Project Proposal: Finding The Average Number For Odd And Even Numbers

資訊概論 **(IN102)**

Introduction to Computer Science

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- **Is the problem changed? (Yes/No) ANS: No**

Problem Description

Given n integers a_1, a_2, …, a_n, $0 \leq a_i \leq 32767$ for $i = 1,2,\ldots,n$, separate the odd with even numbers in two groups and then find the average number for each group of integers. For example, given 10 integers 5, 50, 17, 88, 2, 63, 7, 5, 11, 90, the average number for odd group is 18 with a remainder of 0 and 57 with a remainder of 2 (57.5) for even group of numbers.

Input Format

The first line gives the number of test cases. It is then followed by the input data for each test case. The input for each test case has $n + 1$ integers which are in order of n, a_1, a_2, …, a_n, where *n* gives the number of $a_i's$. Each line takes only one integer.

Technical Specification

- $n \geq 1$
- $0 \leq a_i \leq 32767$

Output Format

Print the average number for odd group in one line and the remainder in the second line. Print the average number for even group in the third line and the remainder at the fourth line for each test case. If the simulator finds that the input has only 1 odd or 1 even, the simulator should print odd and even numbers respectively. If there are no odd numbers. It should print 1 for odd in one line and if there are no even numbers, print 0 on the second line. If the average is a whole number with a decimal, just print out the remainder instead of its decimal equivalent.

Example (Note that the input and output should be non-negative integers only)

Sample Input:	**Sample Output:**
5	
	15
10	4
	12
24	0
13	
19	
4	3
7	0
8	2
33	0
7	
20	24
4	0
	80
2	0
2	1
3	0
	40
3	0
80	3
21	0
27	1
	0
4	
86	
58	
12	
4	
6	

0
0
0
4
5
1