

## A. Make It Zero

time limit per test: 1 second  
memory limit per test: 256 megabytes  
input: standard input  
output: standard output

During Zhongkao examination, Reyκλοer met an interesting problem, but he cannot come up with a solution immediately. Time is running out! Please help him.

Initially, you are given an array  $a$  consisting of  $n \geq 2$  integers, and you want to change all elements in it to 0.

In one operation, you select two indices  $l$  and  $r$  ( $1 \leq l \leq r \leq n$ ) and do the following:

- Let  $s = a_l \oplus a_{l+1} \oplus \dots \oplus a_r$ , where  $\oplus$  denotes the bitwise XOR operation;
- Then, for all  $l \leq i \leq r$ , replace  $a_i$  with  $s$ .

You can use the operation above in any order at most 8 times in total.

Find a sequence of operations, such that after performing the operations in order, all elements in  $a$  are equal to 0. It can be proven that the solution always exists.

### Input

The first line of input contains a single integer  $t$  ( $1 \leq t \leq 500$ ) — the number of test cases. The description of test cases follows.

The first line of each test case contains a single integer  $n$  ( $2 \leq n \leq 100$ ) — the length of the array  $a$ .

The second line of each test case contains  $n$  integers  $a_1, a_2, \dots, a_n$  ( $0 \leq a_i \leq 100$ ) — the elements of the array  $a$ .

### Output

For each test case, in the first line output a single integer  $k$  ( $0 \leq k \leq 8$ ) — the number of operations you use.

Then print  $k$  lines, in the  $i$ -th line output two integers  $l_i$  and  $r_i$  ( $1 \leq l_i \leq r_i \leq n$ ) representing that you select  $l_i$  and  $r_i$  in the  $i$ -th operation.

Note that you **do not** have to minimize  $k$ . If there are multiple solutions, you may output any of them.

### Example

input	Copy
6 4 1 2 3 0 8 3 1 4 1 5 9 2 6 6 1 5 4 1 4 7 5 0 0 0 0 0 7 1 1 9 9 0 1 8 3 100 100 0	
output	Copy
1 1 4 2 4 7 1 8 6 1 2 3 4 5 6 1 3 4 6 1 6 0 4 1 2 6 7 3 4 6 7 1 1 2	

### Note

Codeforces Round 896 (Div. 2)

Finished

Practice

→ Virtual participation

Virtual contest is a way to take part in past contest, as close as possible to participation on time. It is supported only ICPC mode for virtual contests. If you've seen these problems, a virtual contest is not for you - solve these problems in the archive. If you just want to solve some problem from a contest, a virtual contest is not for you - solve this problem in the archive. Never use someone else's code, read the tutorials or communicate with other person during a virtual contest.

Start virtual contest

→ Clone Contest to Mashup

You can clone this contest to a mashup.

Clone Contest

→ Submit?

Language: GNU G++20 13.2 (64 bit, win

Choose file: Choose File No file chosen

Submit

→ Last submissions

Submission	Time	Verdict
<a href="#">234087745</a>	Nov/24/2023 18:36	Accepted
<a href="#">234085464</a>	Nov/24/2023 18:32	Wrong answer on test 1
<a href="#">234082647</a>	Nov/24/2023 18:27	Wrong answer on test 1
<a href="#">234081259</a>	Nov/24/2023 18:24	Wrong answer on test 1
<a href="#">234079910</a>	Nov/24/2023 18:22	Wrong answer on test 1
<a href="#">234077935</a>	Nov/24/2023 18:19	Wrong answer on test 1

→ Problem tags

constructive algorithms \*900

No tag edit access

→ Contest materials

Announcement (en)

Tutorial (en)

In the first test case, since  $1 \oplus 2 \oplus 3 \oplus 0 = 0$ , after performing the operation on segment  $[1, 4]$ , all the elements in the array are equal to 0.

In the second test case, after the first operation, the array becomes equal to  $[3, 1, 4, 15, 15, 15, 15, 6]$ , after the second operation, the array becomes equal to  $[0, 0, 0, 0, 0, 0, 0, 0]$ .

In the third test case:

Operation	$a$ before	$a$ after
1	$[1, 5, 4, 1, 4, 7]$	$\rightarrow [4, 4, 4, 1, 4, 7]$
2	$[4, 4, 4, 1, 4, 7]$	$\rightarrow [4, 4, 5, 5, 4, 7]$
3	$[4, 4, 5, 5, 4, 7]$	$\rightarrow [4, 4, 5, 5, 3, 3]$
4	$[4, 4, 5, 5, 3, 3]$	$\rightarrow [5, 5, 5, 5, 3, 3]$
5	$[5, 5, 5, 5, 3, 3]$	$\rightarrow [5, 5, 5, 5, 5, 5]$
6	$[5, 5, 5, 5, 5, 5]$	$\rightarrow [0, 0, 0, 0, 0, 0]$

In the fourth test case, the initial array contains only 0, so we do not need to perform any operations with it.

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