```java
/**
 * Definition for an interval.
 * public class Interval {
 *     int start;
 *     int end;
 *     Interval() { start = 0; end = 0; }
 *     Interval(int s, int e) { start = s; end = e; }
 * }
 */
class Solution {
    public List<Interval> merge(List<Interval> intervals) {
        List<Interval> res = new ArrayList<>();
        if (intervals == null || intervals.size() == 0)
            return res;
        Collections.sort(intervals,
                new Comparator<Interval>(){
                    @Override
                    public int compare(Interval i1, Interval i2) {
                        return i1.start != i2.start ?
                                i1.start - i2.start :
                                i1.end - i2.end;
                    }
                });
        int s = intervals.get(0).start, e = intervals.get(0).end;
        for (int i = 1; i < intervals.size(); i++) {
            Interval tmp = intervals.get(i);
            if (e < tmp.start) {
                Interval ni = new Interval(s, e);
                res.add(ni);
                s = tmp.start;
                e = tmp.end;
            } else {
                e = Math.max(e, tmp.end);
            }
        }
        res.add(new Interval(s, e));
        return res;
    }
}
```