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Training ticket

Session

ID: training84FBKS-3RX **Time limit:** 120 min.

Status: closed

Created on: 2016-04-17 03:43 UTC Started on: 2016-04-17 03:43 UTC Finished on: 2016-04-17 04:01 UTC

Tasks in test

1 | CoddOccurrencesInArray

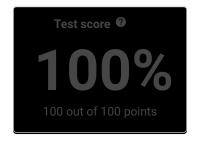
Correctness

100%

Performance

Task score

100%



score: 100 of 100 |

1. OddOccurrencesInArray

Find value that occurs in odd number of elements.

Task description

A non-empty zero-indexed array A consisting of N integers is given. The array contains an odd number of elements, and each element of the array can be paired with another element that has the same value, except for one element that is left unpaired.

For example, in array A such that:

$$A[0] = 9$$
 $A[1] = 3$ $A[2] = 9$
 $A[3] = 3$ $A[4] = 9$ $A[5] = 7$
 $A[6] = 9$

- the elements at indexes 0 and 2 have value 9.
- the elements at indexes 1 and 3 have value 3,
- the elements at indexes 4 and 6 have value 9,
- the element at index 5 has value 7 and is unpaired.

Write a function:

class Solution { public int solution(int[] A); }

that, given an array A consisting of N integers fulfilling the above conditions, returns the value of the unpaired element.

For example, given array A such that:

$$A[0] = 9$$
 $A[1] = 3$ $A[2] = 9$
 $A[3] = 3$ $A[4] = 9$ $A[5] = 7$

the function should return 7, as explained in the example above.

Assume that:

- N is an odd integer within the range [1..1,000,000];
- each element of array A is an integer within the range [1..1,000,000,000];
- all but one of the values in A occur an even number of times.

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: 18 minutes

Effective time used: 19 minutes

Notes: not defined yet

Task timeline

03:43:55



Code: 04:01:56 UTC, java, final, score: **100**

show code in pop-up

04:01:56

import java.util.Arrays; class Solution { 3 4 public int solution(int[] A) { Arrays.sort(A); 8 int count = 1; 9 int last = A[0]; for(int i = 1; i < A.length; i++) {
 if(A[i] == last) {</pre> 10 11 12 count++; 14 **else if**(count % 2 == 0) { 15 count = 1; last = A[i]: 16 17 18 else { 19 return last; 20 21 22 return last: 23

Analysis summary

24 }

re pronibited.	The solution obtained perfect so	core.
	Analysis	
	O(N) or O(N*log(N))	
	expand all Ex	ample tests
	example1 example test	✓ OK
	expand all Corr	ectness tests
	► simple1 simple test n=5	✓ OK
	➤ simple2 simple test n=11	✓ OK
	extreme_single_item [42]	✓ OK
	▶ small1 small random test n=201	✓ OK
	▶ small2 small random test n=601	✓ OK
	expand all Perfo	ormance tests
	► medium1 medium random test n=2,001	✓ OK
	► medium2 medium random test n=100,003	✓ OK
	▶ big1 big random test n=999,999, mul	✓ OK tiple
	repetitions	
	▶ big2 big random test n=999,999	✓ OK

Training center