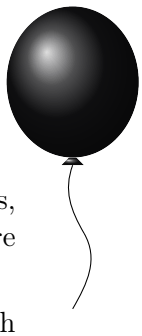
F Dating



You are the developer of a dating app which ignores gender completely. The app has n users, indexed from 1 to n. Each user's profile features a list of the activities they enjoy doing. There are m possible activities, indexed from 1 to m.

A match between two users is good if they share at least one activity and, at the same time, both of them like at least one activity that the other user does not like.

Find a good match if it exists.

Input

The first line contains two integers n and m ($2 \le n \le 200\,000$, $1 \le m \le 10^6$) — the number of users and the number of activities.

Each of the following n lines contains a number k_i ($0 \le k_i \le m$) — the number of activities that user i likes — followed by k_i distinct integers from 1 to m — the activities user i likes.

It is guaranteed that $k_1 + k_2 + \cdots + k_n$ does not exceed 10^6.

Output

Print `YES` if a good match exists. Otherwise, print `NO`.

If a good match exists, on the next line print two integers — the indexes of two users that make a match.

Samples

Sample input 1	Sample output 1
3 5 3 1 2 4 5 1 2 3 4 5 2 1 5	YES 3 1

Explanation of sample 1.
Users 1 and 3 form a match, because they share activity 1, and, furthermore, user 3 likes activity 5 (which user 1 does not like) and user 1 likes activity 4 (which user 3 does not like). Note that users 1 and 2, as well as users 2 and 3, do not form a match, as there is no activity that users 1 or 3 like, and user 2 doesn't like.

Sample input 2	Sample output 2
3 3 1 1 1 2 3 2 3 1	NO