

User's Guide - Game of Life

1. Input file

Before starting the game, the user must fill in a text file, named iniState.txt available inside the game's folder, with the initial state (system seed) as shown in the example below:

```
0 1 0 0 1 1
1 1 0 1 0 0
0 0 1 0 1 1
```

In this example, a board of size 6x3 is given as input to the game, where '1' indicates a living cell and '0' a dead cell. As well as the initial state, the board size will also be defined by the user (the number of rows and columns in the iniState.txt file will indicate this).

It is important to check if there are **only one** new line after the last cell of the last row.

2. Starting the game

To start the game, the user should either call the gameOfLife command at the prompt or start the executable with the same name. The following menu will appear:

- 1 – Start continuously.
- 2 – Start step by step.
- 3 – Exit.

By choosing '1' from the menu, the game will start and every second will display the current state in the console. To end the game, the user must press the "Esc" key.

By choosing '2' from the menu the game will start with the system seed and each time the 'Enter' key is pressed, the next state will be displayed according to the rules of the game. To end the game, the user must press the 'Esc' key.

By choosing '3' from the menu, the game ends.

In menu cases '1' and '2', each interaction is saved in the output file fasedavida.txt.

In the file fasedavida.txt, you will see each interaction and its respective board as exemplified below:

Iteration 1:

```
0 1 0 0 1 1
```

1 1 0 1 0 0
0 0 1 0 1 1

Iteration 2:

1 1 1 0 1 0
1 1 1 1 1 1
0 1 1 1 1 0

. .
. .
. .

Iteration n:

1 0 0 1 1 1
0 0 0 0 0 1
1 0 0 0 0 1