



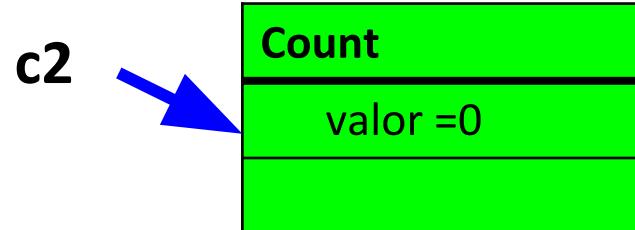
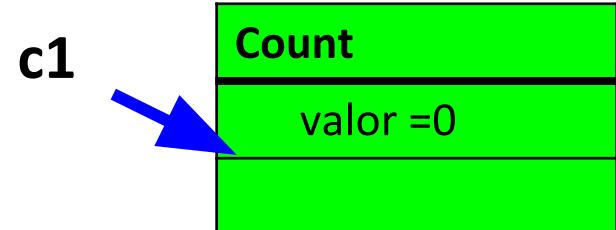
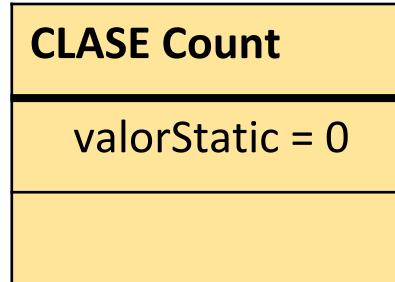
Estáticos



Los **atributos estáticos** pertenecen a la **CLASE**, no se crean en cada objeto

```
class Count{  
    int valor;  
    static int valorStatic;  
}
```

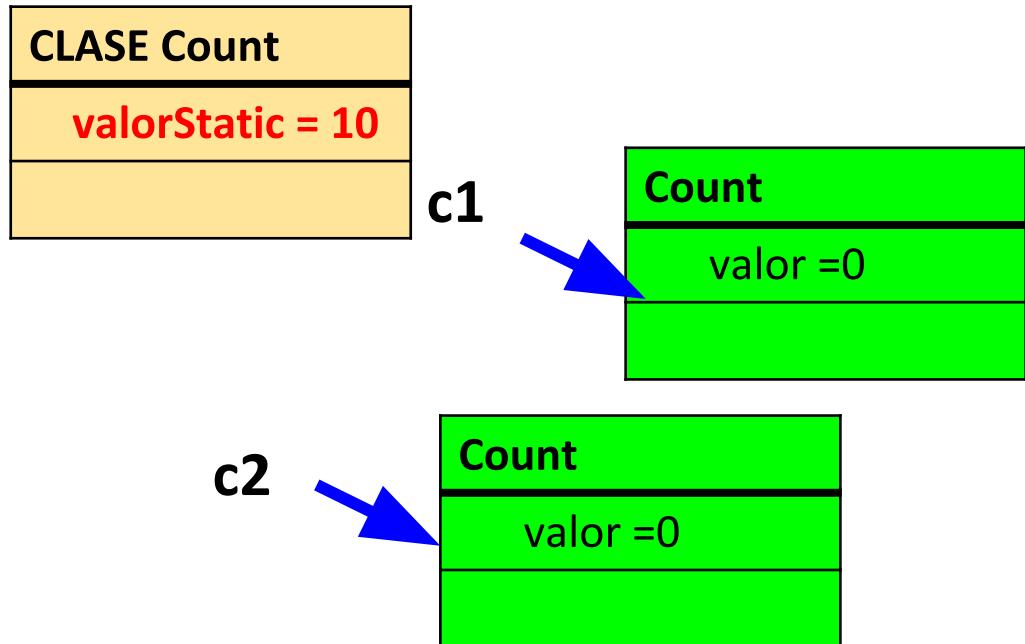
```
Count c1=new Count();  
Count c2=new Count();
```



```
class Count{  
    int valor;  
    static int valorStatic;  
}  
  
Count c1=new Count();  
Count c2=new Count();
```

## Estáticos

Como los estáticos pertenecen a la clase, la forma correcta de accederlos es **NOMBRECLASE.ATTRIBUTOESTATICO**  
Count.valorStatic = 10;





Certified  
Associate

JAVA SE 8 PROGRAMMER

```
class Count{  
    int valor;  
    static int valorStatic;  
}  
  
Count c1=new Count();
```

