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1  /** SPOJ - MKTHNUM K-th Number: Given an array a[1 ... n] of different integer numbers,
2  your program must answer a series of questions Q(i, j, k) in the form:
3  "What would be the k-th number in a[i ... j] segment, if this segment was sorted?" ***/
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5  #define mx 100005
6  int a[mx+5], ar[mx+5]; vector<int> tree[4*mx+5];
7  void MergeNode(int nd, int lf, int rg){
8      int n1=tree[lf].size(); int n2=tree[rg].size();
9      int i=0, j=0;
10     while(i<n1 && j<n2){
11         if(tree[lf][i]<=tree[rg][j]){
12             tree[nd].push_back(tree[lf][i]); i++;
13         } else{
14             tree[nd].push_back(tree[rg][j]); j++;
15         }
16     }
17     while(i<n1){ tree[nd].push_back(tree[lf][i]); i++; }
18     while(j<n2){ tree[nd].push_back(tree[rg][j]); j++; }
19 }
20 void init(int nd, int b, int e){
21     if(b==e){ tree[nd].push_back(a[b]); return; }
22     int lf=2*nd, rg=2*nd+1, md=(b+e)/2;
23     init(lf, b, md);
24     init(rg, md+1, e);
25     MergeNode(nd, lf, rg);
26     //merge(tree[lf].begin(), tree[lf].end(), tree[rg].begin(), tree[rg].end(), back_inserter(tree[nd]));
27 }
28 int LowerBound(int nd, int v){
29     int lo=0; int hi=tree[nd].size()-1; int cnt=0;
30     while(lo<=hi){
31         int md=(lo+hi)/2;
32         int u = tree[nd][md];
33         if(u<v){ cnt=md+1; lo=md+1; }
34         else{ hi=md-1; }
35     }
36     return cnt;
37 }
38 int query(int nd, int b, int e, int x, int y, int v){
39     if(b>y || e<x) return 0;
40     if(b>=x && e<=y){
41         int cnt = LowerBound(nd, v); return cnt;
42         // return Lower_bound(tree[nd].begin(), tree[nd].end(), v)-tree[nd].begin();
43     }
44     int lf=2*nd, rg=2*nd+1, md=(b+e)/2;
45     return query(lf, b, md, x, y, v) + query(rg, md+1, e, x, y, v);
46 }
47 int solve(int n, int x, int y, int k){
48     int lo=1; int hi=n; int ans = -1;
49     while(lo<=hi){
50         int md = (lo+hi)/2;
51         int v = ar[md];
52         int res = query(1, 1, n, x, y, v);
53         if(res<k){ ans=v; lo=md+1; }
54         else{ hi=md-1; }
55     }
56     return ans;
57 }
58 int main(){
59     int n, q;
60     while(scanf("%d%d", &n, &q)==2){
61         for(int i=1; i<=n; i++){
62             scanf("%d", &a[i]); ar[i] = a[i];
63         }
64         init(1, 1, n);
65         sort(ar+1, ar+n+1);
66         for(int qq=1; qq<=q; qq++){
67             int x, y, k; scanf("%d%d%d", &x, &y, &k);
68             int ans = solve(n, x, y, k);
69             printf("%d\n", ans);
70         }
71         for(int i=0; i<4*mx; i++) tree[i].clear();
72     }
73 }

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