Conway's Game of Life

"The Game of Life" takes place on a two-dimensional, finite, and 2D square grid of cells. Each cell is in one of two possible states: alive or dead. The grid is initialized randomly and the game progresses in discrete steps called "tick"s. At each tick, 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 referred to as "Life", which is a representation of the dead and alive cells in a grid of a fixed size. The following rules are applied for "Life" to move towards a new state:

RULE 1. Any live cell with fewer than two live neighbors dies.
RULE 2. Any live cell with two or three live neighbors lives.
RULE 3. Any live cell with more than three live neighbors dies.
RULE 4. Any dead cell with exactly three live neighbors becomes alive.

Requirements

- A cell shall be in two possible states: dead or alive
- The grid shall be of any size that is composed of a square arrangement of cells in 2D, e.g. 10x10, 50x50 etc. Therefore, each cell shall be accessible by a unique (x, y) coordinate.
- The states of the cells in the grid shall be initialized uniformly random at the beginning, i.e. number of alive cells should be roughly equal to the number of dead cells.
- 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 eight neighbors, whereas cells in the borders have five 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 is called "Life" and shall be represented as a string, 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 N characters (columns of the grid), where NxN is the size of the grid.
- You shall throw "CustomLifeException" for all error cases including but not limited to null pointer errors and attempts to access a cell that is outside the edges of the grid (e.g. when checking for neighbors).