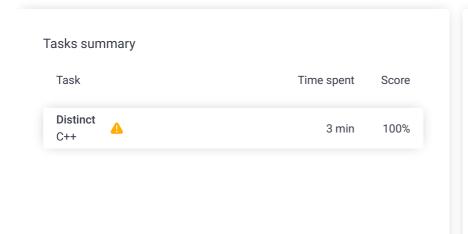
Codility_

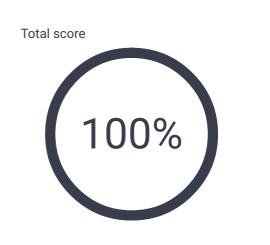
CodeCheck Report: trainingWWFVKV-9JF

Test Name:

Check out Codility training tasks

Summary Timeline 🛕 Al Assistant Transcript





Tasks Details

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

Task Score

Correctness

100%

Performance

100%

100%

Task description

Write a function

int solution(vector<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

04:15:54

Programming language used: C++

Total time used: 3 minutes

Effective time used: 3 minutes

Notes: not defined yet

Task timeline

04:18:39

Code: 04:18:38 UTC, cpp, show code in pop-up final, score: 100

- 1 // you can use includes, for example:
- 2 // #include <algorithm>
 - #include <unordered_set>

Test results - Codility

```
// you can write to stdout for debugging purpo
    // cout << "this is a debug message" << endl;</pre>
 6
    int solution(vector<int> &A) {
 7
8
         std::unordered_set<int> s;
9
10
         for (const auto& e : A)
11
             s.insert(e);
12
13
         return s.size();
14
    }
```

Analysis summary

The solution obtained perfect score.

Analysis

Detected time complexity:

O(N*log(N)) or O(N)

exna	nd all Examp	ple tests
€ Apo	example1	✓ OK
, i	example test, positive answer	VOIC
ovno		ness tests
expo		✓ OK
	extreme_empty empty sequence	VOR
•	extreme_single	✓ OK
	sequence of one element	
•	extreme_two_elems	✓ OK
	sequence of three distinct elem	nents
•	extreme_one_value	✓ OK
	sequence of 10 equal elements	S
•	extreme_negative	✓ OK
	sequence of negative elements	S,
	length=5	
•	extreme_big_values	✓ OK
	sequence with big values, length	th=5
•	medium1	✓ OK
	chaotic sequence of value sfro	om
	[01K], length=100	
•	medium2	✓ OK
	chaotic sequence of value sfro	om
	[01K], length=200	
•	medium3	✓ OK
	chaotic sequence of values fro	om
	[010], length=200	
expa	nd all Perform	ance tests
•	large1	✓ OK
	chaotic sequence of values fro	om
	[0100K], length=10K	
•	large_random1	✓ OK
	chaotic sequence of values fro	om
	[-1M1M], length=100K	
•	large_random2	✓ OK
	another chaotic sequence of va	alues

from [-1M..1M], length=100K