

Sansa has an array. She wants to find the value obtained by XOR-ing the contiguous subarrays, followed by XOR-ing the values thus obtained.

Determine this value.

**Example**

$arr = [3, 4, 5]$

Subarray	Operation	Result
3	None	3
4	None	4
5	None	5
3,4	3 XOR 4	7
4,5	4 XOR 5	1
3,4,5	3 XOR 4 XOR 5	2

Now we take the resultant values and XOR them together:

$3 \oplus 4 \oplus 5 \oplus 7 \oplus 1 \oplus 2 = 6$ . Return **6**.

Function Description

Complete the sansaXor function in the editor below.

sansaXor has the following parameter(s):

- int arr[n]: an array of integers

Returns

- int: the result of calculations

Input Format

The first line contains an integer  $t$ , the number of the test cases.

Each of the next  $t$  pairs of lines is as follows:

- The first line of each test case contains an integer  $n$ , the number of elements in  $arr$ .
- The second line of each test case contains  $n$  space-separated integers  $arr[i]$ .

Constraints

- $1 \leq t \leq 5$
- $2 \leq n \leq 10^5$
- $1 \leq arr[i] \leq 10^8$

Sample Input

```
2
3
1 2 3
4
4 5 7 5
```

Sample Output

```
2
0
```

Explanation

Test case #00:

$1 \oplus 2 \oplus 3 \oplus (1 \oplus 2) \oplus (2 \oplus 3) \oplus (1 \oplus 2 \oplus 3) = 2$

Test case #01:

$4 \oplus 5 \oplus 7 \oplus 5 \oplus (4 \oplus 5) \oplus (5 \oplus 7) \oplus (7 \oplus 5) \oplus (4 \oplus 5 \oplus 7) \oplus (5 \oplus 7 \oplus 5) \oplus (4 \oplus 5 \oplus 7 \oplus 5) = 0$

Change Theme Language Python 3

```
5 import random
6 import re
7 import sys
8
9 #
10 # Complete the 'sansaXor' function below.
11 #
12 # The function is expected to return an INTEGER.
13 # The function accepts INTEGER_ARRAY arr as parameter.
14 #
15
16
17
18 def sansaXor(arr):
19     # if the nubmer is even XOR = 0
20     if len(arr)%2==0:
21         return 0
22
23     # if it's an odd length array, answer = XOR of every alternate number
24     result = arr[0]
25     for idx in range(2,len(arr),2):
26         result = result ^ arr[idx]
27
28     return result
29
30
31
32
33
34
35
36
37
38
39
40 > if __name__ == '__main__': ...
55
```

Line: 26 Col: 1

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Congratulations

You solved this challenge. Would you like to challenge your friends?

✔ Test case 0

✔ Test case 1

✔ Test case 2

✔ Test case 3

✔ Test case 4

✔ Test case 5

✔ Test case 6

Compiler Message

Success

Input (stdin)

1	2
2	3
3	1 2 3
4	4
5	4 5 7 5

Expected Output

1	2
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