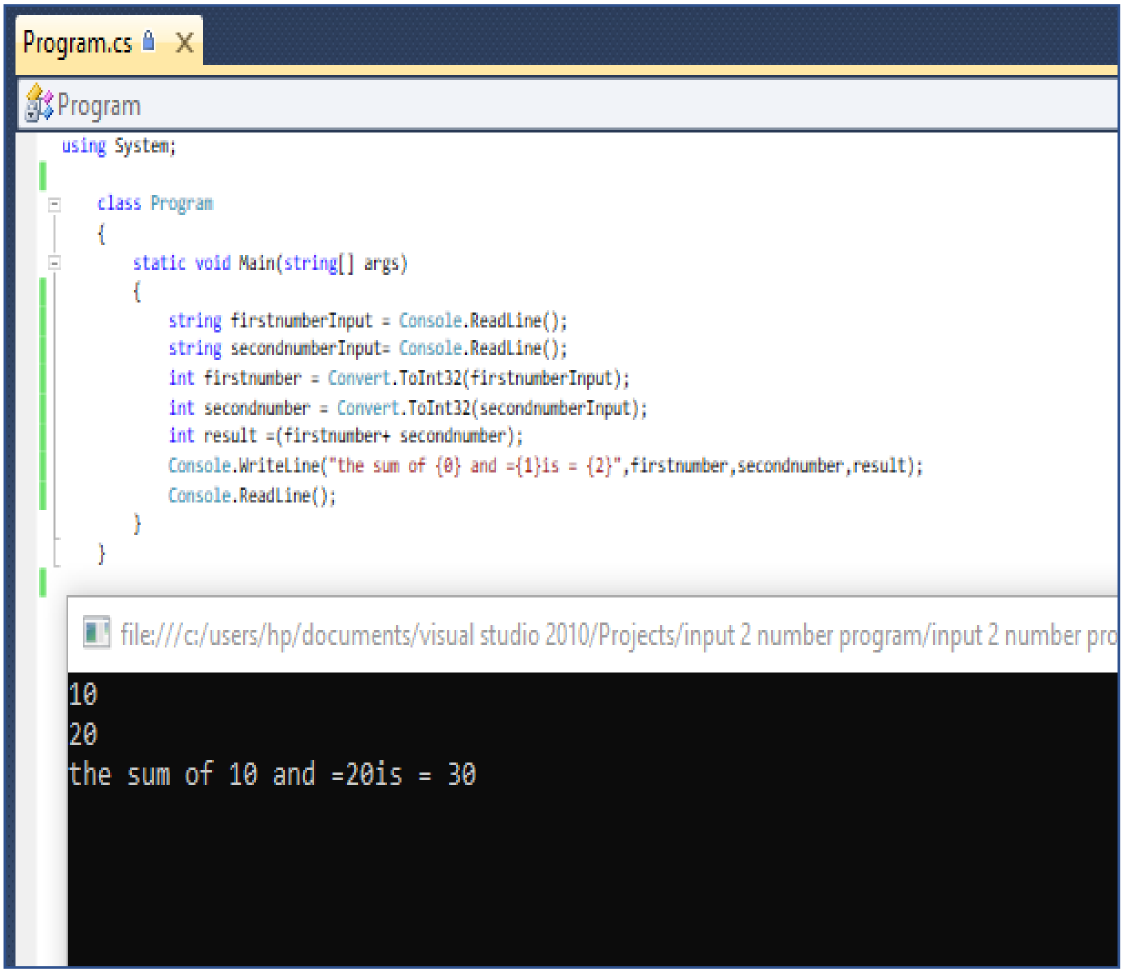
1. Hello World Programe:



```
using System;
class programe {
    static void Main(string[] args)
    {
        Console.WriteLine("Hello World");
            Console.ReadKey();
    }
}
```

```
Hello World
```

2. Sum between 2 numbers:

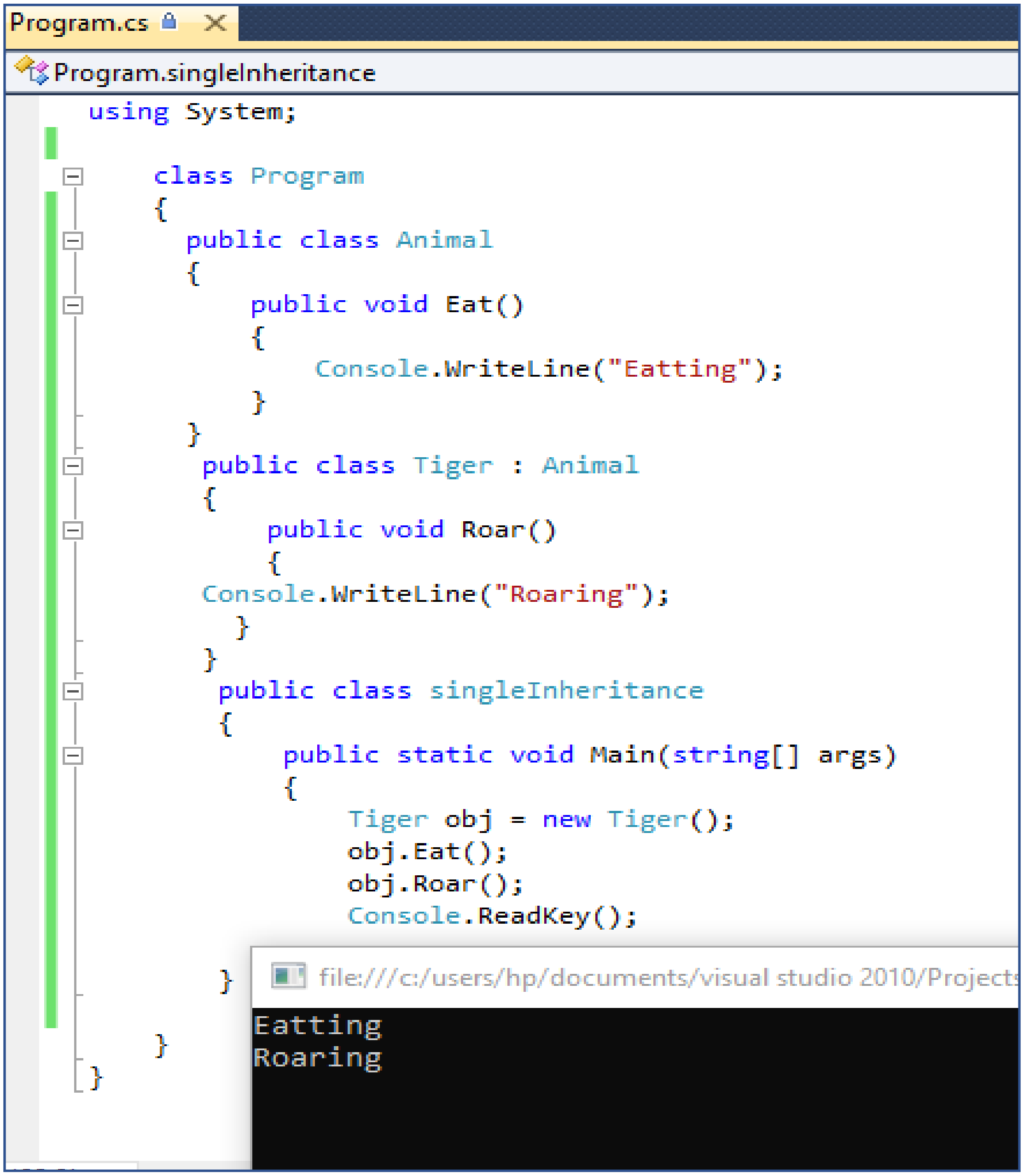


```
using System;

    class Program
    {
        static void Main(string[] args)
        {
            string firstnumberInput = Console.ReadLine();
            string secondnumberInput= Console.ReadLine();
            int firstnumber = Convert.ToInt32(firstnumberInput);
            int secondnumber = Convert.ToInt32(secondnumberInput);
            int result =(firstnumber+ secondnumber);
            Console.WriteLine("the sum of {0} and ={1}is = {2}",firstnumber,secondnumber,result);
            Console.ReadLine();
        }
    }
```

file:///c:/users/hp/documents/visual studio 2010/Projects/input 2 number program/input 2 number pro

```
10
20
the sum of 10 and =20is = 30
```

