

## INHERITANCE :

```
2  using System.Collections.Generic;
3  using System.Linq;
4
5  public class College
6  {
7      public string cname = "PSG";
8  }
9  public class Student: College
10 {
11     public string sname="JAGADESH";
12 }
13
14 public class Program
15 {
16     public static void Main()
17     {
18         Student s = new Student();
19         Console.WriteLine("College Name : " + s.cname);
20         Console.WriteLine("Student Name: " + s.sname);
21     }
22 }
23
```

Run

College Name : PSG  
Student Name: JAGADESH

```
1  using System;
2  using System.Collections.Generic;
3  using System.Linq;
4
5
6  public class Animal
7  {
8      public void eat() { Console.WriteLine("Eating..."); }
9  }
10 public class Dog: Animal
11 {
12     public void bark() { Console.WriteLine("Barking..."); }
13 }
14 public class BabyDog : Dog
15 {
16     public void weep() { Console.WriteLine("Weeping..."); }
17 }
18 public class Program
19 {
20     public static void Main()
21     {
22         BabyDog d1 = new BabyDog();
23         d1.eat();
24         d1.bark();
25         d1.weep();
26     }
27 }
28
29
```

Run

Eating...  
Barking...  
Weeping...

## POLYMORPHISM :

```
1  using System;
2  class Shape
3  {
4      public virtual void draw()
5      {
6          Console.WriteLine("draw a shape");
7      }
8  }
9
10 class Circle : Shape
11 {
12     public override void draw()
13     {
14         Console.WriteLine("draw an circle");
15         base.draw();
16     }
17 }
18
19 class Program
20 {
21     static void Main(string[] args)
22     {
23         Shape c = new Circle();
24         c.draw();
25     }
26 }
```

Run

draw an circle  
draw a shape

```
1  using System;
2  class Animal
3  {
4      public virtual void animalSound()
5      {
6          Console.WriteLine("The animal makes a sound");
7      }
8  }
9
10 class Pig : Animal
11 {
12     public override void animalSound()
13     {
14         Console.WriteLine("The pig says: wee wee");
15     }
16 }
17
18 class Dog : Animal
19 {
20     public override void animalSound()
21     {
22         Console.WriteLine("The dog says: bow wow");
23     }
24 }
25
26 class Program
27 {
28     static void Main(string[] args)
29     {
30         Animal myAnimal = new Animal();
31         Animal myPig = new Pig();
32         Animal myDog = new Dog();
33
34         myAnimal.animalSound();
35         myPig.animalSound();
36         myDog.animalSound();
37     }
38 }
```

Run

The animal makes a sound  
The pig says: wee wee  
The dog says: bow wow

## ABSTRACT CLASS :

```
1  using System;
2  abstract class Employee
3  {
4      public abstract void role();
5
6      public void dateofjoin()
7      {
8          Console.WriteLine("16-12-21");
9      }
10 }
11
12 class Developer : Employee
13 {
14     public override void role()
15     {
16         Console.WriteLine("Develope a Website");
17     }
18 }
19
20 class Program
21 {
22     static void Main(string[] args)
23     {
24         Developer d = new Developer();
25         d.role();
26         d.dateofjoin();
27     }
28 }
29
30 }
```

Run

Develope a Website  
16-12-21

```
1  using System;
2  abstract class Product
3  {
4      public abstract void item();
5
6      public void product()
7      {
8          Console.WriteLine("Laptop");
9      }
10 }
11
12 class Customer : Product
13 {
14     public override void item()
15     {
16         Console.WriteLine("item : 2");
17     }
18 }
19
20 class Program
21 {
22     static void Main(string[] args)
23     {
24         Customer c = new Customer();
25         c.product();
26         c.item();
27     }
28 }
29
30 }
```

Run

Laptop  
item : 2