Problem M. Magic Contest

Time limit: 1 second
Memory limit: 1024 mebibytes

There are N wizards studying at a magic academy, numbered from 1 to N. Each wizard has a positive integer magical power, and the magical power of wizard i is A_i.

You are the headmaster of the academy, and you would like to hold a series of team battles.

For each battle, you must divide all N wizards into two non-empty teams. The team with the greater total magical power wins the battle. If the two teams have the same total magical power, you may choose either team as the winner.

Every wizard on the winning team receives one point.

You must hold at least one battle. Your goal is to make every wizard receive the same total number of points after all battles are over.

If there are multiple ways to achieve this, you want to use as few battles as possible.

Determine whether it is possible to make all wizards receive the same number of points. If it is possible, find a way to do so using the minimum possible number of battles.

Input

The first line contains an integer N — the number of wizards.

The second line contains N integers $A_1, A_2, \ldots, A_N$, where A_i is the magical power of wizard i.

Output

If it is impossible to make all wizards receive the same number of points, print -1.

Otherwise, print an integer K on the first line — the minimum number of battles.

Then print K lines describing the battles.

On each line, print an integer M — the number of wizards on the winning team — followed by M pairwise distinct integers representing their indices. Separate all integers on each line by spaces.

The indices of the wizards on each winning team may be printed in any order.

If there are multiple valid answers, print any of them.

Constraints

- $2 \le N \le 500$
- $1 \le A_i \le 500$ $(1 \le i \le N)$

Examples

standard input	standard output
5 3 1 4 1 5	2 2 1 3 3 2 4 5
5 2 1 7 1 8	3 4 1 2 3 4 4 1 2 4 5 2 3 5
2 1 5	-1

Note

In the first example, the goal can be achieved with the following two battles.

- In the first battle, divide the wizards into teams $\{1, 3\}$ and $\{2, 4, 5\}$. Both teams have the same total magical power 7, so either team may be chosen as the winner. Let team $\{1, 3\}$ win.
- In the second battle, divide the wizards into the same two teams, and let team $\{2, 4, 5\}$ win.

After these two battles, every wizard receives exactly 1 point.

It is impossible to achieve the goal with only one battle. Thus, the minimum number of battles is 2.

In the second example, the goal can be achieved with the following three battles.

- In the first battle, divide the wizards into teams 5 and $1, 2, 3, 4$. Team $1, 2, 3, 4$ wins.
- In the second battle, divide the wizards into teams 3 and $1, 2, 4, 5$. Team $1, 2, 4, 5$ wins.
- In the third battle, divide the wizards into teams $1, 2, 4$ and $3, 5$. Team $3, 5$ wins.

After these three battles, every wizard receives exactly 2 points.

It is impossible to achieve the goal with two battles. Thus, the minimum number of required battles is 3.