# Problem BALLOONS: Balloons

As you know, floating balloons play a crucial role in all types of contests since the ancient Greek Olympic games. The best athletes were prized with the laurel wreathes and the appropriate amount of colorful balloons – the symbol of strength, freedom, and wisdom.

In our fascinating modern age, the programming challenges have become the most spectacular sport events ever. Following in the old tradition, the participants of the programming challenges are prized with a balloon for each solved problem.

Given the distribution of balloons over the teams, can you compute the best team as well as the easiest problem?

## Input

The first line contains the integers $M$ and $N$ ($0 < M \leq 16; 0 < N \leq 1024$) where $M$ is the number of problems and $N$ the number of teams in the contest. Then $M$ lines follow each describing a problem giving its name and color, which is encoded by a single unique capital letter (e.g., B for *Blue*).

Each of the following $N$ lines gives the name and a sequence of balloon colors for one team. As this is no freshmen contest, you may safely assume that each team has solved at least one problem. Both a problem and a team name consists of up to $64$ characters (upper/lower case letters, numbers and underline).

## Output

Print both the name of the team with the most solved problems and the name of the problem solved by the most teams, each on a single line. If there are multiple teams or problems satisfying this condition, any of them will do.

**Sample Input 1**

```
3 2
The_Ballons R
The_Card_Trick G
The_Pizza B
some_very_cool_name BG
even_cooler_name GB
```

**Sample Output 1**

```
even_cooler_name
The_Card_Trick
```

**Sample Input 2**

```
3 2
The_Ballons R
The_Card_Trick G
The_Pizza B
some_very_cool_name B
even_cooler_name RGB
```

**Sample Output 2**

```
even_cooler_name
The_Pizza
```