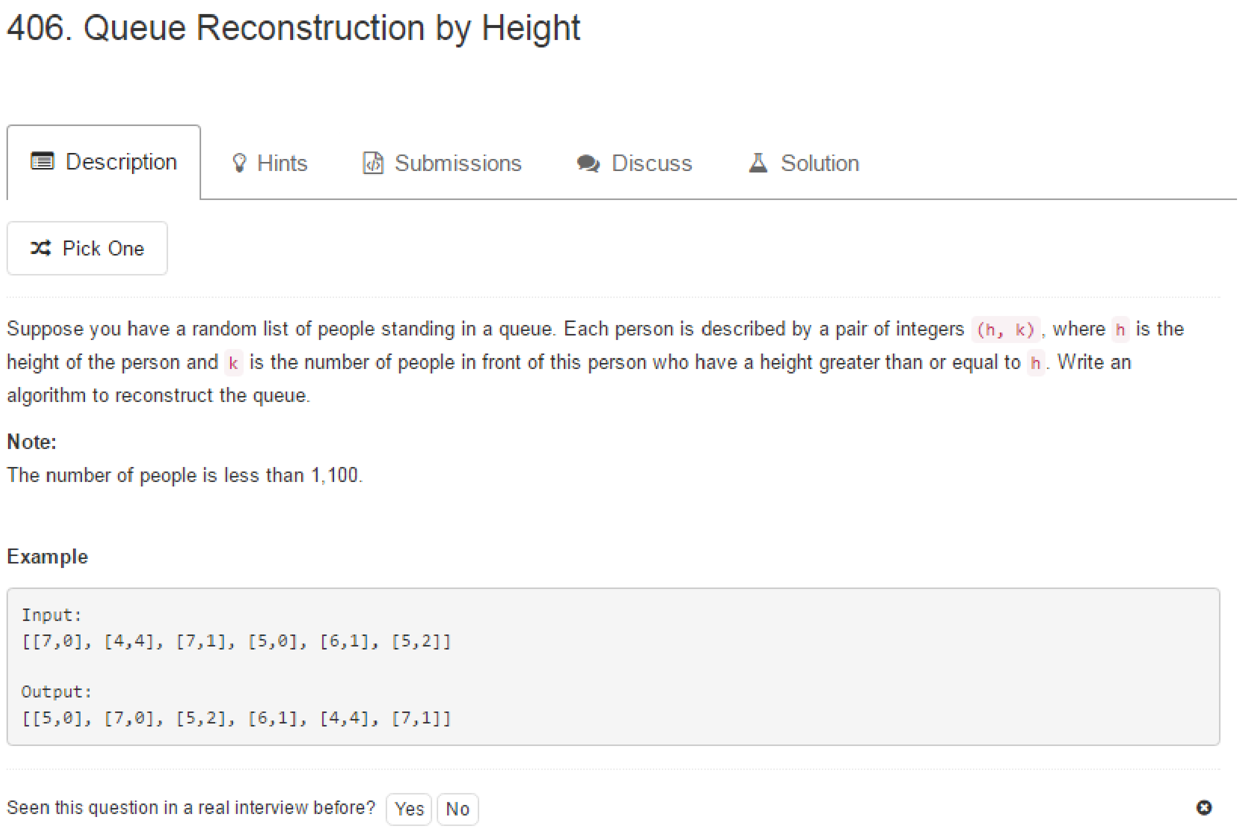


406. Queue Reconstruction by Height

Suppose you have a random list of people standing in a queue. Each person is described by a pair of integers `(h, k)`, where `h` is the height of the person and `k` is the number of people in front of this person who have a height greater than or equal to `h`. Write an algorithm to reconstruct the queue.

Note:
The number of people is less than 1,100.

Example

```
Input:
[[7,0], [4,4], [7,1], [5,0], [6,1], [5,2]]

Output:
[[5,0], [7,0], [5,2], [6,1], [4,4], [7,1]]
```

Seen this question in a real interview before? Yes No

Note:

The number of people is less than 1,100.

Example :

```
Input:
[[7,0], [4,4], [7,1], [5,0], [6,1], [5,2]]

Output:
[[5,0], [7,0], [5,2], [6,1], [4,4], [7,1]]
```