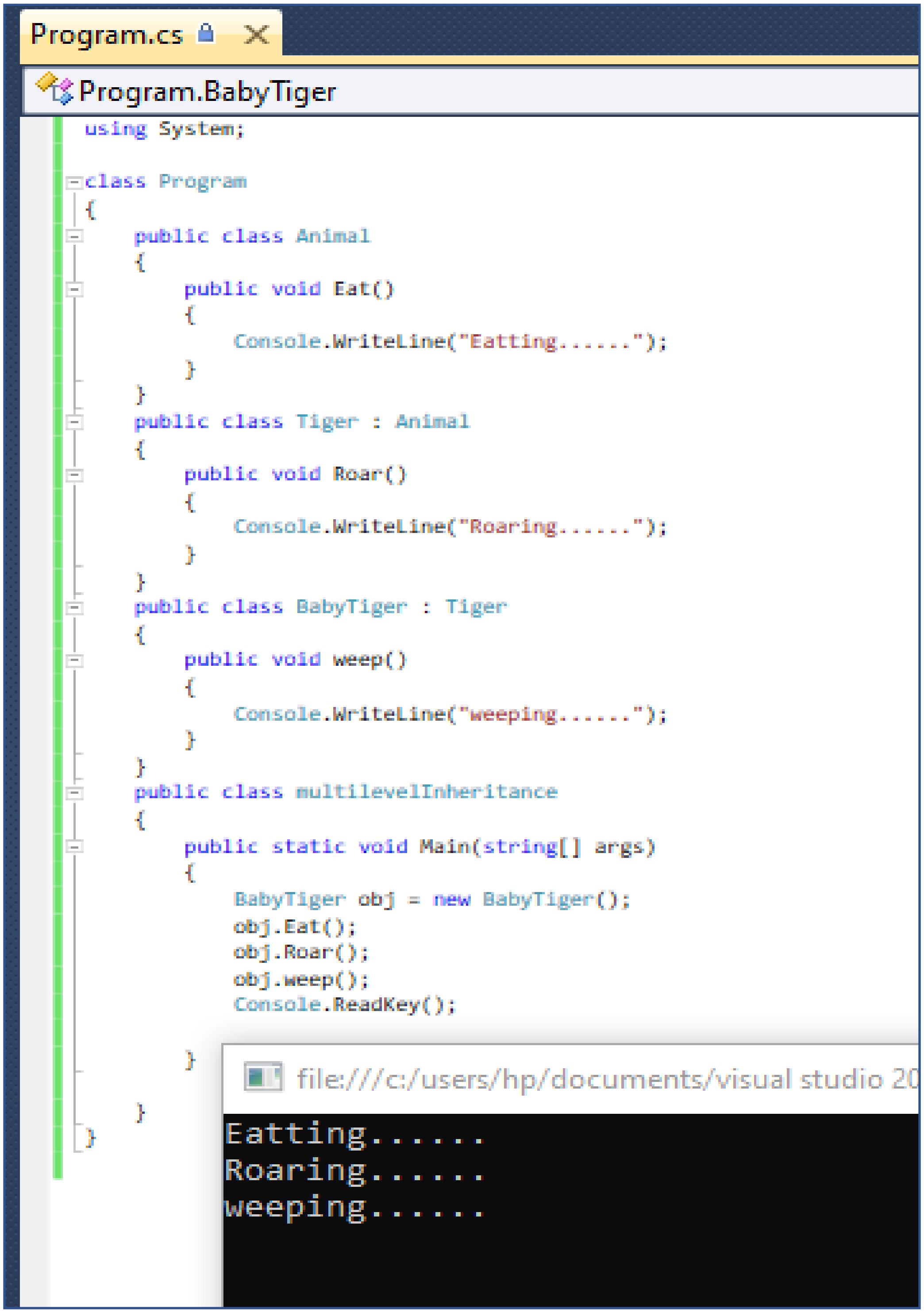
3. Single Inheritance:


Program.cs
Program.singleInheritance
file:///c:/users/hp/documents/visual studio 2010/Projects

```
using System;

    class Program
    {
      public class Animal
      {
          public void Eat()
          {
              Console.WriteLine("Eatting");
          }
      }
       public class Tiger : Animal
       {
           public void Roar()
           {
       Console.WriteLine("Roaring");
         }
       }
        public class singleInheritance
        {
            public static void Main(string[] args)
            {
                Tiger obj = new Tiger();
                obj.Eat();
                obj.Roar();
                Console.ReadKey();

        }
    }
}
```

```
Eatting
Roaring
```

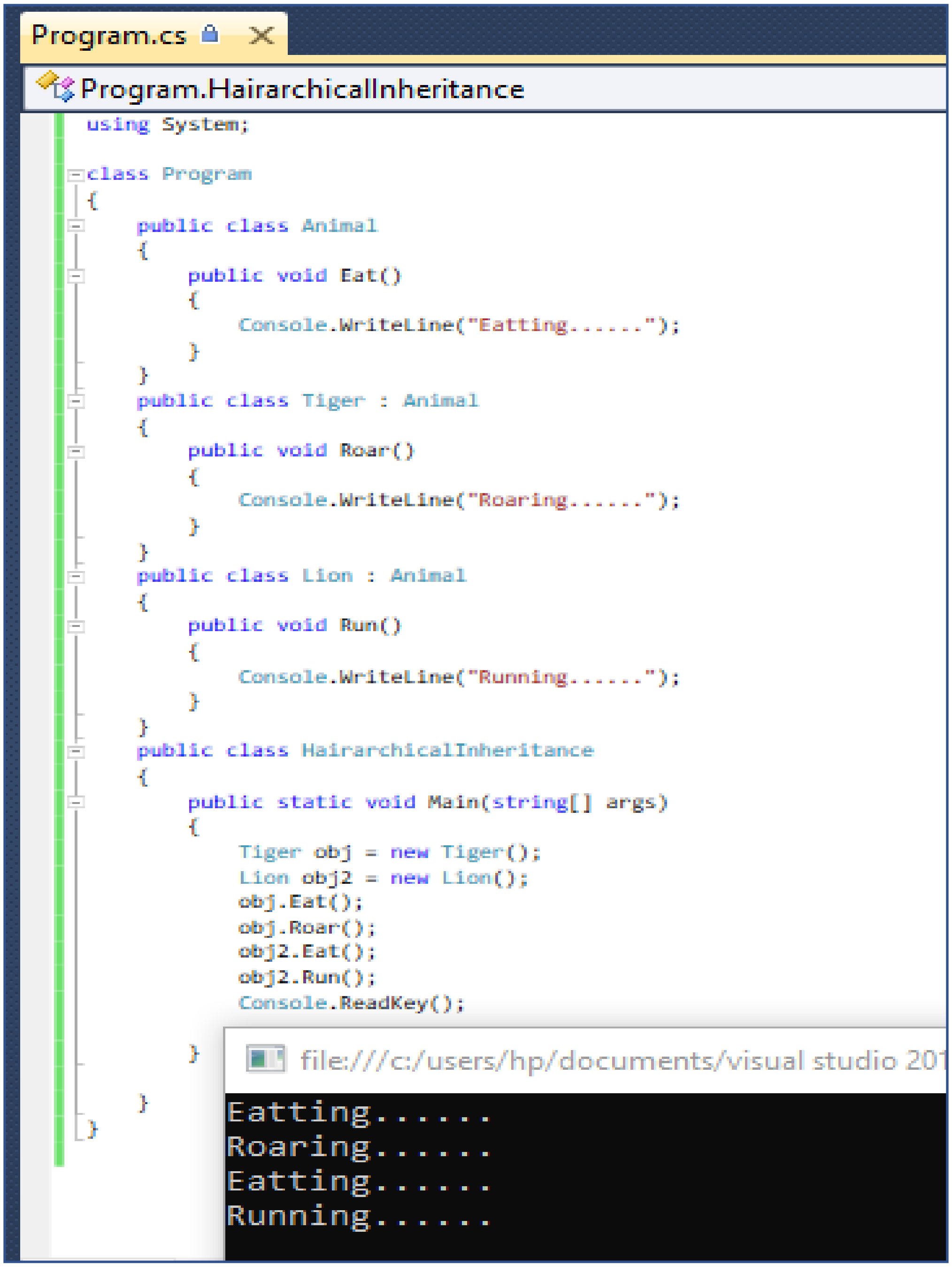
4. Multilevel Inheritance:



```
using System;

class Program
{
    public class Animal
    {
        public void Eat()
        {
            Console.WriteLine("Eatting......");
        }
    }
    public class Tiger : Animal
    {
        public void Roar()
        {
            Console.WriteLine("Roaring......");
        }
    }
    public class BabyTiger : Tiger
    {
        public void weep()
        {
            Console.WriteLine("weeping......");
        }
    }
    public class multilevelInheritance
    {
        public static void Main(string[] args)
        {
            BabyTiger obj = new BabyTiger();
            obj.Eat();
            obj.Roar();
            obj.weep();
            Console.ReadKey();

        }
    }
}
```

```
Eatting......
Roaring......
weeping......
```

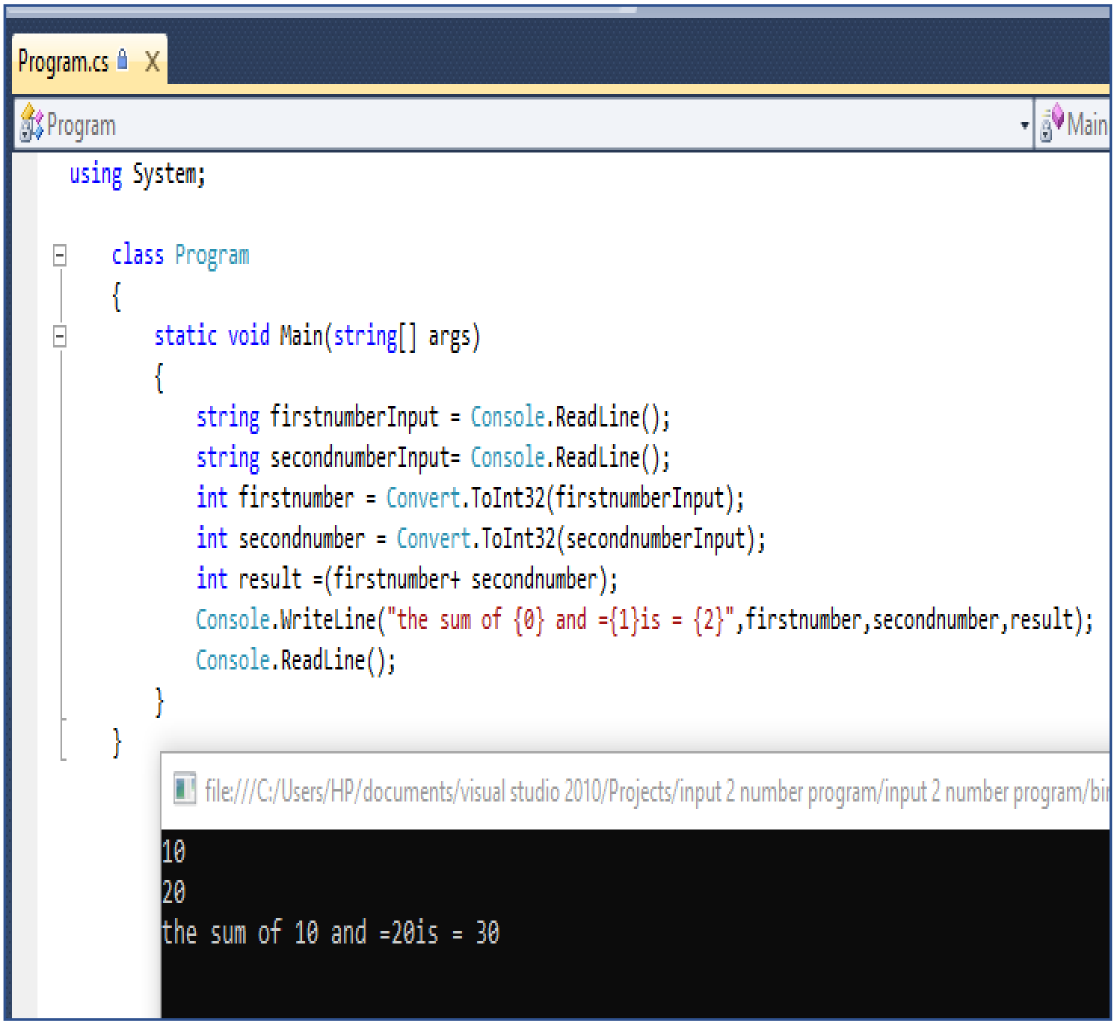
5. Hairarcical Inheritance:


