Objective

You are in charge of carrying out an exciting marketing study on the packaging of a new organic yoghurt issued from short circuits. Even if you regret to see a "responsible" brand inspired by the methods of industrial producers, this is your job and you have no choice... You receive the results of a study where consumers indicate the colour they prefer for packaging. Not wanting to make such an important decision alone, you want to present the 2 preferred colors to your boss.

Data format

Input

Row 1: an integer **N** between 3 and *10 000* corresponding to the number of people interviewed.
Rows 2 to **N**+1 : a string comprising between *4* and *10* lower case letters corresponding to the color preferred by a given person.

Output

Two strings separated by a space representing the two colors that come out the most. The first string must be the color that is favored by the greatest number of people.

There will never be two colors with the same number of votes.

Example

Input

```
6
red
yellow
blue
red
yellow
red
```

Output

```
red yellow
```

Because red got 3 votes, yellow two votes and blue 1 vote.