# Problem F

## The Symposium of Disciplines

**Time limit: 1 second**
**Memory limit: 256 megabytes**

At the Academy of Knowledge, students are preparing for the Great Symposium, where teams of two will compete to showcase the breadth of their expertise. Each student has mastered a unique set of disciplines, recorded in the Academy's archives. The Headmaster seeks your help to form the most versatile team possible and to count how many such teams can be assembled for the event.

There are $n$ students and $m$ topics. Each student's knowledge is represented by a binary string of length $m$. If the $j$-th character is `'1'`, the student knows topic $j$; otherwise, it is `'0'`.

You need to determine:

- The maximum number of topics a team of two students can know together.
- The number of distinct teams that can achieve this maximum.

## Input

The first line contains two integers $n$ and $m$ ($2 \leq n \leq 500,\ 1 \leq m \leq 500$) — the number of students and the number of topics.

The next $n$ lines each contain a binary string of length $m$, representing the topics known by each student.

## Output

Print two integers on separate lines:

- The first line: the maximum number of topics a team can know.
- The second line: the number of teams that can achieve this maximum.

| Sample Input | Sample Output |
|---|---|
| 4 5<br>10101<br>11100<br>11010<br>00101 | 5<br>2 |

## Explanation

There are 4 students and 5 topics. The possible teams are: (1,2), (1,3), (1,4), (2,3), (2,4), (3,4).

- Team (1,3): `10101 OR 11010 = 11111` (5 topics)
- Team (3,4): `11010 OR 00101 = 11111` (5 topics)

Two teams can cover all 5 topics.