Problem I. Illuminati

Input file:	`standard input`
Output file:	`standard output`
Time limit:	1 second
Memory limit:	1024 megabytes

Dwarf the Illuminati is preparing the New Year's Eve light show. There will be N candles put in a straight line. Each candle can be either lit or not. The show will consist of K rounds. Between each pair of consecutive rounds, Illuminati will move the candles around.

To make everything easier to remember, Illuminati wants to move the candles in the same way each time. Formally, he will create an N-element permutation P, and after each round, he will move the candle from position i to position $P(i)$.

He already designed the entire show. Please help him and determine if there exists a permutation P that would match his requirements. If there are multiple such permutations, output the lexicographically smallest one.

Input

The first line contains two natural numbers: N and K. Each of the next K lines will contain a binary string of length N, where 1 means the candle is lit, and 0 means that it is not. The i-th of these lines corresponds to the i-th round of the show.

Limits $1 \leq N, K \leq 100\,000$, $N \cdot K \leq 1\,000\,000$.

Output

If the required permutation exists, in the first line output `YES`, and in the second line output the permutation (starting from 1). If such a permutation doesn't exist, output `NO`.

Examples

standard input	standard output
3 3 100 010 001	YES 2 3 1
4 2 0011 0110	YES 1 4 2 3