Codility_

Candidate Report: trainingC2Q7EF-GUY

Check out Codility training tasks

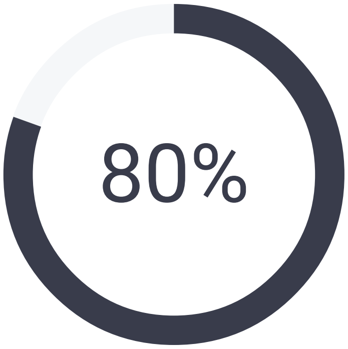
Test Name:

Summary Timeline

Tasks summary

Task	Time spent	Score
PermMissingElem ⚠ Java 8	21 min	80%

Total score



Tasks Details

Easy

1. PermMissingElem

Find the missing element in a given permutation.

Task Score	Correctness	Performance
80%	100%	60%

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:

```
class Solution { public int solution(int[] 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;
- each element of array A is an integer within the range [1..(N + 1)].

Solution

Programming language used:	Java 8
Total time used:	21 minutes
Effective time used:	21 minutes
Notes:	*not defined yet*

Task timeline

20:48:03

21:08:49

Code: 21:08:49 UTC, java, final, score: **80**

show code in pop-up

```
// you can also use imports, for example:
// import java.util.*;

```

```java
// you can write to stdout for debugging purposes, e.g.
// System.out.println("this is a debug message");

class Solution {
    public int solution(int[] A) {
        // write your code in Java SE 8
        if(A.length == 0) return 1;

        int sumA = 0;
        for(int i=0; i < A.length; i++){
            sumA += A[i];
        }
        int arraylen = A.length + 1;
        int actualSum = (arraylen * (arraylen + 1)) / 2

        return actualSum - sumA;
    }
}
```

Analysis summary

The following issues have been detected: wrong answers.

Analysis

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

expand all **Example tests**

▶ example ✔ OK
example test

expand all **Correctness tests**

▶ empty_and_single ✔ OK
empty list and single element

▶ missing_first_or_last ✔ OK
the first or the last element is missing

▶ single ✔ OK
single element

▶ double ✔ OK
two elements

▶ simple ✔ OK
simple test

expand all **Performance tests**

▶ medium1 ✔ OK
medium test, length = ~10,000

▶ medium2 ✔ OK
medium test, length = ~10,000

▼ large_range ✘ WRONG ANSWER
range sequence, length = ~100,000 got -2147483647 expected 1

1. 0.244 s **OK**
2. 0.124 s **WRONG ANSWER**, got -2147483647 expected 1
3. 0.124 s **WRONG ANSWER**, got -2147471303 expected 12345

▶ large1 ✔ OK
large test, length = ~100,000

▼ large2 ✘ WRONG ANSWER
large test, length = ~100,000 got -2147473647 expected

10001

1. 0.148 s **WRONG ANSWER**, got -2147473647 expected 10001

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