

1256 – Word Puzzle

You are given a puzzle board where there are n words. Initially they are scattered. Your task is to find a order of the words such that the first character of i^{th} word is same as the last character of the $(i-1)^{\text{th}}$ word ($1 < i \leq n$).

For example, you are given {"abcf", "pqrs", "fzzp", "zama", "pxrp"}, the solution is

zama abcf fzzp pxrp pqrs

Input

Input starts with an integer T (≤ 20), denoting the number of test cases.

Each case starts with a line containing two an integer n ($1 \leq n \leq 1000$). Each of the next n lines contains a word whose length is between 1 and 20 (inclusive). You can assume that the words contain lowercase letters only.

Output

For each case, print the case number and 'Yes' if such a ordering can be possible, or 'No' if there is no such ordering. If the result is yes, then in the next line you should print the n words in a valid order. Print a single space between two consecutive words. There can be multiple solutions, any valid one will do.

Sample Input	Output for Sample Input
2 5 abcf pqrs fzzp zama pxrp 3 yes no notsolvable	Case 1: Yes zama abcf fzzp pxrp pqrs Case 2: No

Note

This is a special judge problem. Wrong output format may cause wrong answer.