Program.cs
Program.HairarchicalInheritance
file:///c:/users/hp/documents/visual studio 201

```
using System;

class Program
{
    public class Animal
    {
        public void Eat()
        {
            Console.WriteLine("Eatting......");
        }
    }
    public class Tiger : Animal
    {
        public void Roar()
        {
            Console.WriteLine("Roaring......");
        }
    }
    public class Lion : Animal
    {
        public void Run()
        {
            Console.WriteLine("Running......");
        }
    }
    public class HairarchicalInheritance
    {
        public static void Main(string[] args)
        {
            Tiger obj = new Tiger();
            Lion obj2 = new Lion();
            obj.Eat();
            obj.Roar();
            obj2.Eat();
            obj2.Run();
            Console.ReadKey();

        }

    }
}
```

```
Eatting......
Roaring......
Eatting......
Running......
```

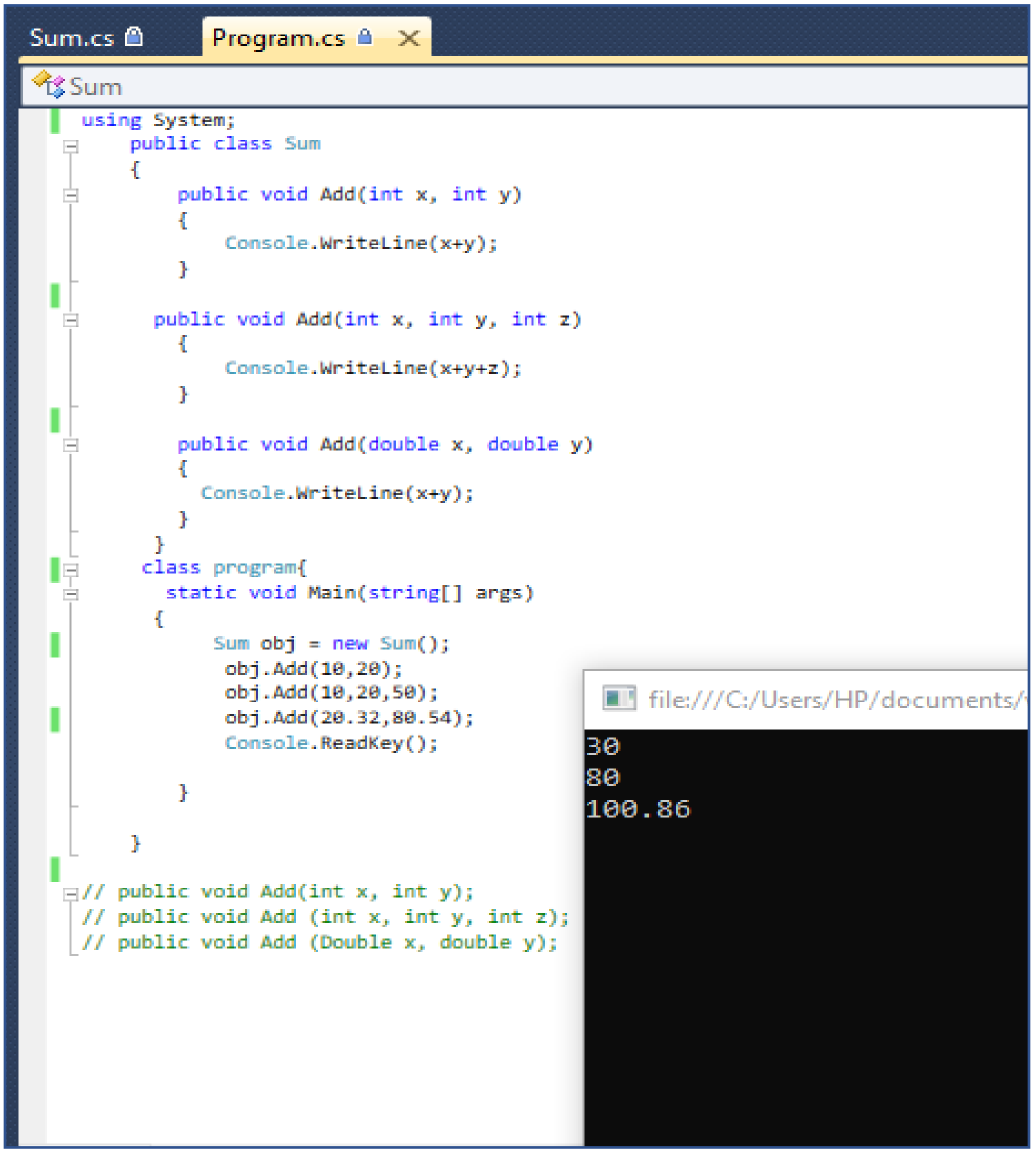
6. Sum between 2 numbers:


Program.cs
Program
Main
file:///C:/Users/HP/documents/visual studio 2010/Projects/input 2 number program/input 2 number program/bi

```
using System;

    class Program
    {
        static void Main(string[] args)
        {
            string firstnumberInput = Console.ReadLine();
            string secondnumberInput= Console.ReadLine();
            int firstnumber = Convert.ToInt32(firstnumberInput);
            int secondnumber = Convert.ToInt32(secondnumberInput);
            int result =(firstnumber+ secondnumber);
            Console.WriteLine("the sum of {0} and ={1}is = {2}",firstnumber,secondnumber,result);
            Console.ReadLine();
        }
    }
```

```
10
20
the sum of 10 and =20is = 30
```

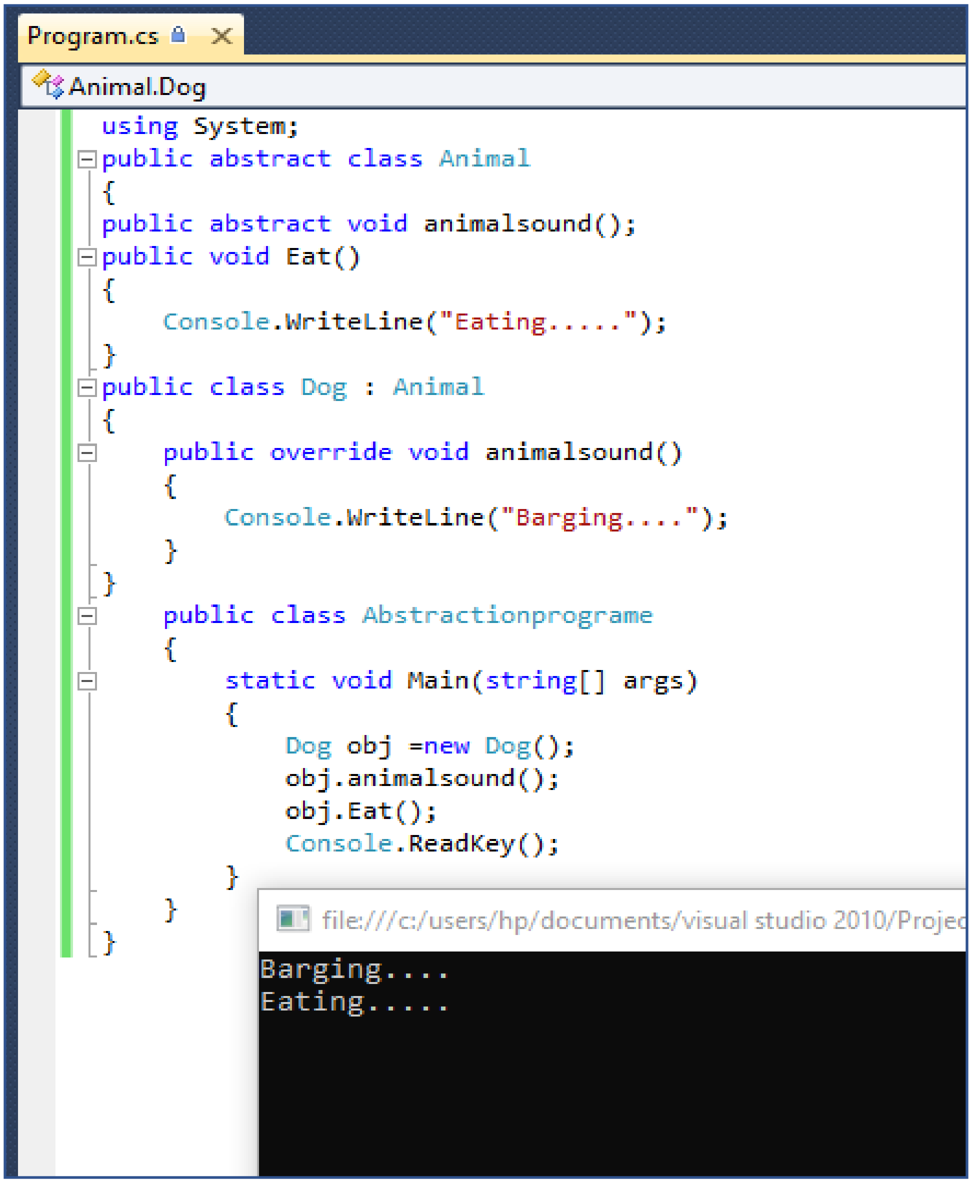
7. Polymorphisum:



```
using System;
    public class Sum
    {
        public void Add(int x, int y)
        {
            Console.WriteLine(x+y);
        }

      public void Add(int x, int y, int z)
        {
            Console.WriteLine(x+y+z);
        }

        public void Add(double x, double y)
        {
          Console.WriteLine(x+y);
        }
      }
     class program{
       static void Main(string[] args)
      {
           Sum obj = new Sum();
            obj.Add(10,20);
            obj.Add(10,20,50);
            obj.Add(20.32,80.54);
            Console.ReadKey();

        }

    }
// public void Add(int x, int y);
// public void Add (int x, int y, int z);
// public void Add (Double x, double y);
```

```
30
80
100.86
```