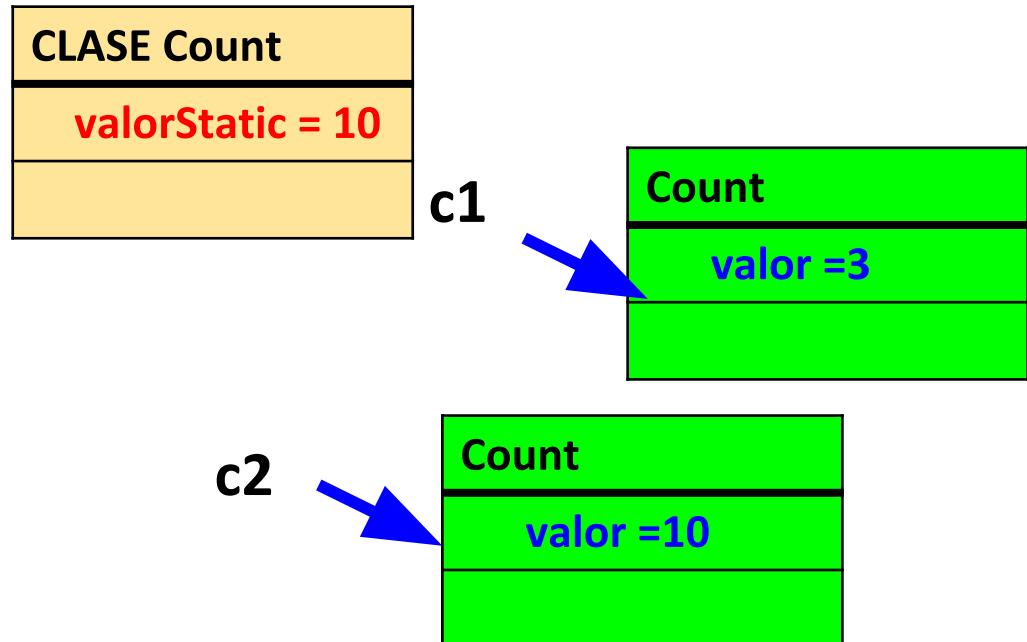
```
c1.valorStatic = 4;  
c1.valorStatic = c1.valorStatic + 10;
```

Cuando se invoca a un atributo estático usando el apuntador, esto es innecesario ya que el atributo no es del objeto sino de la clase. El compilador solamente marca un warning y el código compila y ejecuta correctamente, en ejecución hace la llamada correcta.

```
c1.valorStatic = 4; //Count.valorStatic  
c1.valorStatic = c1.valorStatic + 10;  
//Count.valorStatic=Count.valorStatic + 10;
```

```
class Count{  
    int valor;  
    static int valorStatic;  
}  
  
Count c1=new Count();  
Count c2=new Count();
```

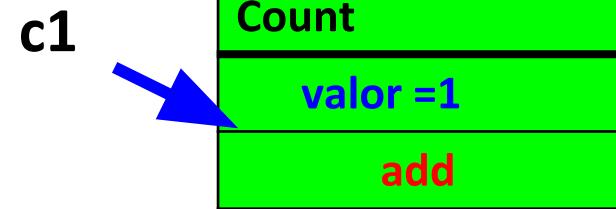
Para acceder a los atributos del Objeto (no estáticos), necesitamos obligatoriamente la referencia o apuntador  
`c1.valor=3; c2.valor=10;`



## Estáticos

```
class Count{  
    int valor;  
    public void add(){  
        valor++;  
    }  
}
```

```
Count c1=new Count();  
c1.add();
```

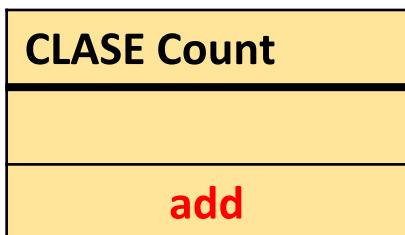


Desde el método **add** que es el objeto,  
modifico la variable **valor**, que también es del  
objeto

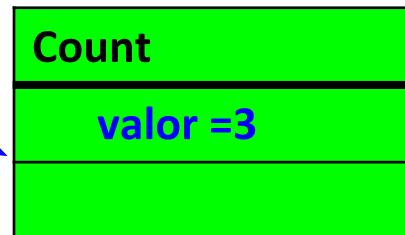
```
class Count{  
    int valor;  
  
    public static void add(){  
        valor++;  
    }  
}
```

ERROR DE COMPILEACIÓN!!

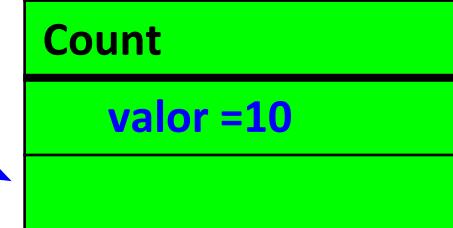
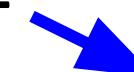
Los **métodos estáticos** pertenecen a la **CLASE**, no pueden acceder a los métodos del objeto directamente



c1



c2



```
public void metodo1(){  
    //  
}  
  
public static void metodo2(){  
    //  
}  
  
public void metodo3(){  
    //  
}
```

En compilación se debe analizar los

*Métodos Static*



```
class Test{  
    int valor;  
  
    public static void main String(args[]){  
        valor = 5;  
    }  
}
```



Los **métodos estáticos** pertenecen a la **CLASE**, no se crean en cada objeto.

