Problem 4A: Mismatch

The company you are working for is a market leader in processing numbers. Before the numbers can be processed, the numbers must be checked to make sure everything is according to the high standards of your company. It is your job to check that every number from 1 to n is present and that there are no duplicates in the list. Luckily, you received some insider information: you know that exactly one number is missing and one number has a duplicate.

Input

The input consists out of:

- One line with one integer n, where
  - n ($1 \leq n \leq 10^6$) is the number of numbers you will receive.
- n lines, the ith of which contains one integer n_i, where
  - n_i ($1 \leq n_i \leq n$) is the ith number you want to process.

Output

Print on the first line the missing number and on the next line the duplicated number.

Sample Input 1	**Sample Output 1**
5 5 2 1 2 3	4 2

Sample Input 2	**Sample Output 2**
2 2 2	1 2