

Candidate Report: Anonymous

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Test Name:

Summary Timeline Feedback

Tasks summary

Task	Time spent	Score
PermMissingElem JavaScript	13 min	30%

Total score



Tasks Details

Easy	1. PermMissingElem Find the missing element in a given permutation.	Task Score 30%	Correctness 60%	Performance 0%
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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.

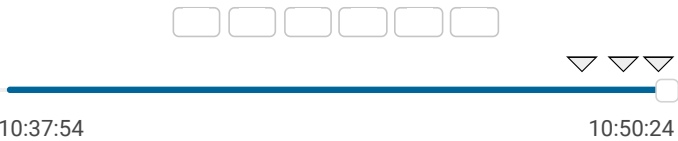
Write an **efficient** algorithm for the following assumptions:

- 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:	13 minutes ?
Effective time used:	13 minutes ?
Notes:	not defined yet

Task timeline ?



Code: 10:50:24 UTC, js, final, score: 30 [show code in pop-up](#)

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

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Test results - Codility

```

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 0;
8     } else if (A.length === 1) {
9         return A[0];
10    } else {
11        A.sort();
12        if (A[0] !== 1) {
13            return 1;
14        } else {
15            for (let i=0; i<A.length; i++) {
16                if (A[i] !== i+1) {
17                    return i+1;
18                }
19            }
20            return A.length + 1;
21        }
22    }
23 }

```

Analysis summary

The following issues have been detected: wrong answers.

For example, for the input [] the solution returned a wrong answer (got 0 expected 1).

Analysis ?

expand all		Example tests
▶	example example test	✓ OK
expand all		Correctness tests
▶	empty_and_single empty list and single element	✗ WRONG ANSWER got 0 expected 1
▶	missing_first_or_last the first or the last element is missing	✓ OK
▶	single single element	✗ WRONG ANSWER got 1 expected 2
▶	double two elements	✓ OK
▶	simple simple test	✓ OK
expand all		Performance tests
▶	medium1 medium test, length = ~10,000	✗ WRONG ANSWER got 2 expected 456
▶	medium2 medium test, length = ~10,000	✗ WRONG ANSWER got 2 expected 9998
▶	large_range range sequence, length = ~100,000	✗ WRONG ANSWER got 2 expected 100001
▶	large1 large test, length = ~100,000	✗ WRONG ANSWER got 2 expected 76541
▶	large2 large test, length = ~100,000	✗ WRONG ANSWER got 2 expected 10001

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