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1  /*
2      @(#) skitrip.cpp
3      inspired by V.K.
4      28th PDP Final Fase
5  */
6
7  #include <cstdio>
8  #include <cassert>
9  #include <cstdlib>
10 #include <climits>
11 #include <algorithm>
12
13 using namespace std;
14
15 int N;
16
17 struct station {
18     int height;
19     bool ignore_as_embarg;
20     bool ignore_as_disembarg;
21     station(){
22         ignore_as_embarg =
23         ignore_as_disembarg = false;
24     }
25 } A[2000000];
26
27 int main(){
28     FILE *in = fopen("skitrip.in","r"), *out = fopen("skitrip.out","w");
29     assert(in && out);
30     fscanf(in,"%d",&N);
31     assert(N>0);
32
33     for(int i=0;i<N;i++){
34         fscanf(in,"%d",&A[i].height);
35
36         //find embarg candidates (they will be on an ascending desuence
37         int prev = A[0].height;
38         for(int i=1;i<N;i++){
39             if(A[i].height>prev)
40                 A[i].ignore_as_embarg = true;
41             else
42                 prev = A[i].height;
43             //printf("%d ",prev);
44         }
45         //printf("\n");
46
47         prev = A[N-1].height;
48         for(int i=N-1;i>=0;i--){
49             if(A[i].height<prev)
50                 A[i].ignore_as_disembarg = true;
51             else
52                 prev = A[i].height;
53             //printf("%d ",prev);
54         }
55         //printf("\n");
56
57         //parse to find solution
```

```
58     int right = N-1;
59     int distance = 0;
60     for(int i=0;i<right;i++){
61         if(A[i].ignore_as_embarg)
62             continue;
63         while(right>i && (A[right].ignore_as_disembarg ||
64             A[right].height<A[i].height))
65             right--;
66         if(A[i].height<=A[right].height){
67             distance = max(distance,right-i);
68             //printf("Possible solution: from %d to %d,
69             distance=%d\n",right,i,distance);
70         }
71     }
72     #ifndef CONTESTprintf
73     printf("Result=%d\n",distance);
74     #endif
75     fprintf(out,"%d\n",distance);
76     return 0;
77 }
```