Codility_

Candidate Report: training3QAX6E-4CX

Check out Codility training tasks

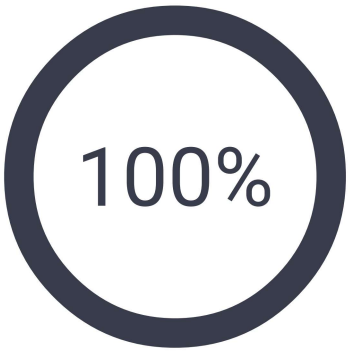
Test Name:

Summary Review (0) Timeline

Tasks summary

Task	Time spent	Score
PermMissingElem Java 8	1 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:

```
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:	1 minutes
Effective time used:	1 minutes
Notes:	*not defined yet*

Task timeline

14:58:00 14:58:40

Code: 14:58:40 UTC, java, final, score: **100** 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, e.g.
5  // System.out.println("this is a debug message");
6
7  class Solution {
8      public int solution(int[] A) {
```

```
 9                  // write your code in Java SE 8
10                  int total = 0,result = 0, length = A.lengt
11                  int goalTotal = 0,i;
12
13                  for(i=0;i<A.length; i++){
14                     goalTotal +=(i+1);
15                     total+=A[i];
16                  }
17
18                  goalTotal +=i+1;
19                  result = goalTotal - total;
20                  return result;
21              }
22  }
```

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