Un método estático **no puede usar this**, porque no está en el objeto. Por lo tanto **un método estático no puede acceder sin apuntador a un atributo del objeto**



Certified  
Associate

JAVA SE 8 PROGRAMMER



```
class Test{  
    int valor;  
  
    public static void main String(args[]){  
        valor = 5;  
    }  
}
```



ERROR DE COMPILEACIÓN!!

```
class Test{  
    int valor;  
  
    public static void main String(args[]){  
        Test t1=new Test();  
        t1.valor = 5;  
    }  
}
```



Estáticos

```
class Test{  
    static int y;  
  
    public static void main String(args[]){  
        y = 5;  
    }  
}
```



El **método estático** accede a la **variable estática**, no es necesario ningún apuntador porque ambos están en la **CLASE**



```
class Position{  
    static int y;  
    int x;  
    public Position(int x, int y){  
        this.x=x;  
        this.y=y;  
    }  
}
```

No hay

*Métodos Static*



No hay análisis de errores de compilación por estáticos

## Compila sin errores?

```
class Position{  
    static int y;  
    int x;  
    public void addX(int a) {  
        x += a;  
    }  
    public void addY(int b) {  
        y += b;  
    }  
}
```

No hay

*Métodos Static*



No hay análisis de errores de compilación por estáticos



# Estáticos

Compila sin errores?

```
class Position{
    static int z;
    int x;
    public void addX(int a){
        x += a;
    }
    public static void addZ(int b){
        z += b;
    }
}
```



Certified  
Associate

JAVA SE 8 PROGRAMMER

# Estáticos

Compila sin errores?

```
class Position{
    static int z;
    int x;
    public void addX(int a){
        x += a;
    }
    public static void addZ(int b){
        z += b;
    }
}
```



Compila sin errores?

```
class Position{
    static int z;
    int x;
    public void addX(int a){
        x += a;
    }
    public static void addZ(int b){
        z += b;
    }
}
```



Utiliza z que es estático, por lo tanto está en la CLASE al igual que el método entonces no hay problema

Compila sin errores?

```
class Position{  
    static int z;  
    int x;  
    public void addX(int a){  
        x += a;  
    }  
  
    public static void addZ(int b){  
        z += x;  
    }  
}
```



Utiliza x que es del objeto, sin referencia. **ERROR DE COMPILEACIÓN!!**

La referencia implícita this.x no funciona, no existe this en el estático porque está en la clase



# Estáticos

Compila sin errores?

```
class Position{
    int z;
    public static void main(String args[]){
        Position pos=new Position();
        pos.z=10;
        new Position().z=8;
        System.out.println(z);
        this.z =12;
    }
}
```

Compila sin errores?

```
class Position{  
    int z;  
  
    public static void main(String args[]){  
        Position pos=new Position();  
        pos.z=10;  
        new Position().z=8;  
        System.out.println(z);  
        this.z =12;  
    }  
}
```



Compila sin errores?

```
class Position{  
    int z;  
  
    public static void main(String args[]) {  
  
        Position pos=new Position();  
        pos.z=10;                      // OK con referencia  
        new Position().z=8;              // OK con referencia  
        System.out.println(z);          //ERROR SIN REFERENCIA  
        this.z =12;                     //ERROR this no existe en el método estático  
    }  
}
```





# Estáticos

Compila sin errores?

```
class Position{  
    static int valor;  
  
    public void metodo(){  
        Position.valor=1;  
        this.valor=2;  
        valor=3;  
        Position p=new Position();  
        p.valor=4;  
    }  
}
```

Compila sin errores?

```
class Position{  
    static int valor;  
  
    public void metodo(){  
        Position.valor=1;  
        this.valor=2;//Position.valor=2;  
        valor=3; //Position.valor=3;  
        Position p=new Position();  
        p.valor=4;//Position.valor=4;  
    }  
}
```





# Estáticos

```
class Apple{  
    double price;  
    static int count;  
    public Apple(){  
        this.price++;  
        count++;  
    }  
}
```



Certified  
Associate

JAVA SE 8 PROGRAMMER

# Estáticos

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        this.price++;
        count++;
    }
    public static void main(String args[]){
        count++;  price++;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(a.price+" "+b.price);
    }
}
```

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        this.price++;
        count++;
    }
    public static void main(String args[]){
        count++; price++;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(a.price+" "+b.price);
    }
}
```



