



# Minimum Distances ★

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The distance between two array values is the number of indices between them. Given  $a$ , find the minimum distance between any pair of equal elements in the array. If no such value exists, return  $-1$ .

## Example

 $a = [3, 2, 1, 2, 3]$ 

There are two matching pairs of values:  $3$  and  $2$ . The indices of the  $3$ 's are  $i = 0$  and  $j = 4$ , so their distance is  $d[i, j] = |j - i| = 4$ . The indices of the  $2$ 's are  $i = 1$  and  $j = 3$ , so their distance is  $d[i, j] = |j - i| = 2$ . The minimum distance is  $2$ .

## Function Description

Complete the `minimumDistances` function in the editor below.

`minimumDistances` has the following parameter(s):

- `int a[n]`: an array of integers

## Returns

- `int`: the minimum distance found or  $-1$  if there are no matching elements

## Input Format

The first line contains an integer  $n$ , the size of array  $a$ .

The second line contains  $n$  space-separated integers  $a[i]$ .

## Constraints

- $1 \leq n \leq 10^3$
- $1 \leq a[i] \leq 10^5$

## Output Format

Print a single integer denoting the minimum  $d[i, j]$  in  $a$ . If no such value exists, print  $-1$ .

## Sample Input

| STDIN       | Function                                   |
|-------------|--|
| -----       | -----                                      |
| 6           | <code>arr[]</code> size <code>n = 6</code> |
| 7 1 3 4 1 7 | <code>arr = [7, 1, 3, 4, 1, 7]</code>      |

## Sample Output

3

## Explanation

There are two pairs to consider:

- $a[1]$  and  $a[4]$  are both  $1$ , so  $d[1, 4] = |1 - 4| = 3$ .
- $a[0]$  and  $a[5]$  are both  $7$ , so  $d[0, 5] = |0 - 5| = 5$ .

The answer is  $\min(3, 5) = 3$ .[Change Theme](#)

Language C++14



```
6 string rtrim(const string &);
7 vector<string> split(const string &);
8
9 /*
10  * Complete the 'minimumDistances' function below.
11  *
12  * The function is expected to return an INTEGER.
13  * The function accepts INTEGER_ARRAY a as parameter.
14  */
15
16 int minimumDistances(vector<int> a) {
17     unordered_map<int,int> counter;
18     int min_distance = 10000 ;
19
20     for(int i = 0 ; i < a.size() ; i++) {
21         if(counter[a[i]]) {
22             min_distance = min(min_distance , abs(i + 1 - counter[a[i]]));
23         }
24
25         else {
26             counter[a[i]] = i + 1;
27         }
28     }
29
30     return min_distance == 10000 ? -1 : min_distance ;
31 }
32
33 int main()
34 {
35     ofstream fout(getenv("OUTPUT_PATH"));
36 }
```

Line: 22 Col: 56

Upload Code as File

☐ Test against custom input

Run Code

Submit Code

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46%

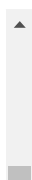
646/850



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Compiler Message

Success

Test case 5

Test case 6

Test case 7

Test case 8

Test case 9

Input (stdin)

1 6

2 7 1 3 4 1 7

Expected Output

1 3

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