Ways

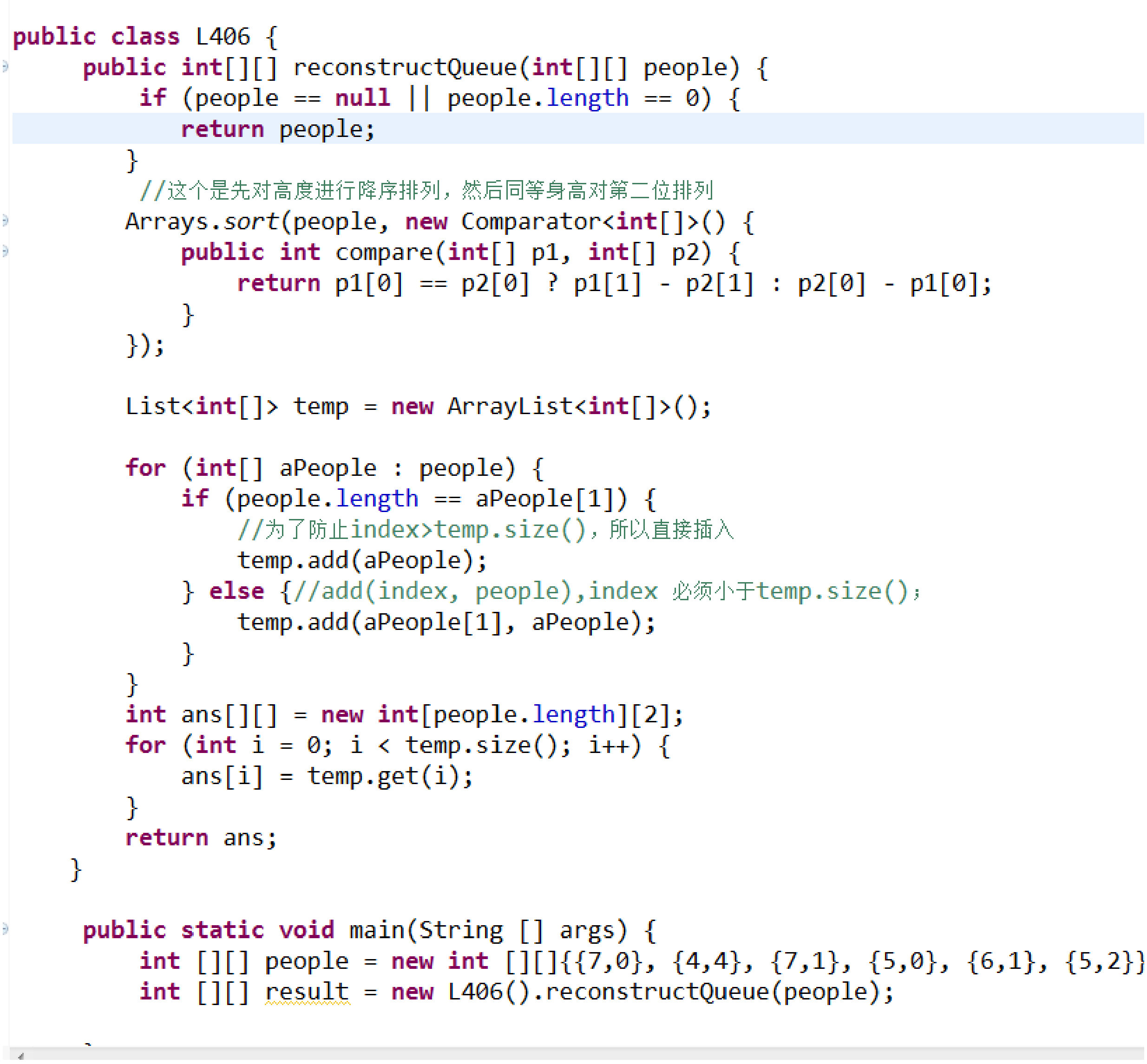
先对已有的数组进行排序。按照高度降序排列，如果高度一样，按照k的值升序排列。这样比如一开始[7，0] [7，1] [7，2]就会排好，然后比如说后面有一个[6，1]， 说明只有一个大于或等于它，又因为比6大的已经全部取出。所以把它放在位置1，这样就变成[7，0] [6，1] [7，1] [7，2].然后比如又有一个[5，0].就放在位置0，以此类推。

即对于案列。首先排序成：

```
{[7,0],[7,1],[6,1],[5,0],[5,2],[4,4]]
```

然后对于第二个数字进行插入对应位置：

```
[[5,0], [7,0], [5,2], [6,1], [4,4], [7,1]]
```



```
public class L406 {
     public int[][] reconstructQueue(int[][] people) {
         if (people == null || people.length == 0) {
            return people;
        }
         //这个是先对高度进行降序排列，然后同等身高对第二位排列
        Arrays.sort(people, new Comparator<int[]>() {
            public int compare(int[] p1, int[] p2) {
                return p1[0] == p2[0] ? p1[1] - p2[1] : p2[0] - p1[0];
            }
        });

        List<int[]> temp = new ArrayList<int[]>();

        for (int[] aPeople : people) {
            if (people.length == aPeople[1]) {
                //为了防止index>temp.size()，所以直接插入
                temp.add(aPeople);
            } else {//add(index, people),index 必须小于temp.size()；
                temp.add(aPeople[1], aPeople);
            }
        }
        int ans[][] = new int[people.length][2];
        for (int i = 0; i < temp.size(); i++) {
            ans[i] = temp.get(i);
        }
        return ans;
    }

     public static void main(String [] args) {
         int [][] people = new int [][]{{7,0}, {4,4}, {7,1}, {5,0}, {6,1}, {5,2}}
         int [][] result = new L406().reconstructQueue(people);
```