It's 3000 years ago. The Pharao's pyramid has just been finished, and now the interior needs to be worked on. However, it's pitch dark inside, and the problem of providing light for the workers has to be solved. Electric light hasn't been invented yet, and lighting a fire inside the pyramid isn't a good solution either, because the interior should stay clean of smoke and ash. Therefore, the senior architect's proposal is to use mirrors to redirect sunlight from the entrance to the construction sites. From time to time, after work had been finished at one place, the mirrors will have to be realigned in order to direct the light to another place.

For each test case: output the same map with the following two modifications:

- Turn mirrors where it is necessary, i.e. replace / by \ or vice versa.
- Redraw the light ray, i.e. change the characters accordingly, so that it goes from O to D.

The characters: O, D, /, \, #, and . stand for:

- O origin of light
- D destination of light
- / mirror in position 1
- \ mirror in position 2
- # obstacle
- . free space
- | light ray moving vertically
- - light ray moving horizontally
- + crossing light rays

The origin of light O will always be on the border. The remaining border will consist entirely of # characters. Light always travels vertically or horizontally, and reflections are always 90-degree turns.

Input Specification
The input file consists of one or more test cases. Each test case starts with a line that contains two integers: the number of rows R and the number of columns C of the map.

Then a map of the current situation follows, given as R rows of C characters each.

The possible characters are O, D, /, \, #, ., |, - , +, ;, :. The first line of the map is on the top of the pyramid, the last line is on the bottom. The leftmost column is on the left of the pyramid, the rightmost column on the right.

Output Specification
For each test case, output the same map with the following two modifications:

- Turn mirrors where it is necessary, i.e. replace / by \ or vice versa.
- Redraw the light ray, i.e. change the characters accordingly, so that it goes from O to D.

The characters O, D, and # always remain unchanged.