

## E. Accidental Victory

time limit per test: 2 seconds

memory limit per test: 256 megabytes

input: standard input

output: standard output

A championship is held in Berland, in which  $n$  players participate. The player with the number  $i$  has  $a_i$  ( $a_i \geq 1$ ) tokens.

The championship consists of  $n - 1$  games, which are played according to the following rules:

- in each game, two random players with non-zero tokens are selected;
- the player with more tokens is considered the winner of the game (in case of a tie, the winner is chosen randomly);
- the winning player takes all of the loser's tokens;

The last player with non-zero tokens is the winner of the championship.

All random decisions that are made during the championship are made equally probable and independently.

For example, if  $n = 4$ ,  $a = [1, 2, 4, 3]$ , then one of the options for the game (there could be other options) is:

- during the first game, the first and fourth players were selected. The fourth player has more tokens, so he takes the first player's tokens. Now  $a = [0, 2, 4, 4]$ ;
- during the second game, the fourth and third players were selected. They have the same number of tokens, but in a random way, the third player is the winner. Now  $a = [0, 2, 8, 0]$ ;
- during the third game, the second and third players were selected. The third player has more tokens, so he takes the second player's tokens. Now  $a = [0, 0, 10, 0]$ ;
- the third player is declared the winner of the championship.

Championship winners will receive personalized prizes. Therefore, the judges want to know in advance which players have a chance of winning, i.e. have a non-zero probability of winning the championship. You have been asked to find all such players.

### Input

The first line contains one integer  $t$  ( $1 \leq t \leq 10^4$ ) — the number of test cases. Then  $t$  test cases follow.

The first line of each test case consists of one positive integer  $n$  ( $1 \leq n \leq 2 \cdot 10^5$ ) — the number of players in the championship.

The second line of each test case contains  $n$  positive integers  $a_1, a_2, \dots, a_n$  ( $1 \leq a_i \leq 10^9$ ) — the number of tokens the players have.

It is guaranteed that the sum of  $n$  over all test cases does not exceed  $2 \cdot 10^5$ .

### Output

For each test case, print the number of players who have a nonzero probability of winning the championship. On the next line print the numbers of these players in **increasing** order. Players are numbered starting from one in the order in which they appear in the input.

### Codeforces Round #702 (Div. 3)

Contest is running

00:49:24

Contestant



### → Submit?

Language: GNU G++14 6.4.0

Choose file:

**Example**

|                                    |      |
|------------------------------------|------|
| <b>input</b>                       | Copy |
| <pre>2 4 1 2 4 3 5 1 1 1 1 1</pre> |      |
| <b>output</b>                      | Copy |
| <pre>3 2 3 4 5 1 2 3 4 5</pre>     |      |

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