

Ivancho started a new business. He made small company that works with big databases. His first project was from old English Lord that have discovered small mistake in the phonebook of his territory. One of the citizens was placed in wrong place. All citizens in the phonebook are sorted lexicographically by their family name. Ivancho doesn't know the family of the wrong placed citizen but he want to find his index in the current order of the phonebook.

It is known that the citizen is placed earlier that he is supposed to be.

This job is too easy for Ivancho's company so he gave this job to you. You have to write the program **phonebook** which by given list of N citizens finds the index of the citizen that is placed on the wrong place.

It is guaranteed that there is only one citizen with wrong place and that there can be a lot of citizens with equal family name.

Input

On the first row of the input file `phonebook.in` is given number N – the number of citizens included in the phonebook. On the next N rows, each is given one string with maximal length 50 symbols (lowercase English letters) – The family name of each citizen.

Output

On the single row of the output file `phonebook.out` you must print one number – the index of the citizen which name is placed in wrong place.

Note: The first person has index 1.

Constraints

$1 < N \leq 50\,000$

Family name of each citizen – up to 50 symbols.

Input (phonebook.in)	Output (phonebook.out)
8 aaaa aaaaa aaab abab bbbb abbb bbbbb fff	5

Explanation:

The citizen with family name bbbb must be placed after the citizen with family abbb.