

Problem D

The special famous person

Input File: *testdata.in*

Time Limit: 0.3 second

Problem Description

Dennis is a data scientist. He wants to figure out who is the special famous person among his data list. The special famous is defined in the following sense: given A is the special famous person, then everyone should know A while A doesn't know anyone except A himself.

Given there are n persons, we use $n * n$ matrix m to indicate the relationship between two persons. For example, $m[i][j] = 1$ indicates person i knows person j ; on the other hand, $m[i][j] = 0$ indicates person i doesn't know person j . Besides, since everyone knows himself/herself, $m[i][i] = 1$.

Technical Specifications

None

Input Format

1. First line: number of persons.
2. For the following n lines: shows an $n * n$ matrix that defines the know status among all person.

Output Format

Output the **index** of the special famous person or **-1** when the special famous person doesn't exist.

Sample Input

```
5
11010
01011
00110
00010
10011
4
1100
0111
1010
0101
```

Sample Output

```
4
-1
```