import java.util.Arrays;

import java.util.Comparators;

import java.util.Stack;

public class interval

{

int start;

int end;

interval(int start,int end)

{

this.start=start;

this.end=end;

}

}

public void merge(interval arr[])

{

if(arr.length==0)

{

return;

}

Arrays.sort(arr,new Comparator<interval>(){

public int compare(interval i1,interval i2)

{

i1.start-i2.start;

}

});

Stack<interval> st=new Stack<>();

st.push(arr[0]);

for(int i=1 ;i<arr.length;i++)

{

interval top=st.peek();

if(top.end<arr[i].start) //not in the interval so we skip

{

st.push(arr[i]);

}

else if(top.end<arr[i].end) //if its in the range we update the next end number to the previous end number.

{

top.end=arr[i].end;

st.pop();

st.push(top);

}

}

while(!st.isEmpty())

{

interval t=st.peek();

System.out.print("["+t.start+","+t.end+"] ");

}

}

public class MyClass {

public static void main(String args[])

{

interval arr[]=new interval[4];

arr[0]=new interval(6,8);

arr[1]=new interval(1,9);

arr[2]=new interval(2,4);

arr[3]=new interval(4,7);

merge(arr);

}

}