ACM ICPC Team

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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 N space, where 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 <= N <= 500

1 <= M <= 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.

Related Topics

- Finding Max Min
- Bitwise OR

Submissions:

20901

Max Score:

25

Difficulty:

Easy