GAME OF LIFE

The Game of Life takes place on a two-dimensional grid of cells. Each cell is in one of two possible states: **alive** or **dead**. Once the grid is initialized, the game progresses in discrete steps called **ticks**. At each tick the existing snapshot of the grid is used for each cell to interact with its neighbors based on four basic rules to determine the next state of the grid. The state of the grid is a representation of the dead and alive cells in a grid of a fixed size.

The following (mutually-exclusive) rules are applied for the grid to move towards a new state:
1. Any live cell with fewer than two live neighbors dies.
2. Any live cell with two or three live neighbors lives.
3. Any live cell with more than three live neighbors dies.
4. Any dead cell with exactly three live neighbors becomes alive.

Requirements:
- A cell shall be in two possible states: dead or alive.
- Each cell in the grid shall be accessible by a unique (x, y) coordinate as shown below.

y	2	(0,2)	(1,2)	(2,2)
	1	(0,1)	(1,1)	(2,1)
	0	(0,0)	(1,0)	(2,0)
		0	1	2

x

- **Neighbors** of a cell are defined as the ones, which are in the immediate vicinity that surround the cell (including the diagonals). E.g. any cell inside the grid has 8 neighbors, whereas cells in the borders have 5 and cells in the corners have 3 neighbors. A cell is not its own neighbor.
- At each tick, the state of the grid shall be updated according to the four neighborhood-based rules above. These rules shall be applied to all cells simultaneously, i.e. the order of cells to which the rules are applied should not affect the outcome.
- The state of the grid shall be represented as a string, called **life**, where dead cells are represented with a "-" (dash) and alive cells are represented with a "*" (star) character. When printed, this string should be displayed in N lines (rows of the grid), each consisting of M characters (columns of the grid), where NxM is the size of the grid (see below).

y	2	DEAD	TRUE	TRUE
	1	DEAD	DEAD	TRUE
	0	TRUE	TRUE	DEAD
		0	1	2

x

-	*	*
-	-	*
*	*	-

LIFE

- You shall throw a **CustomLifeException** when a cell receives negative coordinates, the grid contains cell outside its limits, or for all other error cases.