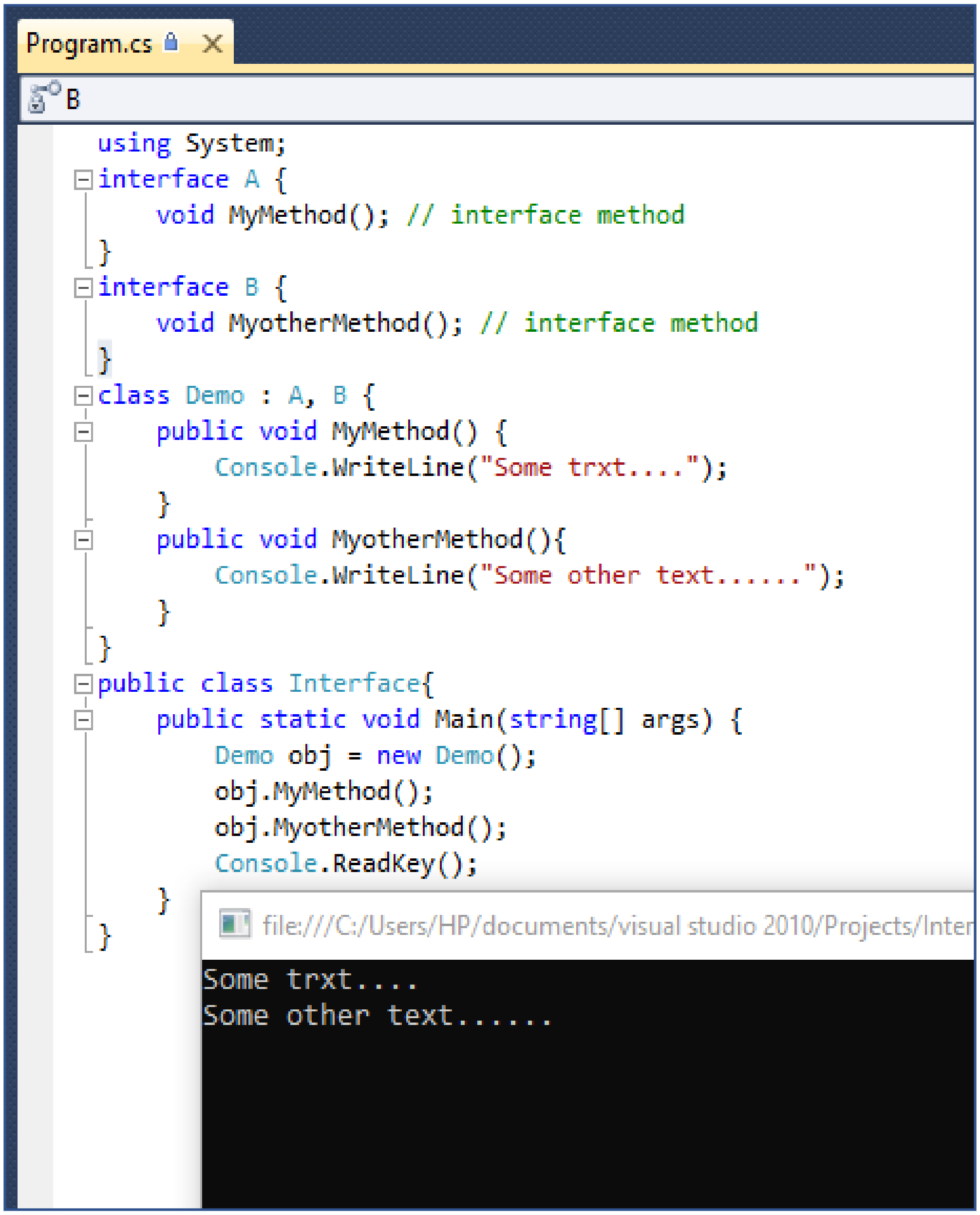
8. Abstraction programe:



```
using System;
public abstract class Animal
{
public abstract void animalsound();
public void Eat()
{
    Console.WriteLine("Eating.....");
}
public class Dog : Animal
{
    public override void animalsound()
    {
        Console.WriteLine("Barging....");
    }
}
    public class Abstractionprograme
    {
        static void Main(string[] args)
        {
            Dog obj =new Dog();
            obj.animalsound();
            obj.Eat();
            Console.ReadKey();
        }
    }
}
```

```
Barging....
Eating.....
```

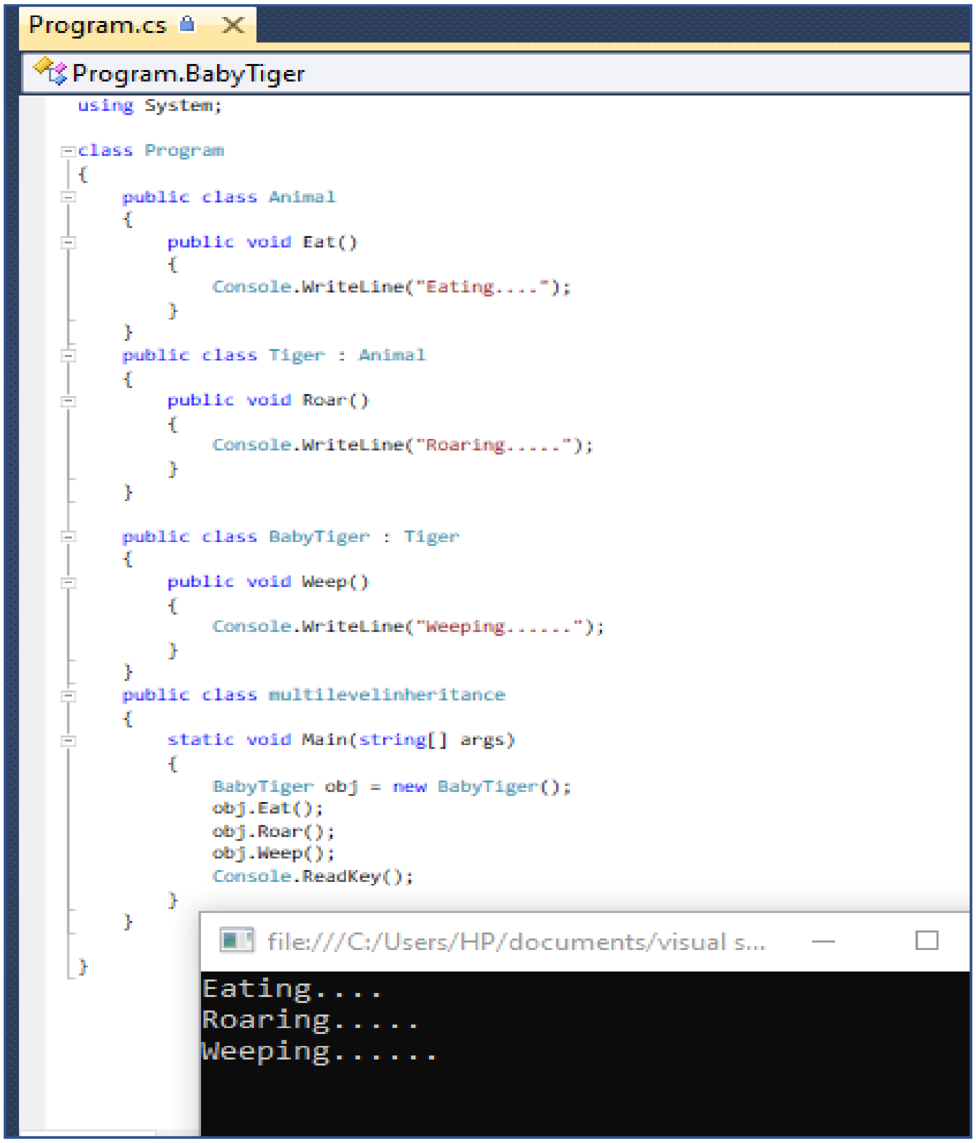
9. Multiple Inheritance:


Program.cs
B
file:///C:/Users/HP/documents/visual studio 2010/Projects/Inter

```
using System;
interface A {
    void MyMethod(); // interface method
}
interface B {
    void MyotherMethod(); // interface method
}
class Demo : A, B {
    public void MyMethod() {
        Console.WriteLine("Some trxt....");
    }
    public void MyotherMethod(){
        Console.WriteLine("Some other text......");
    }
}
public class Interface{
    public static void Main(string[] args) {
        Demo obj = new Demo();
        obj.MyMethod();
        obj.MyotherMethod();
        Console.ReadKey();
    }
}
```

```
Some trxt....
Some other text......
```

