Rain

We know the amount of rain measured in N locations across the country for the last D days.

Write a program that determines the following:

1. How many rainy days were in the first location?
2. The location where the daily average amount of rain was the least.
3. The list of locations where there was a day with at least 50mm of rain.
4. Was there any day when there was no rain in the country? If yes, which day?
5. Two locations such that in the first location the amount of rain was always bigger or equal to the amount of rain in the second one.

Input

The first line of the *standard input* contains the number of measurement locations ($1 \le N \le 50$), and the number of days ($1 \le D \le 50$). Afterward, there are N lines, one line for each location. Each line contains D integer numbers - the rain measurements for a location, in millimeters ($0 \le R_{i,j} \le 100$).

Output

The *standard output* should contain a line with a single **# character** before the solution of **each subtask**. This # character line is followed by as many lines as needed for the output of a subtask. If you cannot solve a subtask, you should output only the line containing the # character. If the output format is not correct (less/more # characters are in the output), you will get "Output format error", even if you have correct solutions for some subtasks.

Subtask 1 (20 points): Print the count of days when the amount of rain was bigger than 0 in the first location.

Subtask 2 (20 points): Print the index of the location with the minimum average rain. If there are multiple possible answers, give the smallest index. The locations are indexed with numbers from 1 to N.

Subtask 3 (20 points): Print the number of locations where there was a day with at least 50mm of rain. Afterward, in the same line, list the indexes of these locations in increasing order, separated by spaces.

Subtask 4 (20 points): Print the index of a day on which the amount of rain was 0 in every location, or –1 if there was no such day. If there are multiple possible answers, give the smallest index. The days are indexed with numbers from 1 to D.

Subtask 5 (20 points): Print two different numbers, the indexes of two locations. It should be true that every day the amount of rain in the first location was not less than the amount of rain in the second location. If there are no such locations, print –1 –1. If there are multiple solutions, you can give any.

Example

Input	Output
4 7 0 6 2 0 15 0 3 0 0 0 0 50 0 0 3 1 4 1 59 2 65 0 6 1 80 3 3 9	# 4 # 1 # 3 2 3 4 # -1 # 3 2

Limits

Time limit: 1.0 s
Memory limit: 64 MB

Your submitted solution is only valid if it contains the following paragraphs at the top of the program. Please fill in your name and Neptun code.

```
/*
NAME, NEPTUN
This solution was prepared and submitted by the student stated above
for the assignment of the Programming course.
I declare that this solution is my own work. I have not copied or used
third party solutions. I have not passed my solution to my classmates,
neither made it public.
Students' regulation of Eötvös Loránd University (ELTE Regulations
Vol. II. 74/C.§) states that as long as a student presents another
student's work - or at least the significant part of it - as his/her
own performance, it will count as a disciplinary fault. The most
serious consequence of a disciplinary fault can be dismissal of the
student from the University.
*/
```