Codility_

Candidate Report: Anonymous

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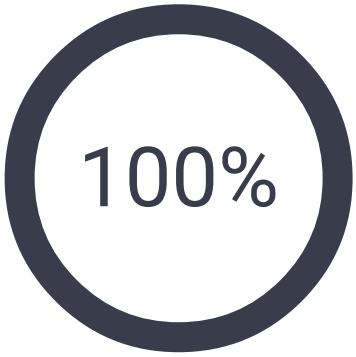
Test Name:

Summary Timeline Feedback

Tasks summary

Task	Time spent	Score
PermMissingElem JavaScript	4 min	100%

Total score



Tasks Details

Easy

1. PermMissingElem

Find the missing element in a given permutation.

Task Score	Correctness	Performance
100%	100%	100%

Task description

An 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:

```
function solution(A);
```

that, given an 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.

Write an **efficient** algorithm for the following assumptions:

- N is an integer within the range [0..100,000];
- the elements of A are all distinct;

Solution

Programming language used:	JavaScript
Total time used:	4 minutes
Effective time used:	4 minutes
Notes:	*not defined yet*

Task timeline

11:11:32 11:14:52

Code: 11:14:51 UTC, js, final, score: **100**

show code in pop-up

- each element of array A is an integer within the range [1.. (N + 1)].


```
1  // you can write to stdout for debugging purposes, e.g
2  // console.log('this is a debug message');
3
4  function solution(A) {
5      // write your code in JavaScript (Node.js 8.9.4)
6      if (A.length === 0) {
7          return 1;
8      } else {
9          A.sort((a,b) => a-b);
10         for (let i=0; i<A.length; i++) {
11             if (A[i] != i+1) { return i+1; }
12         }
13         return A.length + 1;
14     }
15 }
```

Analysis summary

The solution obtained perfect score.

Analysis

Detected time complexity: **O(N) or O(N * log(N))**

expand all	Example tests	
▶	example example test	✔ OK
expand all	**Correctness tests**	
▶	empty_and_single empty list and single element	✔ OK
▶	missing_first_or_last the first or the last element is missing	✔ OK
▶	single single element	✔ OK
▶	double two elements	✔ OK
▶	simple simple test	✔ OK
expand all	**Performance tests**	
▶	medium1 medium test, length = ~10,000	✔ OK
▶	medium2 medium test, length = ~10,000	✔ OK
▶	large_range range sequence, length = ~100,000	✔ OK
▶	large1 large test, length = ~100,000	✔ OK
▶	large2 large test, length = ~100,000	✔ OK