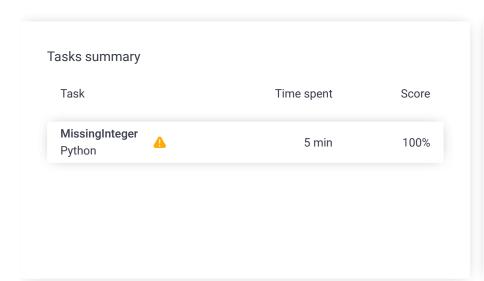
# Codility\_

## **Candidate Report: Anonymous**

Check out Codility training tasks

Test Name:

Summary Timeline





#### Tasks Details

legium

## 1. MissingInteger

Find the smallest positive integer that does not occur in a given sequence.

**Task Score** 

Correctness

100%

Performance

100%

100%

#### Task description

This is a demo task.

Write a function:

def solution(A)

that, given an array A of N integers, returns the smallest positive integer (greater than 0) that does not occur in A.

For example, given A = [1, 3, 6, 4, 1, 2], the function should return 5.

Given A = [1, 2, 3], the function should return 4.

Given A = [-1, -3], the function should return 1.

Write an efficient algorithm for the following assumptions:

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

# Solution

Programming language used: Python

Effective time used:

Total time used:

5 minutes

5 minutes

Notes:

not defined yet

#### Task timeline

09:14:24 09:18:45

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```
Code: 09:18:45 UTC, py, final,
                                      show code in pop-up
 score: 100
     # you can write to stdout for debugging purposes, e.g.
     # print("this is a debug message")
 2
 3
 4
     def solution(A):
         # write your code in Python 3.6
 5
         dic = \{\}
 6
         for i in A:
 7
             dic[i] = 1
         #print(dic)
 9
10
         i = 1
         while True:
11
12
             if i not in dic:
13
                return i
             i = i + 1
14
15
16
         return 0
17
     """A = [1, 3, 6, 4, 1, 2]
18
19
     tmp = solution(A)
20
     print(tmp)""
```

#### Analysis summary

The solution obtained perfect score.

#### Analysis

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

ехра	nd all	Example tests		
•	example1 first example test	<b>√</b>	1	OK
•	example2 second example te	•	′	OK
•	example3 third example test	<b>√</b>	′	OK
ехра	nd all	Correctness test	S	
•	extreme_single a single element	V	1	OK
•	simple simple test	V	,	OK
•	extreme_min_m	_	,	OK
•	positive_only shuffled sequence then 102200	•	′	OK
•	negative_only shuffled sequence	•	,	OK
ехра	nd all	Performance test	ts	3
•	medium chaotic sequences	•	,	ОК

	(with minus)	
•	large_1 chaotic + sequence 1, 2,, 40000 (without minus)	√ OK
•	large_2 shuffled sequence 1, 2,, 100000 (without minus)	√ OK
•	large_3 chaotic + many -1, 1, 2, 3 (with minus)	✓ OK

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