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.
*/
```

Reindeer

At Christmas the reindeer trips were registered. We know the number of reindeers, and for each of them how many trips happened and how long was a trip (in miles).

Write a program that determines the followings:

1. How many trips were exactly 40 miles?
2. Which reindeer travelled the most?
3. How many reindeers and which one (with index) travelled more than M miles?
4. Did it happen, that a reindeer travelled less than another one shortes trip?

Input

The first line of the *standard input* contains the number of Reindeers (1≤N≤1000), and the given M number (1≤M≤2000). Afterward, there are N lines, one line for each Reindeer. Each line contains the number of trips (1≤R≤1000) that was happen by the given reindeer, it is followed by R integers those mean the length of the trips (1≤G≤2000).".

Output

You have to write exactly 4 lines into the *standard output*. Each line must contain an answer for the given question in the given order. First line contains a number, the number of trips that were exaclty 40 miles. The second line contains the index of the reindeer who travelled the most. The third line contains the number of the reindeer and their indexes separated by space. The last, fourth line contains YES or NO that answers the fourth question.

Example

Input

```
4 50
5 10 10 10 10 10
5 14 40 16 12 12
5 10 17 40 16 12
5 53 54 55 56 57
```

Output

```
2
4
3 2 3 4
YES
```

Comment: YES, because the first reindeer travelled 50 miles and the last reindeer shortest trip is 53.

Limits

Time limit: 1.0 sec

Memory limit: 64 MB