9/5/2017 Test results - Codility



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Training ticket

Session

ID: trainingZCJJSH-24Q
Time limit: 120 min.

Status: closed

Created on: 2017-09-05 16:12 UTC Started on: 2017-09-05 16:12 UTC Finished on: 2017-09-05 16:12 UTC

Tasks in test

1 PermMissingElem
Submitted in: Python

Correctness

100%

Performance

100%

Task score

100%

Test score **②**

100%

100 out of 100 points

How likely are you to recommend Codility to your friends and colleagues?

Not at all likely

Extremely likely

X

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Task description

A zero-indexed array A consisting of N different integers is given. The array contains integers in the range [1..(N + 1)], which means that exactly one element is missing.

Your goal is to find that missing element.

Write a function:

```
def solution(A)
```

that, given a zero-indexed array A, returns the value of the missing element.

For example, given array A such that:

A[0] = 2

A[1] = 3

A[2] = 1

A[3] = 5

the function should return 4, as it is the missing element.

Assume that:

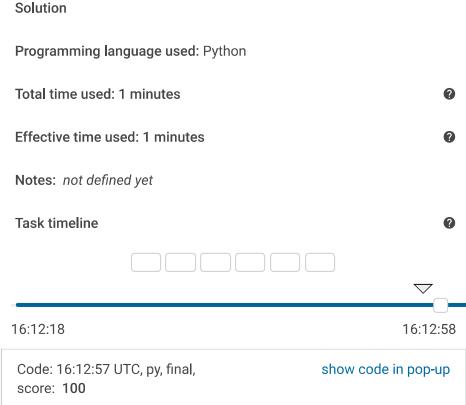
- N is an integer within the range [0..100,000];
- the elements of A are all distinct;
- each element of array A is an integer within the range [1..
 (N + 1)].

Complexity:

- expected worst-case time complexity is O(N);
- expected worst-case space complexity is O(1), beyond input storage (not counting the storage required for input arguments).

Elements of input arrays can be modified.

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```
score: 100

def solution(A):
    n = len(A)+1

actual_sum = 0
    expected_sum = n*((n+1))/2

for i in A:
    actual_sum += i

return expected_sum-actual_sum
```

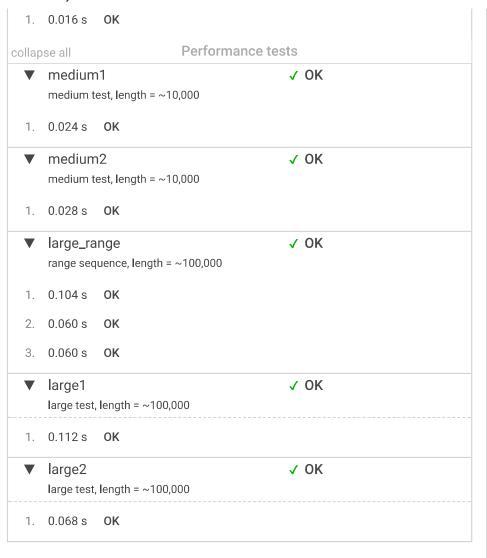
Analysis summary

The solution obtained perfect score.

Analysis

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

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