A. Appleman and Easy Task

time limit per test
1 second
memory limit per test
256 megabytes
input
standard input
output
standard output

Toastman came up with a very easy task. He gives it to Appleman, but Appleman doesn't know how to solve it. Can you help him?

Given a $n \times n$ checkerboard. Each cell of the board has either character 'x', or character 'o'. Is it true that each cell of the board has even number of adjacent cells with 'o'? Two cells of the board are adjacent if they share a side.

Input

The first line contains an integer n ($1 \le n \le 100$). Then n lines follow containing the description of the checkerboard. Each of them contains n characters (either 'x' or 'o') without spaces.

Output

Print "YES" or "NO" (without the quotes) depending on the answer to the problem.

Examples

input

NO

Copy	
3 xxo	
xxo xox	
OXX	
output	
YES	
input	
input Copy	
4	
XXXO	
XOXO	
oxox	
XXXX	
output	