

All Tracks > Data Structures > Arrays > 1-D > Problem

Micro and Array Update

Attempted by: 31358 / Accuracy: 72% / Maximum Score: 10 / ★★★☆ 752 Votes

Tag(s): Ad-Hoc, Data Structures, One-dimensional, Very-Easy

PROBLEM EDITORIAL MY SUBMISSIONS

Micro purchased an array A having N integer values. After playing it for a while, he got bored of it and decided to update value of its element. In one second he can increase value of each array element by 1. He wants each array element's value to become greater than or equal to K. Please help Micro to find out the minimum amount of time it will take, for him to do so.

Input:

First line consists of a single integer, *T*, denoting the number of test

First line of each test case consists of two space separated integers denoting *N* and *K*.

Second line of each test case consists of *N* space separated integers denoting the array *A*.

Output:

For each test case, print the minimum time in which all array elements will become greater than or equal to K. Print a new line after each test case.

Constraints:

 $1 \le T \le 5$

 $1 \le N \le 10^5$

 $1 \le A[i], K \le 10^6$

SAMPLE INPUT	% 🖆	SAMPLE OUTPUT	% @
2 3 4 1 2 5 3 2 2 5 5		3 0	

Explanation

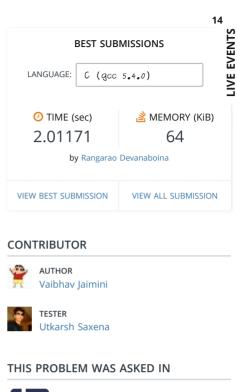
For first test case,

After 1 second, array will be $\{2,3,6\}$

After 2 second, array will be $\{3, 4, 7\}$

After 3 second, array will be $\{4,5,8\}$

So it will take $\it 3$ second for all array elements to become greater than or equal to $\it 4$.





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SOLVE

ANALYTICS

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Time Limit:	1.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded when all the testcases pass.
Allowed Languages:	Bash, C, C++, C++14, Clojure, C#, D, Erlang, F#, Go,
	Groovy, Haskell, Java, Java 8, JavaScript(Rhino),
	JavaScript(Node.js), Julia, Kotlin, Lisp, Lisp (SBCL), Lua,
	Objective-C, OCaml, Octave, Pascal, Perl, PHP, Python,
	Python 3, R(RScript), Racket, Ruby, Rust, Scala, Swift,
	Swift-4.1, TypeScript, Visual Basic

14 -IVE EVENTS

CODE EDITOR

```
Enter your code or Upload your code as file.
                         Save C++14 (g++ 5.4.0)
     // Micro and Array Update
     #include<iostream>
 2
     #include <bits/stdc++.h>
 3
 5
     using namespace std;
 6
 7
     int main(){
 8
           ios_base::sync_with_stdio(false);
 9
           cin.tie(NULL);
           cout.tie(NULL);
10
11
           int testCases;
12
13
           cin>>testCases;
14
           for(int t=0;t<testCases;t++){</pre>
               int n,k;
15
               cin>>n>>k;
16
               // int arr[n];
17
               int smallest = 99999;
18
               for(int i=0;i<n;i++){</pre>
19
                    int temp;
20
21
                    cin>>temp;
22
                    if(temp<smallest)</pre>
23
                         smallest = temp;
24
25
               if(smallest > k ){
26
                                                   1:1 vscode
■ Provide custom input
  COMPILE & TEST
                       SUBMIT
```



Your Rating:

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PROGRAMMERS WHO SOLVED THIS PROBLEM ALSO SOLVED

14 IVE EVENTS

Binary Queries

Attempted By: 21871 / Accuracy: 25

Monk And Rotation

Attempted By: **16566** / Accuracy: **90**

Pairs Having Similar El...

Attempted By: 2574 / Accuracy: 29

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