A. Marks

time limit per test

1 second

memory limit per test

256 megabytes

input

standard input

output

standard output

Vasya, or Mr. Vasily Petrov is a dean of a department in a local university. After the winter exams he got his hands on a group's gradebook.

Overall the group has n students. They received marks for m subjects. Each student got a mark from 1 to 9(inclusive) for each subject.

Let's consider a student the *best at some subject*, if there is no student who got a higher mark for this subject. Let's consider a student *successful*, if there exists a subject he is the *best at*.

Your task is to find the number of *successful* students in the group.

Input

The first input line contains two integers n and m ($1 \le n, m \le 100$) — the number of students and the number of subjects, correspondingly. Next n lines each containing m characters describe the gradebook. Each character in the gradebook is a number from 1 to 9. Note that the marks in a rows are not sepatated by spaces.

Output

Print the single number — the number of *successful* students in the given group.

Examples

input

Copy

```
3 3
223
232
112
```

output

```
2
```

input

Copy

```
3 5
91728
11828
11111
```

output

```
3
```

Note

In the first sample test the student number 1 is the best at subjects 1 and 3, student 2 is the best at subjects $1$and 2, but student 3 isn't the best at any subject.
In the second sample test each student is the best at at least one subject.