



Candidate Report: Anonymous

Test Name:

[Summary](#) [Timeline](#)

Test Score

91 out of 100 points

91%

Tasks in Test

	Time Spent ⓘ	Task Score
Distinct Submitted in: Java 8	30 min	91%

TASKS DETAILS

EASY	1. Distinct	Task Score	Correctness	Performance
	Compute number of distinct values in an array.		91%	88%
				100%

Task description

Write a function

```
class Solution { public int solution(int[] A); }
```

that, given an array A consisting of N integers, returns the number of distinct values in array A.

For example, given array A consisting of six elements such that:

```
A[0] = 2    A[1] = 1    A[2] = 1  
A[3] = 2    A[4] = 3    A[5] = 1
```

the function should return 3, because there are 3 distinct values appearing in array A, namely 1, 2 and 3.

Write an **efficient** algorithm for the following assumptions:

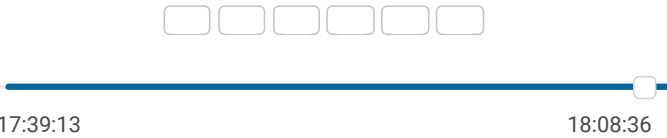
- N is an integer within the range [0..100,000];
- each element of array A is an integer within the range [−1,000,000..1,000,000].

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Solution

Programming language used:	Java 8
Total time used:	30 minutes ⓘ
Effective time used:	30 minutes ⓘ
Notes:	not defined yet

Task timeline ⓘ



Code: 18:08:35 UTC, java, final, score: 91 [show code in pop-up](#)

```
1 // you can also use imports, for example:  
2 // import java.util.*;  
3  
4 // you can write to stdout for debugging purposes, e.g.  
5 // System.out.println("this is a debug message");  
6 import java.util.Hashtable;  
7 import java.util.Map;  
8  
9 class Solution {
```

```
10 public static int solution(int[] a) {
11     Map<Integer, Integer> m = new Hashtable<In
12
13     if (a.length == 1)
14         return a[0];
15
16     for (int i = 0; i < a.length; i++) {
17         Integer v = m.putIfAbsent(a[i], 1)
18         if (v != null) {
19             m.put(a[i], v + 1);
20         }
21     }
22
23     int r = m.keySet().size();
24
25     return r;
26 }
27 }
```

Analysis summary

The following issues have been detected: wrong answers.

For example, for the input [0] the solution returned a wrong answer (got 0 expected 1).

Analysis ?

Detected time complexity:		<div>O(N*log(N)) or O(N)</div>
expand all	Example tests	
▶	example1	✓ OK
	example test, positive answer	
expand all	Correctness tests	
▶	extreme_empty	✓ OK
	empty sequence	
▶	extreme_single	✗ WRONG ANSWER
	sequence of one element	got 0 expected 1
▶	extreme_two_elems	✓ OK
	sequence of three distinct elements	
▶	extreme_one_value	✓ OK
	sequence of 10 equal elements	
▶	extreme_negative	✓ OK
	sequence of negative elements, length=5	
▶	extreme_big_values	✓ OK
	sequence with big values, length=5	
▶	medium1	✓ OK
	chaotic sequence of value sfrom [0..1K], length=100	
▶	medium2	✓ OK
	chaotic sequence of value sfrom [0..1K], length=200	
▶	medium3	✓ OK
	chaotic sequence of values from [0..10], length=200	
expand all	Performance tests	
▶	large1	✓ OK
	chaotic sequence of values from [0..100K], length=10K	
▶		

large_random1	✓ OK
chaotic sequence of values from [-1M..1M], length=100K	
▶ large_random2	✓ OK
another chaotic sequence of values from [-1M..1M], length=100K	

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