

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 ($1 \leq n \leq 100$). 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
3 xxo xox oxx
output
YES

input
4 xxxo xoxo oxox xxxx
output
NO