Codility_

CodeCheck Report: trainingSC2JC5-7P7

Test Name:

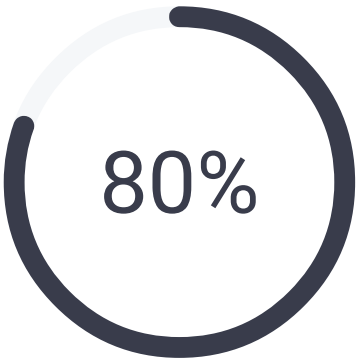
Check out Codility training tasks

Summary Timeline AI Assistant Transcript

Tasks summary

Task	Time spent	Score
PermMissingElem Java 8	12 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:

Solution

Programming language used:	Java 8
Total time used:	12 minutes
Effective time used:	12 minutes
Notes:	*not defined yet*

Task timeline

10:32:49 10:44:45

- 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)].

Code: 10:44:44 UTC, java, final, score: 80 show code in pop-up

```
1  // you can also use imports, for example:
2  // import java.util.*;
3
4  // you can write to stdout for debugging purposes,
5  // System.out.println("this is a debug message");
6
7  class Solution {
8      public int solution(int[] A) {
9          int sum = 0;
10         for(int i : A)
11             sum +=i;
12         int n= A.length+1;
13         int total = n*(n+1)/2;
14         return total - sum ;
15     }
16 }
```

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 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	✗ WRONG ANSWER got -2147483647 expected 1

▶	large1 large test, length = ~100,000	✓ OK
▶	large2 large test, length = ~100,000	✗ WRONG ANSWER got -2147473647 expected 10001