



Demo ticket

Session

ID: demoGS7ZJR-2H9 **Time limit:** 120 min.

Status: closed

Created on: 2014-12-11 10:31 UTC Started on: 2014-12-11 10:31 UTC Finished on: 2014-12-11 10:43 UTC

Tasks in test

1 | = PermMissingElem

Correctness

100%

Performance

100%

100%

Task score

100%

Test score

100 out of 100 points

score: 100 of 100

1. PermMissingElem

Find the missing element in a given permutation.

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:

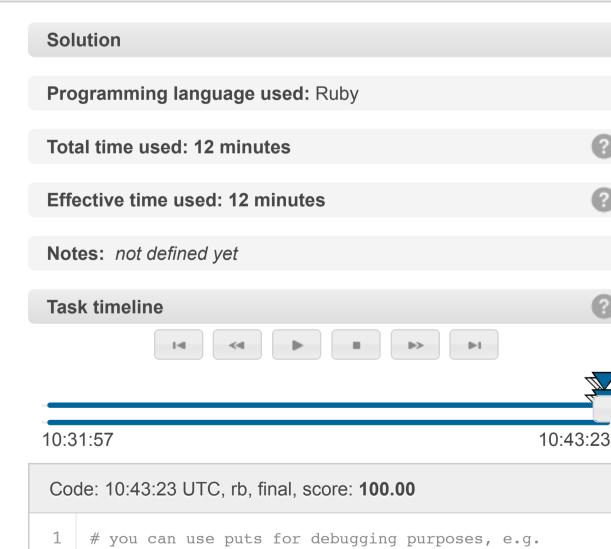
- N is an integer within the range [0..100,000];
- the elements of A are all distinct;
- each element of array A is an integer within the range [1..(N + 1)].

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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puts "this is a debug message"

(1..a.count+1).each do |n|

return n unless h[n]

write your code in Ruby 1.9.3

def solution(a)

 $h = \{\}$

end

end

end

a.each do |n|

h[n] = true

3

5

6

7

8

9

10

11

12

13

Analysis

0

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

| test | time | result |
|--|---------|--------|
| Example tests | | |
| example example test | 0.060 s | ок |
| Correctness tests | | |
| empty_and_single empty list and single element | 0.056 s | ОК |
| missing_first_or_last the first or the last element is missing | 0.060 s | ок |
| single single element | 0.060 s | ок |
| double two elements | 0.056 s | ок |
| simple test | 0.060 s | ок |
| Performance tests | | |
| medium1 medium test, length = ~10,000 | 0.080 s | ок |
| medium2 medium test, length = ~10,000 | 0.080 s | ок |
| large_range range sequence, length = ~100,000 | 0.144 s | ок |
| large1 large test, length = ~100,000 | 0.268 s | ок |
| large2 large test, length = ~100,000 | 0.160 s | ОК |

Training center

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