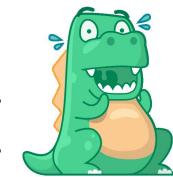
Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        this.price++;
        count++;
    }
    public static void main(String args[]){
        count++;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+price);
    }
}
```



Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        this.price++;
        count++;
    }
    public static void main(String args[]){
        count++;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```



Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        this.price++;
        count++;
    }
    public static void main(String args[]){
        count++;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```





Certified  
Associate

JAVA SE 8 PROGRAMMER

# Estáticos

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

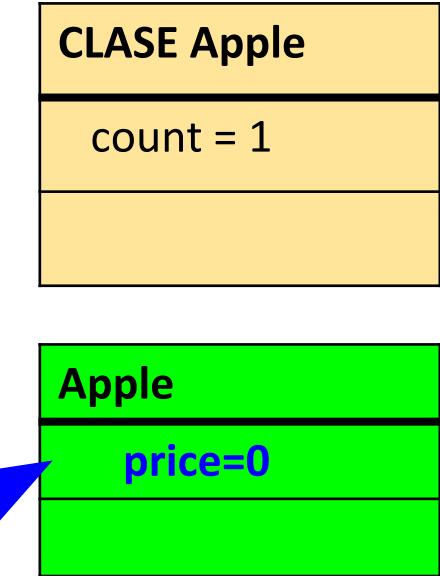
CLASE Apple

count = 1

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

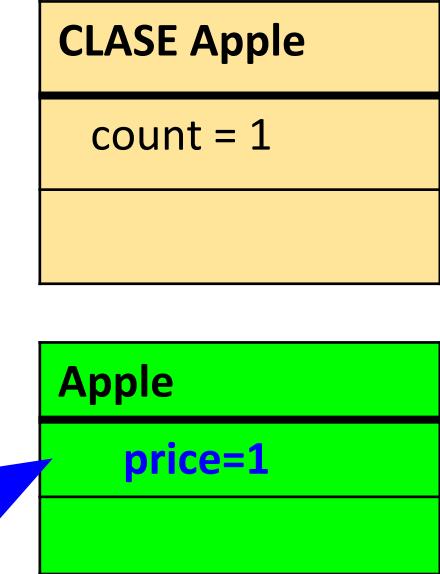
a



Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

a





Certified  
Associate

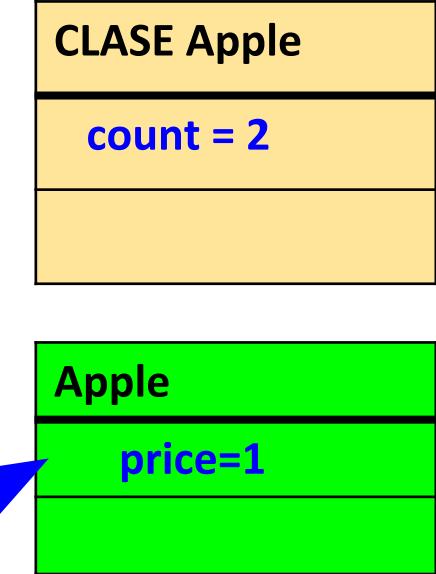
JAVA SE 8 PROGRAMMER

# Estáticos

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;//++Apple.count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

a



Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

CLASE Apple

count = 2

Apple

price=1

a

Apple

price=0

b

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

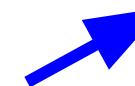
CLASE Apple

count = 2

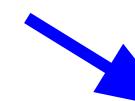
Apple

price=1

a



b



Apple

price =1

Cuál es la salida en consola?

```
class Apple{
    int price;
    static int count;
    public Apple(){
        ++this.price;
        ++count;
    }
    public static void main(String args[]){
        ++count;
        Apple a=new Apple();
        Apple b=new Apple();
        System.out.print(count+" "+a.price);
    }
}
```

CLASE Apple

count = 3

Apple

price=1

a



b



Apple

price=1

Cuál es la salida en consola?

```
class Apple{  
    int price;  
    static int count;  
    public Apple(){  
        ++this.price;  
        ++count;  
    }  
  
    public static void main(String args[]){  
        ++count;  
        Apple a=new Apple();  
        Apple b=new Apple();  
        System.out.print(count+" "+a.price);  
    }  
}
```

Salida en Consola: 3 1

CLASE Apple

count = 3

Apple

price=1

a



b



Las mismas reglas aplicadas a los **atributos estáticos**,  
aplican a los **métodos estáticos**

```
class Test {  
    public void metodo1(){  }  
  
    public static void main(String args[]){  
        metodo1();  
    }  
}
```



**ERROR DE COMPILEACIÓN!!**