Given an $n \times m$ board with some cells already marked, fill it with ‘$o$’ and ‘$x$’ in all the possible ways, but avoiding any horizontal or vertical three-in-a-row. The diagonal three-in-a-row are allowed.

**Input**

Input consists of several cases. Every case begins with $n$ and $m$, followed by $n$ rows with $m$ characters each. If the cell is already marked, there is an ‘$o$’ or an ‘$x$’. Otherwise, we have a period. You can assume that $n \cdot m$ is between 1 and 20, and that there is no three-in-a-row initially.

**Output**

For every case, print in lexicographical order (from top to bottom, and inside each row, from left to right) all the ways to fill the board without any forbidden three-in-a-row. Print a line with 10 dashes at the end of each board, and a line with 20 asterisks at the end of each case.

**Sample input**

```
2 2
X.
.X
4 5
.X...
.OX.O
..O..
...X.
3 4
.X..
...O
..XX.
```

**Sample output**

```
XO
OX
---------
XO
XX
---------
XX
OX
---------
XX
XX
---------
***************
***************
OXXOX
XOXO
OXXO
---------
XXOX
OXXO
---------
OXXO
OXXO
---------
***************
```