

## B. Uniqueness

time limit per test: 2 seconds  
 memory limit per test: 256 megabytes  
 input: standard input  
 output: standard output

You are given an array  $a_1, a_2, \dots, a_n$ . You can remove **at most one** subsegment from it. The remaining elements should be pairwise distinct.

In other words, **at most one** time you can choose two integers  $l$  and  $r$  ( $1 \leq l \leq r \leq n$ ) and delete integers  $a_l, a_{l+1}, \dots, a_r$  from the array. Remaining elements should be pairwise distinct.

Find the minimum size of the subsegment you need to remove to make all remaining elements distinct.

### Input

The first line of the input contains a single integer  $n$  ( $1 \leq n \leq 2000$ ) — the number of elements in the given array.

The next line contains  $n$  spaced integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq 10^9$ ) — the elements of the array.

### Output

Print a single integer — the minimum size of the subsegment you need to remove to make all elements of the array pairwise distinct. If no subsegment needs to be removed, print 0.

### Examples

input	Copy
3 1 2 3	
output	Copy
0	

  

input	Copy
4 1 1 2 2	
output	Copy
2	

  

input	Copy
5 1 4 1 4 9	
output	Copy
2	

### Note

In the first example all the elements are already distinct, therefore no subsegment needs to be removed.

In the second example you can remove the subsegment from index 2 to 3.

In the third example you can remove the subsegments from index 1 to 2, or from index 2 to 3, or from index 3 to 4.

**Manthan, Codefest 19 (open for everyone, rated, Div. 1 + Div. 2)**

Finished

Practice



### → Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ACM-ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

### → Practice

You are registered for practice. You can solve problems unofficially. Results can be found in the contest status and in the bottom of standings.

### → Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

### → Submit?

Language: GNU G++11 5.1.0

Choose file: 选择文件 未选择任何文件

Be careful: there is 50 points penalty for submission which fails the pretests or resubmission (except failure on the first test, denial of judgement or similar verdicts). "Passed pretests" submission verdict doesn't guarantee that the solution is absolutely correct and it will pass system tests.

Submit

### → Last submissions

Submission	Time	Verdict
<a href="#">59498542</a>	Aug/26/2019 03:57	Accepted
<a href="#">59498519</a>	Aug/26/2019 03:56	Wrong answer on test 5
<a href="#">59498503</a>	Aug/26/2019 03:55	Compilation error



#### → Problem tags

binary search  brute force   
implementation  two pointers

[Add tag](#)

#### → Contest materials

- Announcement (en)
- Tutorial (en)

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The only programming contests Web 2.0 platform

Server time: Aug/26/2019 11:08:54<sup>UTC+8</sup> (h3).

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