

Candidate Report: Anonymous

Test Name:

Summary

Timeline

Test Score

100 out of 100 points

100%

Tasks in Test

	Time Spent ⓘ	Task Score
Distinct Submitted in: Java 8	1 min	100%

TASKS DETAILS

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

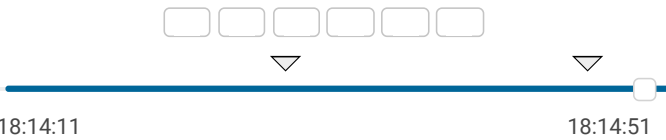
- N is an integer within the range [0..100,000];
- each element of array A is an integer within the range [-1,000,000..1,000,000].

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Solution

Programming language used:	Java 8
Total time used:	1 minutes ⓘ
Effective time used:	1 minutes ⓘ
Notes:	not defined yet

Task timeline ⓘ



Code: 18:14:51 UTC, java, final, score: 100 [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     for (int i = 0; i < a.length; i++) {
14         m.putIfAbsent(a[i], 1);
15     }
16
17     int r = m.keySet().size();
18
19     return r;
20 }
21 }
```

Analysis summary

The solution obtained perfect score.

Analysis ?

Detected time complexity: $O(N \cdot \log(N))$ or $O(N)$

expand all	Example tests	
▶ example1		✓ OK
example test, positive answer		
expand all	Correctness tests	
▶ extreme_empty		✓ OK
empty sequence		
▶ extreme_single		✓ OK
sequence of one element		
▶ 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 values from [0..1K], length=100		
▶ medium2		✓ OK
chaotic sequence of values from [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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