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
3 3 223 232 112
output
2

input
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.