Ejemplo de Herencia y Utilización del Sort

```
public abstract class Shape {

	public abstract void draw();
	public abstract void erase();
	public abstract float getArea();

}


public class Circulo extends Shape{
	private int radio;
	private int x;
	private int y;

	public Circulo(int r, int cx, int cy){
		radio = r;
		x = cx;
		y = cy;
	}

	public void draw(){
	    System.out.println("Circulo, Radio=" + radio + " X=" + x + " Y=" + y);
	}

	public void erase(){
		System.out.println("Borra Circulo");
	}

	public float getArea(){
		return (float)(Math.PI * Math.pow(radio, 2));
	}
}


public class Cuadrado extends Shape{
	private int ancho;
	private int largo;
	private int x;
	private int y;

	public Cuadrado(int a, int l, int cx, int cy){
		ancho = a;
		largo = l;
		x = cx;
		y = cy;
	}

	public void draw(){
		System.out.println("Cuadrado, Ancho=" + ancho + " Largo=" + largo +
" X=" + x + " Y=" + y);
	}

	public void erase(){
		System.out.println("Borra Cuadrado");
	}

	public float getArea(){
		return ancho * largo;
	}
}
```

```
import java.util.Comparator;

public class Comparador implements Comparator{


	public int compare(Object o1, Object o2){
		float a1 = ((Shape)o1).getArea();
		float a2 = ((Shape)o2).getArea();
		int res = ((Comparable)a1).compareTo(a2);
		return res;
	}
}
```

Main:

```
	public static void main(String[] args) {
		Shape S = new Circulo(5,1,1);
		Circulo C = new Circulo(3,1,1);
		System.out.println("Area: " + S.getArea());
		System.out.println("Area: " + C.getArea());
		S = new Cuadrado(2,2,0,0);
		System.out.println("Area: " + S.getArea());
		System.out.println("- -");

		Circulo C2 = new Circulo(6,1,0);
		Vector v = new Vector();
		v.add(C);		v.add(C2);		v.add(S);
		Comparador Comp = new Comparador();
		for(int i = 0; i < v.size(); i++)
		    System.out.println("Area: "+((Shape)v.elementAt(i)).getArea());
		System.out.println("- -");

		Collections.sort(v,Comp);
		for(int i = 0; i < v.size(); i++)
		    System.out.println("Area: "+((Shape)v.elementAt(i)).getArea());

	}
```