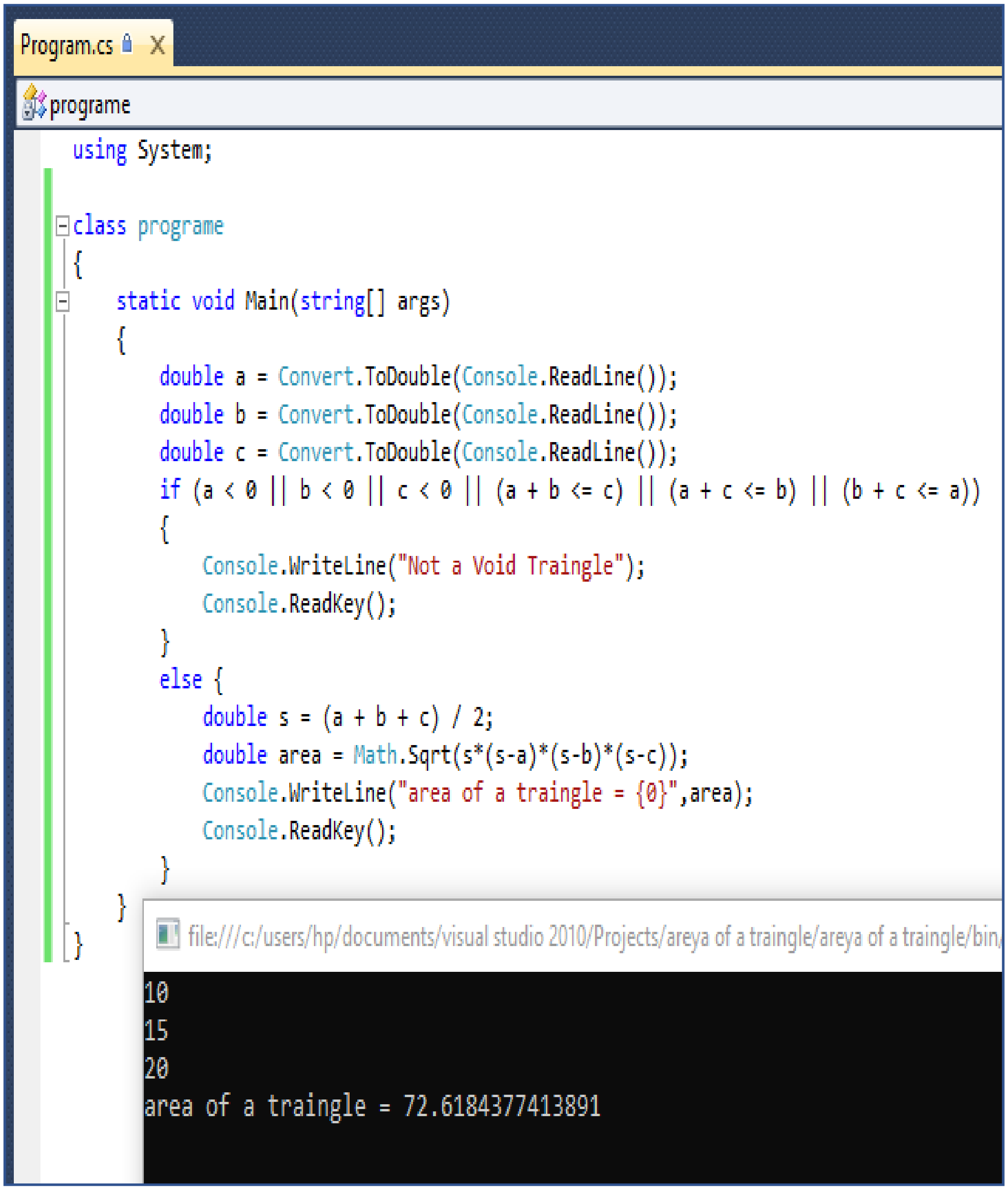
10. Multilevel Inheritance:



```
using System;

class Program
{
    public class Animal
    {
        public void Eat()
        {
            Console.WriteLine("Eating....");
        }
    }
    public class Tiger : Animal
    {
        public void Roar()
        {
            Console.WriteLine("Roaring.....");
        }
    }

    public class BabyTiger : Tiger
    {
        public void Weep()
        {
            Console.WriteLine("Weeping......");
        }
    }
    public class multilevelinheritance
    {
        static void Main(string[] args)
        {
            BabyTiger obj = new BabyTiger();
            obj.Eat();
            obj.Roar();
            obj.Weep();
            Console.ReadKey();
        }
    }
}
```

```
Eating....
Roaring.....
Weeping......
```

11. Areya of a triangle:

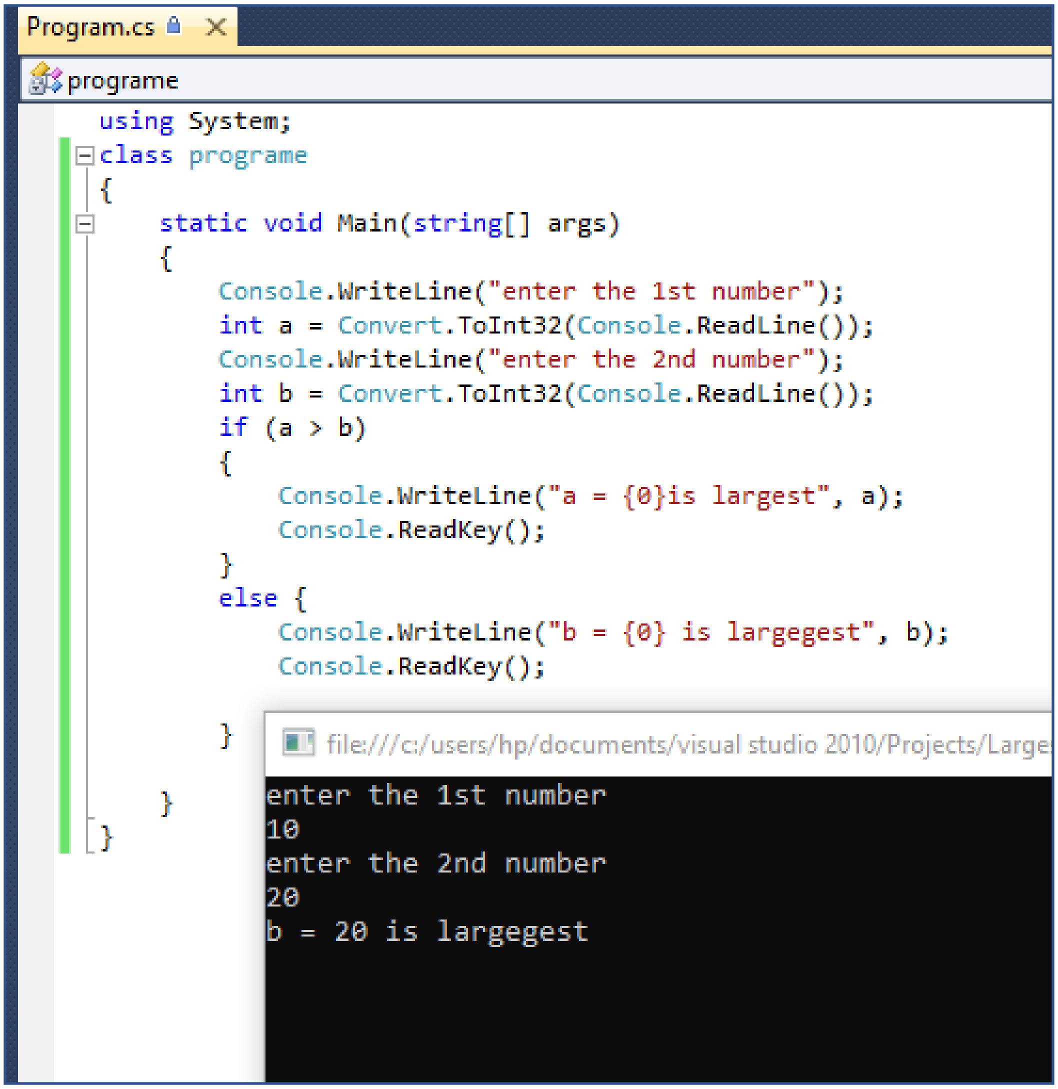


```
using System;

class programe
{
    static void Main(string[] args)
    {
        double a = Convert.ToDouble(Console.ReadLine());
        double b = Convert.ToDouble(Console.ReadLine());
        double c = Convert.ToDouble(Console.ReadLine());
        if (a < 0 || b < 0 || c < 0 || (a + b <= c) || (a + c <= b) || (b + c <= a))
        {
            Console.WriteLine("Not a Void Traingle");
            Console.ReadKey();
        }
        else {
            double s = (a + b + c) / 2;
            double area = Math.Sqrt(s*(s-a)*(s-b)*(s-c));
            Console.WriteLine("area of a traingle = {0}",area);
            Console.ReadKey();
        }
    }
}
```

file:///c:/users/hp/documents/visual studio 2010/Projects/areya of a traingle/areya of a traingle/bin/

```
10
15
20
area of a traingle = 72.6184377413891
```

