Problem G. TV Show

Input file:	`show.in`
Output file:	`show.out`
Time limit:	2 seconds
Memory limit:	256 megabytes

Recently various TV shows started to gain popularity among young people who like to test their luck. One such show is running on ZhTV channel in China.

The show proceeds as follows. There is a special game board which has the form of a rectangle with n rows and n columns. The cells on the main diagonal of the board contain one hieroglyph each. There are also m phrases each of which contains n hieroglyphs. For each i there are at most two phrases such that their i-th hieroglyph is equal to the hieroglyph written in the i-th row of the board.

The player has to put phrases to the rows of the board in such way that if the phrase is put to the i-th row, the i-th hieroglyph of the phrase must coincide with the hieroglyph written in the corresponding cell. Also hieroglyphs in each column must be distinct.

For each phrase put to the board the player gets some small prize, and she gets a super prize if she puts a phrase to every row of the board. Help the player to determine whether she can win the super prize.

Input

We will denote hieroglyphs with integer numbers from 1 to 10^9.

The first line of the input file contains n — the number of rows on the board ($1 \le n \le 200$). The next line contains n integer numbers — hieroglyphs written on the diagonal.

The third line contains an integer number m ($n \le m \le 2n$) followed by m lines. Each line contains n integer numbers — hieroglyphs of the corresponding phrase. For each i there are at most two phrases such that their i-th hieroglyph is equal to the hieroglyph written in the i-th row of the board.

Output

If the super prize can be won, print "`YES`" at the first line of the output file. The second line must contain n integer numbers — the phrases to put to the board, from top to bottom. Phrases are numbered from 1 to m in order they are given in the input file.

If the super prize cannot be won, print "`NO`" at the first line of the output file.

Example

show.in	show.out
4 1 2 3 4 7 1 5 2 5 1 5 4 1 2 3 3 1 3 2 4 1 2 2 2 2 3 3 3 3 5 4 5 4	YES 2 5 6 7
4 1 2 3 4 7 1 5 2 5 1 3 4 1 2 3 3 1 3 2 4 1 2 2 2 2 3 3 3 3 5 4 5 4	NO