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Training ticket

Session

ID: trainingHFE7QR-TH2
Time limit: 120 min.

Status: closed

Created on: 2016-06-04 21:03 UTC Started on: 2016-06-04 21:03 UTC Finished on: 2016-06-04 21:03 UTC

Tasks in test

PermMissingElem
Submitted in: Java

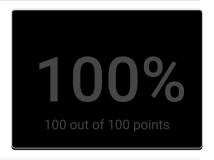
Correctness

Performance

100%

Task score

100%



1. PermMissingElem

Find the missing element in a given permutation.

score: 100 of 100

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:

class Solution { public int solution(int[] A); }

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

For example, given array A such that:

A[0] = 2

A[1] = 3A[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:

- ullet 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.

Solution

Programming language used: Java

Total time used: 1 minutes

Effective time used: 1 minutes

Notes: not defined yet

Task timeline



21:03:51

Code: 21:03:51 UTC, java, final,

show code in pop-up

score: 100

21:03:23

```
// you can also use imports, for example:
    // import java.util.*;
3
4
     // you can write to stdout for debugging purposes, e.g.
    // System.out.println("this is a debug message");
6
    class Solution {
8
        public int solution(int[] A) {
9
         long sum = 0;
10
         long max = A.length + 1;
11
         for (int i: A) {
12
           sum += i;
13
        return (int)(((max * (max + 1)) / 2) - sum);
```

Analysis summary

The solution obtained perfect score.

Analysis

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Detected time complexity: O(N)

expand all Example volk example example test expand all Correctness tests Pempty_and_single volk empty list and single element missing_first_or_last volk the first or the last element is missing single single element double volk two elements simple volk simple test expand all Performance tests Performance tests Medium 1 volk medium 1 volk medium test, length = ~10,000 medium 2 volk medium test, length = ~10,000 large_range range sequence, length = ~100,000 large1 volk large test, length = ~100,000 large2 volk large test, length = ~100,000		
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