cødility

Training center

Check out Codility training tasks

TASKS DETAILS

1. **PermCheck**

Task Score Check

Correctness

Performance

whether array 100% 100%

A is a

permutation.

Task description

A non-empty array A consisting of N integers is given.

A permutation is a sequence containing each element from 1 to N once, and only once.

For example, array A such that:

A[0] = 4

A[1] = 1

A[2] = 3

A[3] = 2

is a permutation, but array A such that:

A[0] = 4

A[1] = 1

A[2] = 3

is not a permutation, because value 2 is missing.

The goal is to check whether array A is a permutation.

Write a function:

def solution(A)

that, given an array A, returns 1 if array A is a permutation and 0 if it is not.

For example, given array A such that:

A[0] = 4

A[1] = 1

A[2] = 3

A[3] = 2

the function should return 1.

Given array A such that:

A[0] = 4

A[1] = 1

A[2] = 3

Programming language used: Python

Total time used: 1 minutes

Effective time used: 1 minutes

not defined yet Notes:

Task timeline

Solution

06:09:05

100%

06:08:53

show code in pop-up

Code: 06:09:05 UTC, py, final, score: 100

Solution 2

1 2 def solution(A): 3

permutation = sorted(A) for idx, value in enumerate(permutation

if idx + 1 != value: return 0

return 1

Analysis summary

The solution obtained perfect score.

Analysis 2

4

5

6

7

the function should return 0.

Assume that:

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

Complexity:

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

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Detected time complexity:



expand all example1 the first example test example2 the second example test expand all Correctness tests expand all OK single element with minimal/maximal value single single v OK single element double two elements antiSum1 v OK total sum is correct, but it is not a permutation, N <= 10 small_permutation permutation + one element occurs twice, N = ~100 permutations_of_ranges v OK permutations of sets like [2100] for which the anwsers should be false expand all Performance tests medium_permutation v OK permutation + few elements occur twice, N = ~10,000 antiSum2 total sum is correct, but it is not a permutation, N = ~100,000 large_not_permutation permutation + one element occurs three times, N = ~100,000 large_range sequence 1, 2,, N, N = ~100,000 extreme_values all the same values, N = ~100,000 various_permutations all sequences are permutations all sequences are permutations all sequences are permutations					
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