16/11/2017 HackerRank

















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Dashboard > Data Structures > Stacks > Poisonous Plants





Problem

Submissions

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There are *n* plants in a garden. Each of these plants has been added with some amount of pesticide. After each day, if any plant has more pesticide than the plant on its left, being weaker than the left one, it dies. You are given the initial values of the pesticide in each plant. Print the number of days after which no plant dies, i.e. the time after which there are no plants with more pesticide content than the plant to their left.

Input Format

The input contains of an integer n. The next line contains n integers, describing the array p where p_i denotes the amount of pesticide in plant i.

Constraints

$$1 \le n \le 10^5$$

$$0 \le p_i \le 10^9$$

Output Format

Output an integer equal to the number of days after which no plants die.

Sample Input

Sample Output

2

Explanation

Initially all plants are alive.

Plants =
$$\{(6,1), (5,2), (8,3), (4,4), (7,5), (10,6), (9,7)\}$$

Plants[k] =
$$(i,j) = j^{th}$$
 plant has pesticide amount = i.

After the 1st day, 4 plants remain as plants 3, 5, and 6 die.

Plants =
$$\{(6,1), (5,2), (4,4), (9,7)\}$$

After the 2nd day, 3 plants survive as plant 7 dies.

Plants =
$$\{(6,1), (5,2), (4,4)\}$$

After the 3rd day, 3 plants survive and no more plants die.

Plants =
$$\{(6,1), (5,2), (4,4)\}$$

After the 2nd day the plants stop dying.

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Submissions:<u>8297</u>
Max Score:70
Difficulty: Hard

Rate This Challenge:
☆☆☆☆☆

⊮ in

```
C++
  Current Buffer (saved locally, editable) & 49
                                                                                                                                Ö
 1 ▼ #include <bits/stdc++.h>
 3 using namespace std;
 4
 5 ▼ int poisonousPlants(vector <int> p) {
 6
         // Complete this function
 7
 8
 9 ▼ int main() {
         int n;
10
11
         cin >> n;
12
         vector<int> p(n);
13 ▼
         for(int p_i = 0; p_i < n; p_{i++}){
14 ▼
            cin >> p[p_i];
15
         int result = poisonousPlants(p);
16
         cout << result << endl;</pre>
17
         return 0;
18
19
    }
20
                                                                                                                       Line: 1 Col: 1
1 Upload Code as File
                                                                                                           Run Code
                                                                                                                        Submit Code
                      Test against custom input
```

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