

Distance.java

```
////////////////////////////////////  
//www.karamian.com  
//Program LinkedList  
////////////////////////////////////  
  
import java.io.*;  
import java.util.*;  
  
//*****  
// Class Distance  
//*****  
  
public class Distance implements Comparable  
{  
    private int foot;  
    private int inch;  
  
    //=====  
    // The Distance constructor.  
    //=====  
  
    public Distance()  
    {  
        foot=0;  
        inch=0;  
    }// end Distance constructor  
  
    //=====  
    // The Distance constructor.  
    //=====  
  
    public Distance(int f, int i)  
    {  
        foot=f+i/12;  
        inch=i%12;  
    }// end Distance constructor  
  
    //=====  
    // The printDistance method.  
    //=====  
  
    public void printDistance()  
    {  
        System.out.println(foot+ " feet "+ inch+ " inches");  
    }// end printDistance method  
  
    //=====  
    // The compareTo method.  
    //=====  
  
    public int compareTo(Object d)  
    {  
        Distance x=(Distance) d;  
        int s1=foot*12+inch;  
        int s2=x.foot*12+x.inch;  
        if(s1==s2)  
            return 0;  
        else if(s1<s2)  
            return -1;  
        else  
            return 1;  
    }  
}
```

Distance.java

```
    } // end compareTo method

    //=====
    // The sum method.
    //=====

    public Distance sum(Distance d)
    {
        Distance sumTemp=new Distance();
        sumTemp.foot=foot+d.foot+(inch+d.inch)/12;
        sumTemp.inch=(inch+d.inch)%12;
        return sumTemp;
    } // end sum method
} //end of Class Distance.
```