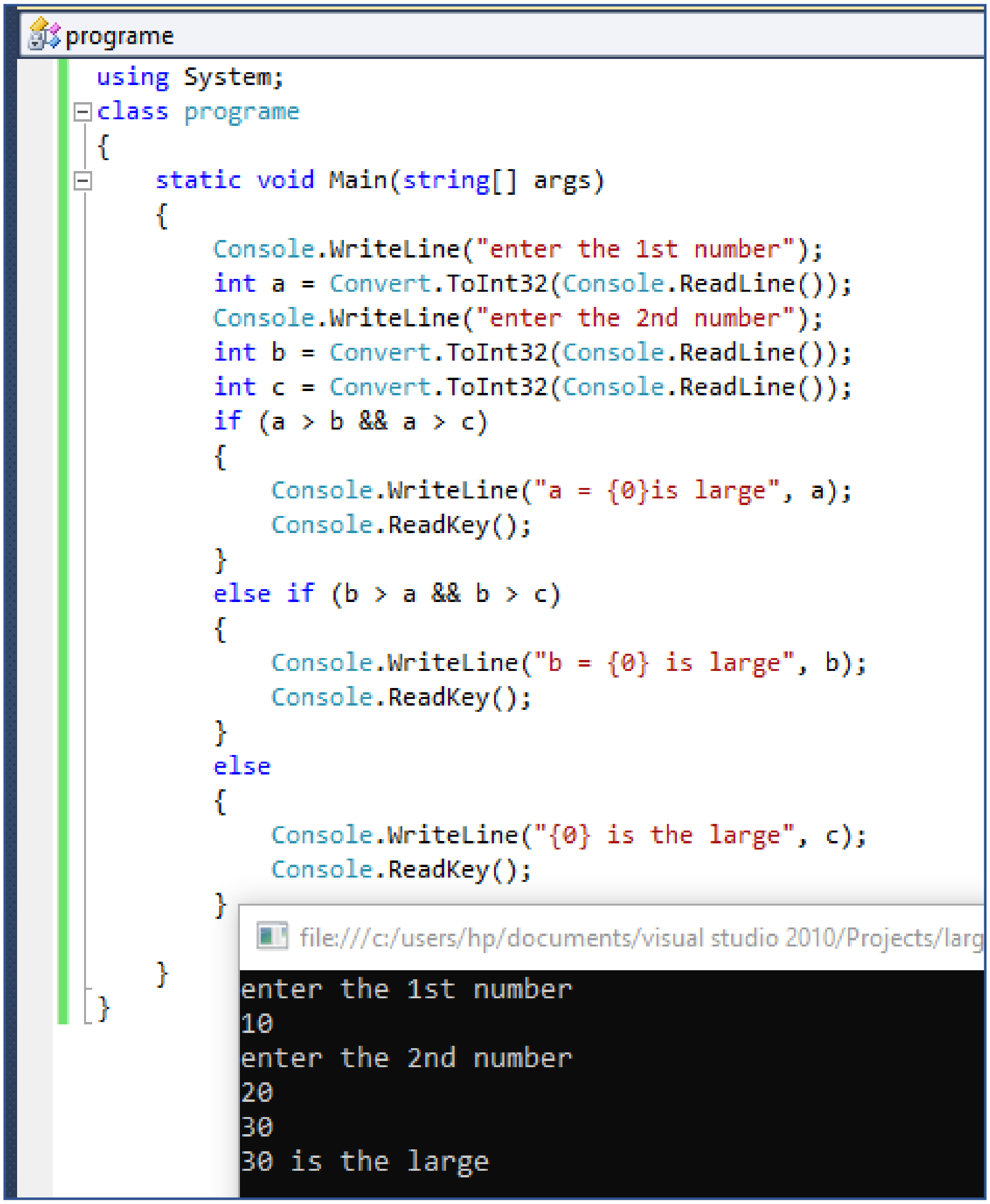
12. Largest number between 2 nombers:


Program.cs
programe
file:///c:/users/hp/documents/visual studio 2010/Projects/Large

```
using System;
class programe
{
    static void Main(string[] args)
    {
        Console.WriteLine("enter the 1st number");
        int a = Convert.ToInt32(Console.ReadLine());
        Console.WriteLine("enter the 2nd number");
        int b = Convert.ToInt32(Console.ReadLine());
        if (a > b)
        {
            Console.WriteLine("a = {0}is largest", a);
            Console.ReadKey();
        }
        else {
            Console.WriteLine("b = {0} is largegest", b);
            Console.ReadKey();

        }

    }
}
```

```
enter the 1st number
10
enter the 2nd number
20
b = 20 is largegest
```

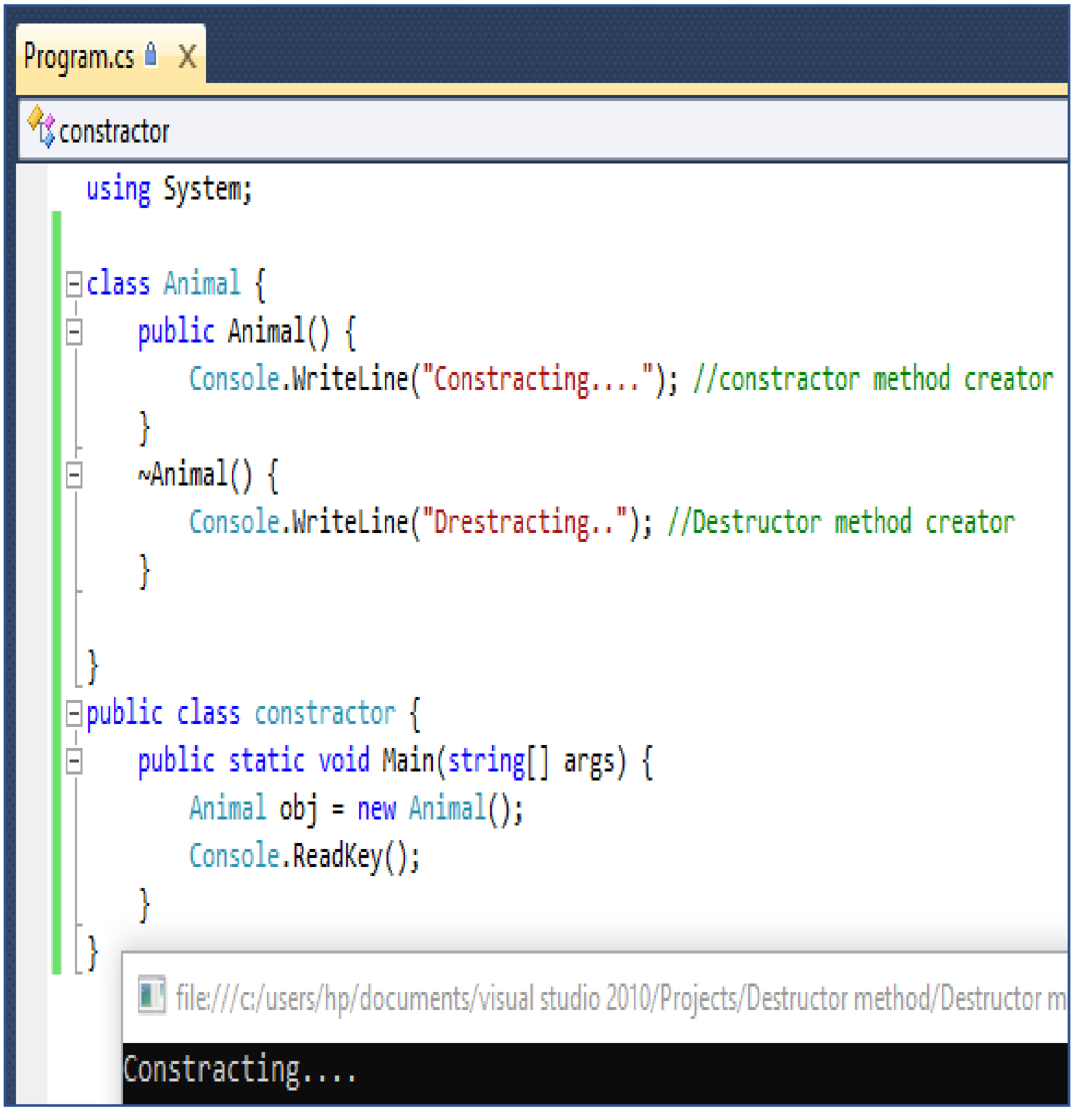
13. Largest number between 3 numbers:


programe
file:///c:/users/hp/documents/visual studio 2010/Projects/larg

```
using System;
class programe
{
    static void Main(string[] args)
    {
        Console.WriteLine("enter the 1st number");
        int a = Convert.ToInt32(Console.ReadLine());
        Console.WriteLine("enter the 2nd number");
        int b = Convert.ToInt32(Console.ReadLine());
        int c = Convert.ToInt32(Console.ReadLine());
        if (a > b && a > c)
        {
            Console.WriteLine("a = {0}is large", a);
            Console.ReadKey();
        }
        else if (b > a && b > c)
        {
            Console.WriteLine("b = {0} is large", b);
            Console.ReadKey();
        }
        else
        {
            Console.WriteLine("{0} is the large", c);
            Console.ReadKey();
        }

    }
}
```

```
enter the 1st number
10
enter the 2nd number
20
30
30 is the large
```

14. Constractor -Distractor method:

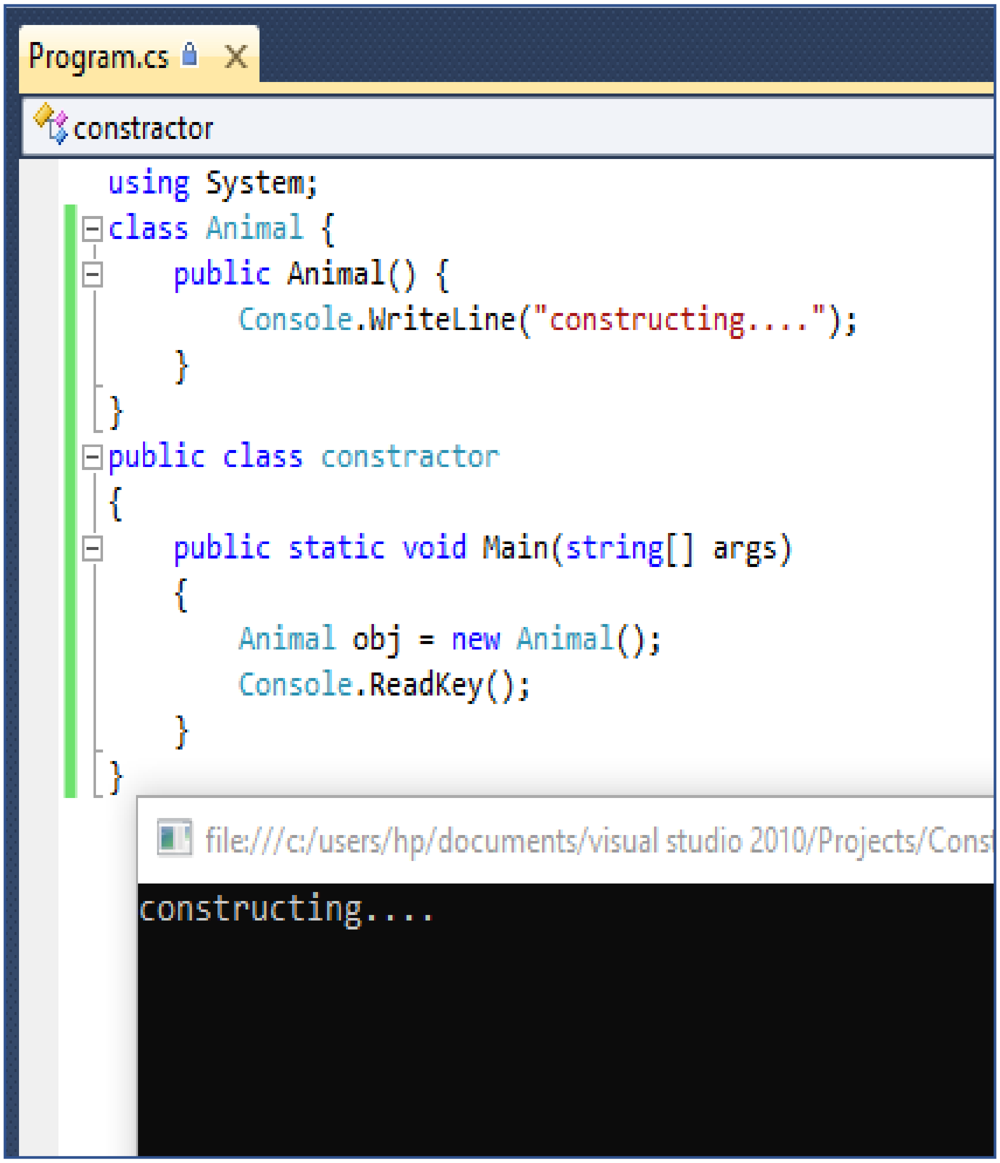


```
using System;

class Animal {
    public Animal() {
        Console.WriteLine("Constracting...."); //constractor method creator
    }
    ~Animal() {
        Console.WriteLine("Drestracting.."); //Destructor method creator
    }

}
public class constractor {
    public static void Main(string[] args) {
        Animal obj = new Animal();
        Console.ReadKey();
    }
}
```

