

Java Assignment

20/11/2020

Using Comparator Interface

```
import java.util.ArrayList;
import java.util.Collections;
import java.util.Comparator;

public class Fan {
    String colour;
    int cost;
    String brand;
    public Fan(String colour,int cost,String brand)
    {
        this.colour=colour;
        this.cost=cost;
        this.brand=brand;
    }
    public String toString()
    {
        return colour+" "+cost+" "+brand;
    }
}
class Alpha implements Comparator
{
    public int compare(Object x,Object y)
    {
        if(((Fan)(x)).cost>((Fan)(y)).cost)
        {
            return 1;
        }
        else
        {
            return -1;
        }
    }
}
```

```

    }
}
class FanApp
{
    public static void main(String[] args)
    {
        Fan f1=new Fan("white",550,"bajaj");
        Fan f2=new Fan("red",600,"crompton");
        Fan f3=new Fan("pink",750,"orient");
        Fan f4=new Fan("yellow",800,"usha");
        Fan f5=new Fan("green",850,"havells");
        ArrayList<Fan>al=new ArrayList<Fan>();
        al.add(f1);
        al.add(f2);
        al.add(f3);
        al.add(f4);
        al.add(f5);
        System.out.println(al);

        Alpha a=new Alpha();
        Collections.sort(al,a);
        System.out.println(al);
    }
}

```

Output:

[white 550 bajaj, red 600 crompton, pink 750 orient, yellow 800 usha, green 850 havells]

[white 550 bajaj, yellow 800 usha, red 600 crompton, pink 750 orient, green 850 havells]

Using Comparable Interface

```
import java.util.ArrayList;
import java.util.Collections;

public class Fan implements Comparable
{
    String colour;
    int cost;
    String brand;
    public Fan(String colour,int cost,String brand)
    {
        this.colour=colour;
        this.cost=cost;
        this.brand=brand;
    }
    public String toString()
    {
        return colour+" "+cost+" "+brand;
    }

    public int compareTo(Object y)
    {
        if(this.cost>((Fan)(y)).cost)
        {
            return 1;
        }
        else
        {
            return -1;
        }
    }
}
```

```
class FanApp
{
    public static void main(String[] args)
    {
        Fan f1=new Fan("white",550,"bajaj");
        Fan f2=new Fan("red",600,"crompton");
        Fan f3=new Fan("pink",750,"orient");
        Fan f4=new Fan("yellow",800,"usha");
        Fan f5=new Fan("green",850,"havells");
        ArrayList<Fan>al=new ArrayList<Fan>();
        al.add(f1);
        al.add(f2);
        al.add(f3);
        al.add(f4);
        al.add(f5);
        System.out.println(al);
        Collections.sort(al);
        System.out.print(al);
    }
}
```

Output:

[white 550 bajaj, red 600 crompton, pink 750 orient, yellow 800 usha, green 950 havells]

[white 650 bajaj, yellow 700 usha, red 800 crompton, pink 850 orient, green 950 havells]