Codility_

Candidate Report: trainingKXDDPT-X9D

Check out Codility training tasks

Test Name:

Summary Timeline

Tasks summary

Task	Time spent	Score
Distinct Python	8 min	100%

Total score

Tasks Details

Easy

1. **Distinct**
Compute number of distinct values in an array.

Task Score	Correctness	Performance
100%	100%	100%

Task description

Write a function

```
def solution(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.

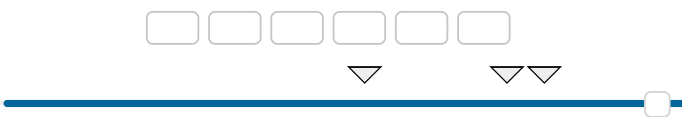
Write an **efficient** algorithm for the following assumptions:

- N is an integer within the range [0..100,000];

Solution

Programming language used:	Python
Total time used:	8 minutes
Effective time used:	8 minutes
Notes:	*not defined yet*

Task timeline



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

02:01:21 02:08:36

Code: 02:08:35 UTC, py, final, score: **100** show code in pop-up

```python
# you can write to stdout for debugging purposes, e.
# print("this is a debug message")

def solution(A):
    # write your code in Python 3.6
    D = {}
    ret = 0
    for i in range(len(A)):
        if A[i] not in D:
            D[A[i]] = 1
            ret += 1

    return ret
```

Analysis summary

The solution obtained perfect score.

Analysis

Detected time complexity: **O(N*log(N)) or O(N)**

expand all	Example tests	
▶	example1 example test, positive answer	✓ OK
expand all	**Correctness tests**	
▶	extreme_empty empty sequence	✓ OK
▶	extreme_single sequence of one element	✓ OK
▶	extreme_two_elems sequence of three distinct elements	✓ OK
▶	extreme_one_value sequence of 10 equal elements	✓ OK
▶	extreme_negative sequence of negative elements, length=5	✓ OK
▶	extreme_big_values sequence with big values, length=5	✓ OK
▶	medium1 chaotic sequence of value sfrom [0..1K], length=100	✓ OK
▶		

	medium2 chaotic sequence of value sfrom [0..1K], length=200	✓ OK
▶	medium3 chaotic sequence of values from [0..10], length=200	✓ OK

expand all Performance tests

▶	large1 chaotic sequence of values from [0..100K], length=10K	✓ OK
▶	large_random1 chaotic sequence of values from [-1M..1M], length=100K	✓ OK
▶	large_random2 another chaotic sequence of values from [-1M..1M], length=100K	✓ OK
