

一、题目说明

题目406. Queue Reconstruction by Height, 队列每个元素包括 (h,k), 其中h是身高, k是身高不低于h的数量, 请按照k和h重构队列。难度是Medium!

二、我的解答

这个题目理论上不难, 但是细节不好处理。代码如下:

```
class Solution{
public:
    vector<vector<int>> reconstructQueue(vector<vector<int>>& people){
        vector<vector<int>> res;
        map<int,vector<int> > mapFronts;

        for(int i=0;i<people.size();i++){
            mapFronts[people[i][1]].push_back(people[i][0]);
        }
        for(map<int,vector<int>>::iterator
iter=mapFronts.begin();iter!=mapFronts.end();iter++){
            //cout<<iter->first<<":";
            vector<int> cur = iter->second;
            sort(cur.begin(),cur.end());
            vector<int> tmp;
            for(int i=0;i<cur.size();i++){
                //cout<<cur[i]<<" ";
                tmp.clear();
                tmp.push_back(cur[i]);
                tmp.push_back(iter->first);
                if(iter->first == 0){
                    res.push_back(tmp);
                }else{
                    int curH = cur[i];
                    int t = 0,num=0;
                    int bigNum = iter->first;
                    while(t<res.size() && num<bigNum){
                        if(res[t][0] >= curH){
                            num++;
                        }
                        t++;
                    }
                    if(t<res.size()){
                        while(t<res.size() && res[t][0] < curH){
                            t++;
                        }
                    }
                    if(t==res.size()){
                        res.push_back(tmp);
                    }else{
                        vector<vector<int>>::iterator itTemp;
                        itTemp = res.begin();
                        itTemp = itTemp + t;
                        res.insert(itTemp,tmp);
                    }
                }
            }
        }
    }
}
```

```
        }  
    }  
    return res;  
}  
};
```

性能如下:

Runtime: 80 ms, faster than 72.71% of C++ online submissions for Queue Reconstruction by Height.
Memory Usage: 14.5 MB, less than 9.52% of C++ online submissions for Queue Reconstruction by Height.

三、优化措施

这个用到map, 用到sort排序。