

TASKS DETAILS

EASY	1.				
	OddOccurrencesInArray	Task Score	Correctness	Performance	
	Find value that occurs in odd number of elements.	66%	80%	50%	

Task description

A non-empty 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:

```
def solution(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
A[6] = 9
```

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:

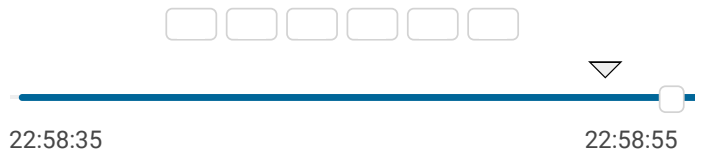
- expected worst-case time complexity is $O(N)$;
- expected worst-case space complexity is $O(1)$ (not counting the storage required for input arguments).

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Solution

Programming language used:	Python	
Total time used:	1 minutes	?
Effective time used:	1 minutes	?
Notes:	not defined yet	

Task timeline



Code: 22:58:55 UTC, py, final,
score: 66

[show code in pop-up](#)

```
1 def solution(A):
2     summary = {}
3     for number in A:
4         if number in summary:
5             summary[number] += 1
6         else:
7             summary[number] = 1
8
9     for k, v in summary.items():
10        if v == 1:
11            return k
```

Analysis summary

The following issues have been detected: runtime errors.

Analysis ?

expand all	Example tests	
▶	example1	✓ OK
	example test	
expand all	Correctness tests	

▶	simple1 simple test n=5	✓ OK
▶	simple2 simple test n=11	✓ OK
▶	extreme_single_item [42]	✓ OK
▶	small1 small random test n=201	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	small2 small random test n=601	✓ OK
expand all		Performance tests
▶	medium1 medium random test n=2,001	✓ OK
▶	medium2 medium random test n=100,003	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	big1 big random test n=999,999, multiple repetitions	✗ RUNTIME ERROR tested program terminated with exit code 1
▶	big2 big random test n=999,999	✓ OK