

# A Good Problem

Input file:            `standard input`  
Output file:          `standard output`  
Time limit:           1 second  
Memory limit:        512 megabytes

A good problem should have a concise statement.

You are given an array  $a$  of length  $n$ , initially filled with zeros, and another array  $b$  of length  $n$ . Your goal is to transform array  $a$  into array  $b$ . You can perform the following two types of operations:

- 1  $x$ : Add 1 to all elements in  $a$  that are equal to  $x$ .
- 2  $x$ : Add 1 to the element in  $a$  at index  $x$ .

You can perform no more than 20 000 operations.

## Input

The first line contains a positive integer  $n$  ( $1 \leq n \leq 1000$ ).

The second line contains  $n$  non-negative integers representing the array  $b$  ( $0 \leq b_i \leq n$ ).

## Output

The first line should contain an integer  $k$ , representing the number of operations.

The following  $k$  lines should each contain two integers 1  $x$  or 2  $x$ , representing an operation. For the operation type 1  $x$ , you must ensure that  $0 \leq x \leq n$ . For the operation type 2  $x$ , you must ensure that  $1 \leq x \leq n$ .

## Example

| standard input | standard output |
|----------------|-----------------|
| 4              | 8               |
| 2 4 3 1        | 2 1             |
|                | 2 2             |
|                | 2 3             |
|                | 1 1             |
|                | 2 4             |
|                | 2 2             |
|                | 2 3             |
|                | 2 2             |