file:///c:/users/hp/documents/visual studio 2010/Projects/Destructor method/Destructor m

```
Constracting....
```

15. Constractor method:

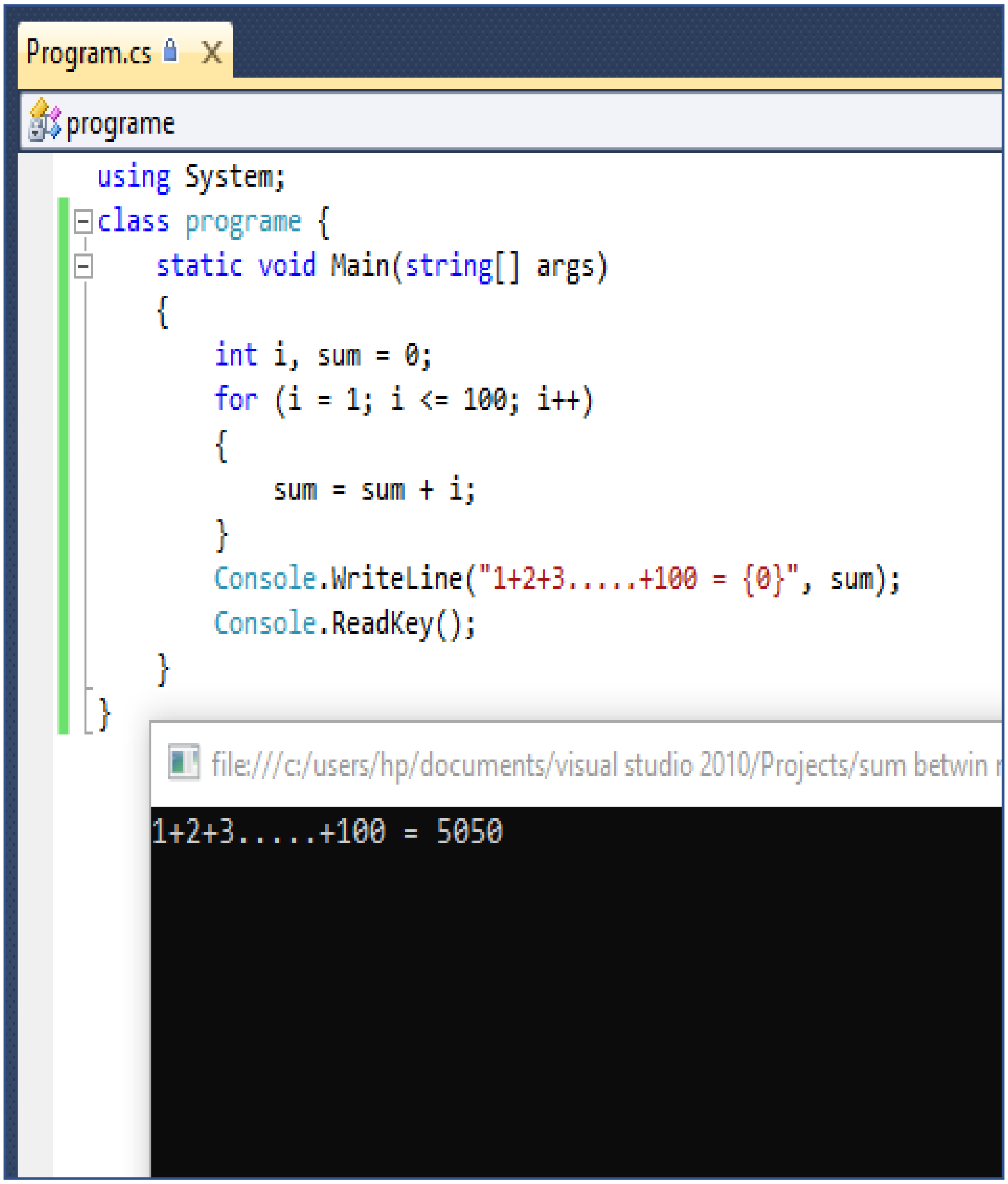


```
using System;
class Animal {
    public Animal() {
        Console.WriteLine("constructing....");
    }
}
public class constractor
{
    public static void Main(string[] args)
    {
        Animal obj = new Animal();
        Console.ReadKey();
    }
}
```

file:///c:/users/hp/documents/visual studio 2010/Projects/Cons

```
constructing....
```

16. For loop programe:

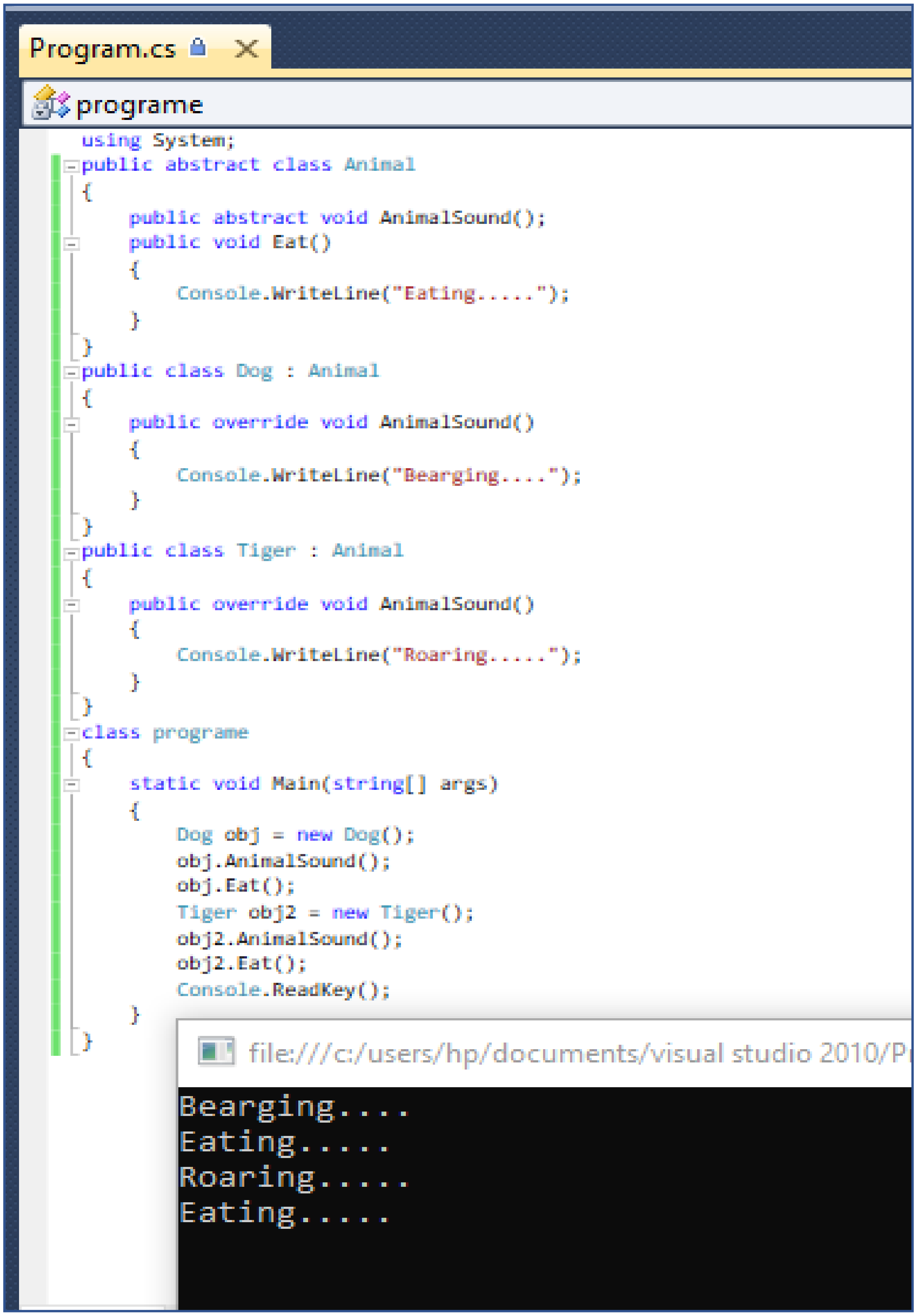


Program.cs
programe
file:///c:/users/hp/documents/visual studio 2010/Projects/sum betwin

```
using System;
class programe {
    static void Main(string[] args)
    {
        int i, sum = 0;
        for (i = 1; i <= 100; i++)
        {
            sum = sum + i;
        }
        Console.WriteLine("1+2+3.....+100 = {0}", sum);
        Console.ReadKey();
    }
}
```

```
1+2+3.....+100 = 5050
```

