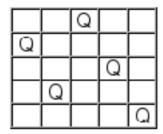
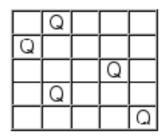
The eight-queens problem consists of finding (if it exists) a configuration for a set of eight queens on a chessboard, in such a way that no queen is under attack by any other. In other words, there must be a single queen in each row and column of the board, and at most one queen in each diagonal line. The N-queens problem is the obvious generalization of this problem to an $N \times N$ board. Consider for instance the following two configurations; the first is a solution to the 5-queens problem and the second is not:





Your task is to write a program that, for a given N, determines whether a configuration is a solution to the N-queens problem. If not, the program will then check if a solution can be obtained by moving a single queen (in any of the eight possible directions). To simplify, consider that queens can move over each other, i.e, a queen can be moved to any empty position in the same row, column, or diagonal line where it stands.

Input

The input consists of several test cases, each of which has:

- \bullet a line containing the dimension N of the problem (a positive integer number not greater than 30), followed by
- N lines, each consisting of N characters followed by newline. Characters can only be '0' (zero, corresponding to an empty position) or (capital) 'X', corresponding to a queen. Each line corresponds to a row in the board.
- will contain exactly N occurrences of the character 'X'.

Output

The output for each test case will consist of one of the following:

- a single line containing the word 'YES' (if the configuration is a solution to the *N*-queens problem)
- \bullet otherwise, a line containing the word 'NO', followed by a line containing either:
 - the word 'NO', if no solution can be obtained by moving one queen; or
 - the word 'YES' followed by N lines corresponding to the description of the solution discovered, in the same format as in the input.

Print a blank line between test cases.

Sample Input

5 00X00 X0000

000X0

0000X

5

00000 0000X

00000

00000

0000X

Sample Output

YES

NO

YES

X0000

000X0

0X000

0000X