

Problem B. Grid Paths

Time limit 1000 ms

Mem limit 524288 kB

Consider an $n \times n$ grid whose squares may have traps. It is not allowed to move to a square with a trap.

Your task is to calculate the number of paths from the upper-left square to the lower-right square. You can only move right or down.

Input

The first input line has an integer n : the size of the grid.

After this, there are n lines that describe the grid. Each line has n characters: `.` denotes an empty cell, and `*` denotes a trap.

Output

Print the number of paths modulo $10^9 + 7$.

Constraints

- $1 \leq n \leq 1000$

Sample

Input	Output
4*.. ...* *....	3