

ACM ICPC Team



You are given a list of N people who are attending ACM-ICPC World Finals. Each of them are either well versed in a topic or they are not. Find out the maximum number of topics a 2-person team can know. And also find out how many teams can know that maximum number of topics.

Note Suppose a , b , and c are three different people, then (a,b) and (b,c) are counted as two different teams.

Input Format

The first line contains two integers, N and M , separated by a single space, where N represents the number of people, and M represents the number of topics. N lines follow. Each line contains a binary string of length M . If the i^{th} line's j^{th} character is **1**, then the i^{th} person knows the j^{th} topic; otherwise, he doesn't know the topic.

Constraints

$$2 \leq N \leq 500$$

$$1 \leq M \leq 500$$

Output Format

On the first line, print the maximum number of topics a 2-person team can know.
On the second line, print the number of 2-person teams that can know the maximum number of topics.

Sample Input

```
4 5
10101
11100
11010
00101
```

Sample Output

```
5
2
```

Explanation

$(1, 3)$ and $(3, 4)$ know all the 5 topics. So the maximal topics a 2-person team knows is 5 , and only 2 teams can achieve this.