By using C++ create the Game of Life (also known as Life) that was originally created by a british mathematician called Conway. (reference: https://en.wikipedia.org/wiki/Conway%27s_Game_of_Life)

Create a N x N board (user can adjust the size) of initially "dead" cells, where the user can set each cell on the board as "alive" to create the "initial state" for the game.

The game progresses in states. On the next progressive state, the following rules are applied to each cell.

If the cell is alive:
1. If it has 1 or no neighbors, it will turn "dead". As if by solitude.
2. if it has 4 or more neighbors, it will turn "dead". As if by overpopulation.
3. If it has 2 or 3 neighbors, it will remain "alive".
If the cell is dead:
1. If it has exactly three neighbors, it will turn "alive", as if by regrowth.

The game can progress both automatically by pressing some "start" button, and sequentially if the user clicks some button for "next state".

Depending on the initial state, the cells can form various different patterns.

Please upload your solution to a repository (github for example) online using git and provide us with a link to it.

We prefer the Linux operating system, so if it is possible please test your assignment in Linux environment.

Evaluation criteria:

- Design
- Structure
- Use of language features
- Clarity of implementation
- Error checking
- Comments
- Testability
- Documentation
- Usability