Gravity

Consider a 2D grid, which contains apples, obstacles, and open spaces. Gravity will pull the apples straight down, until they hit an obstacle, or the bottom of the grid, or another apple which has already come to rest. Obstacles don't move. Given such a grid, determine where the apples eventually settle.

Input

Each input will consist of a single test case. Note that your program may be run multiple times on different inputs. The first line of input contains two integers, r and c ($1 \le r, c \le 100$), which are the number of rows and the number of columns of the grid. On each of the next r lines will be c characters: 'o' (lowercase 'Oh') for an apple, '#' for an obstacle, and '.' for an open space.

Output

Output the grid, after the apples have fallen.

Sample Input	Sample Output
3 3	o..
ooo	#.o
#..	.o#
..#	
4 2	..
oo	o.
oo	oo
o.	oo
..	