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Demo ticket

Session ID: demoWDP79-6SN  
Time limit: 120 min.

Status: closed  
Started on: 2014-01-16 01:27 UTC

Score:

77  
of 100

★ 1. PermMissingElem  
Find the missing element in a given permutation.

score: 77 of 100

Task description

A zero-indexed 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 a zero-indexed 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. Assume that:

- 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)].

Complexity:

- expected worst-case time complexity is O(N);
- expected worst-case space complexity is O(1), beyond input storage (not counting the storage required for input arguments).

Elements of input arrays can be modified.

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Solution

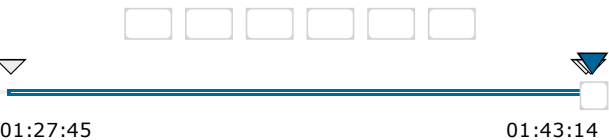
Programming language used: Java

Total time used: 16 minutes

Effective time used: 16 minutes

Notes: not defined yet

Task timeline



Code: 01:43:14 UTC, java, final, score: 77.00

```
01. // you can also use imports, for  
    // example:  
02. // import java.math.*;  
03. class Solution {  
04.     public int solution(int[] A) {  
05.  
06.         int lenght = A.length+1;  
07.         int sum = (lenght * (lenght +  
                        1) / 2);  
08.  
09.         for (int a : A) {  
10.             sum = sum - a;  
11.         }  
12.  
13.         return sum;  
14.  
15.     }  
16.  
17. }
```

Analysis

test	time	result
example example test	0.330 s.	OK
empty empty list	0.340 s.	OK
single single element	0.330 s.	OK

<div>Get account</div>	double two elements	0.330 s.	OK
	simple simple test	0.330 s.	OK
	medium1 medium test, length = ~10,000	0.330 s.	OK
	medium2 medium test, length = ~10,000	0.340 s.	OK
	large_range range sequence, length = ~100,000	0.340 s.	WRONG ANSWER got -2147483647 expected 1
	large1 large test, length = ~100,000	0.350 s.	OK
	large2 large test, length = ~100,000	0.340 s.	WRONG ANSWER got -2147473647 expected 10001