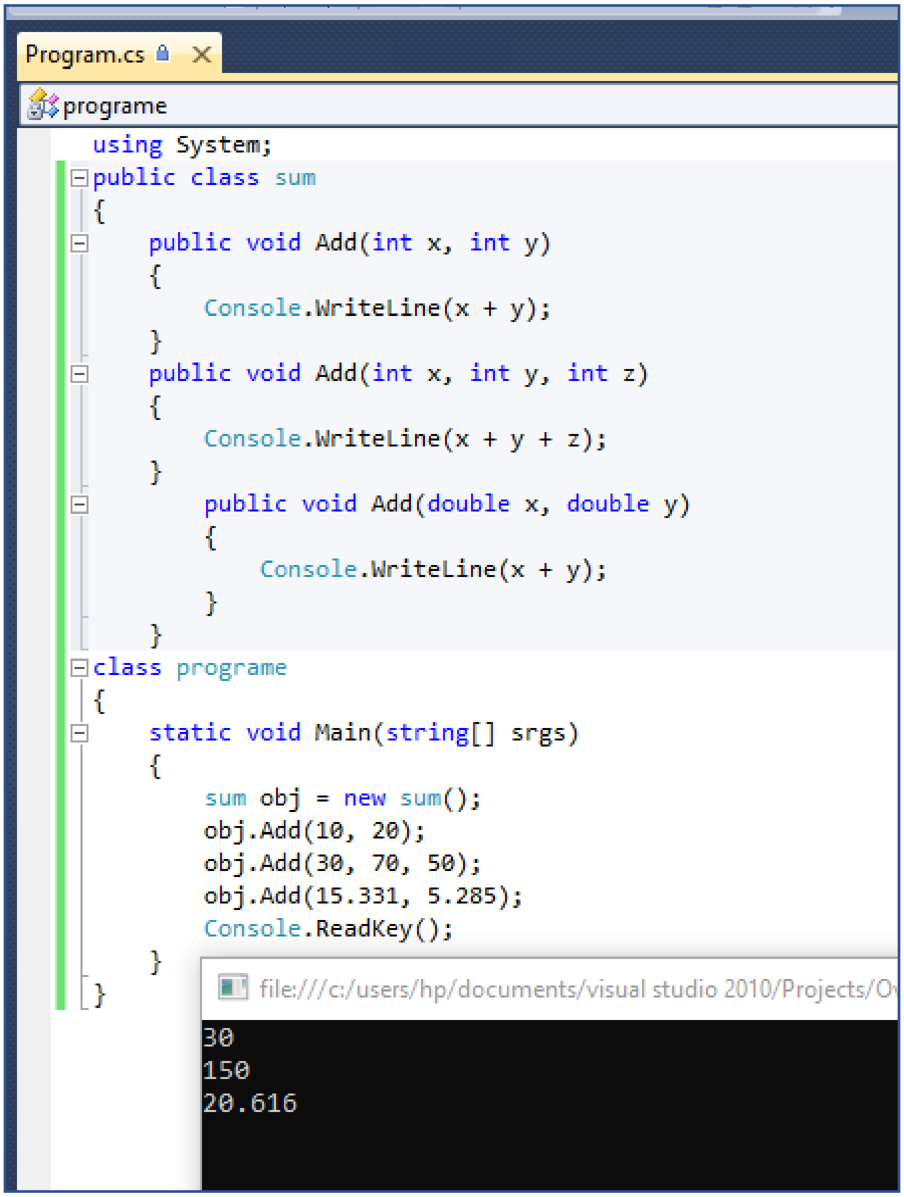
17. Abstructor method programe:



```
using System;
public abstract class Animal
{
    public abstract void AnimalSound();
    public void Eat()
    {
        Console.WriteLine("Eating.....");
    }
}
public class Dog : Animal
{
    public override void AnimalSound()
    {
        Console.WriteLine("Bearging....");
    }
}
public class Tiger : Animal
{
    public override void AnimalSound()
    {
        Console.WriteLine("Roaring.....");
    }
}
class programe
{
    static void Main(string[] args)
    {
        Dog obj = new Dog();
        obj.AnimalSound();
        obj.Eat();
        Tiger obj2 = new Tiger();
        obj2.AnimalSound();
        obj2.Eat();
        Console.ReadKey();
    }
}
```

```
Bearging....
Eating.....
Roaring.....
Eating.....
```

18. Overloading method programe:

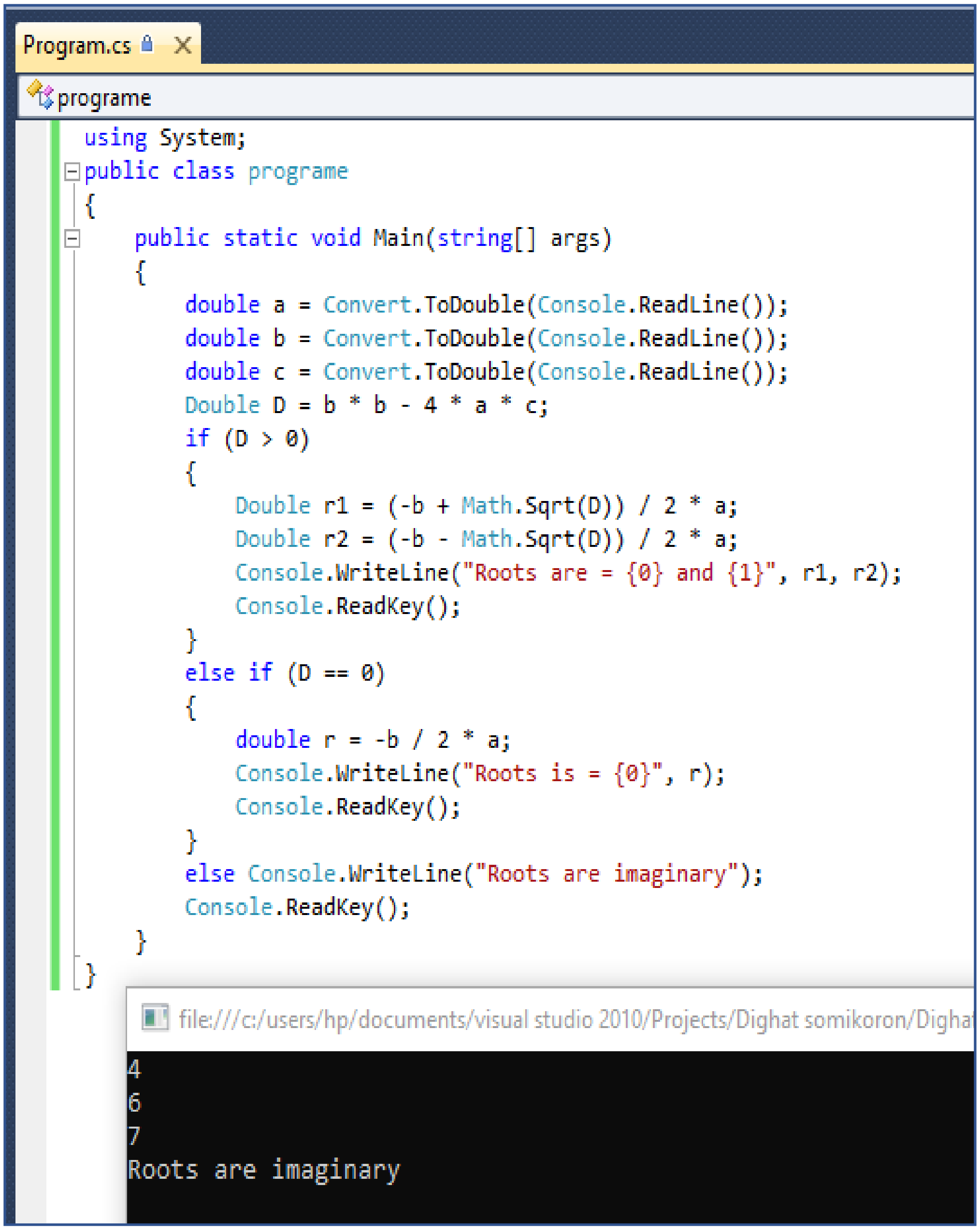


```
using System;
public class sum
{
    public void Add(int x, int y)
    {
        Console.WriteLine(x + y);
    }
    public void Add(int x, int y, int z)
    {
        Console.WriteLine(x + y + z);
    }
        public void Add(double x, double y)
        {
            Console.WriteLine(x + y);
        }
    }
class programe
{
    static void Main(string[] srgs)
    {
        sum obj = new sum();
        obj.Add(10, 20);
        obj.Add(30, 70, 50);
        obj.Add(15.331, 5.285);
        Console.ReadKey();
    }
}
```

file:///c:/users/hp/documents/visual studio 2010/Projects/O

```
30
150
20.616
```

19. Dighat somikoron ar Programe:


Program.cs
programe
file:///c:/users/hp/documents/visual studio 2010/Projects/Dighat somikoron/Digha

```
using System;
public class programe
{
    public static void Main(string[] args)
    {
        double a = Convert.ToDouble(Console.ReadLine());
        double b = Convert.ToDouble(Console.ReadLine());
        double c = Convert.ToDouble(Console.ReadLine());
        Double D = b * b - 4 * a * c;
        if (D > 0)
        {
            Double r1 = (-b + Math.Sqrt(D)) / 2 * a;
            Double r2 = (-b - Math.Sqrt(D)) / 2 * a;
            Console.WriteLine("Roots are = {0} and {1}", r1, r2);
            Console.ReadKey();
        }
        else if (D == 0)
        {
            double r = -b / 2 * a;
            Console.WriteLine("Roots is = {0}", r);
            Console.ReadKey();
        }
        else Console.WriteLine("Roots are imaginary");
        Console.ReadKey();
    }
}
```

```
4
6
7
Roots are imaginary
```