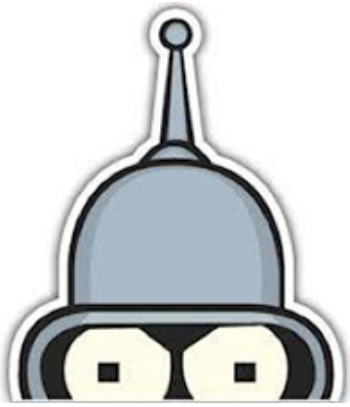
B2 - Stumpers

B-CPE-210

Game of Life

Duo Stumper



1.01

{EPITECH.}

Game of Life

binary name:	gameoflife
repository name:	CPE_duostumper_$STUMPERNUMBER_$ACADEMICYEAR
repository rights:	ramassage-tek
language:	C
compilation:	via Makefile, including re, clean and fclean rules

- Your repository must contain the totality of your source files, but no useless files (binary, temp files, obj files,...).
- Error messages have to be written on the error output, and the program should then exit with the 84 error code (0 if there is no error).

The $STUMPERNUMBER is always on one digit: `1`, `2`, ...

For this project, the **only** authorized functions are those of the standard `libC`.

The game is played on a two-dimensional grid, with certain squares occupied by cells.

With each step, the cells' evolution is entirely determined by the state of the eight neighboring squares, in the following way:

- In an empty square, a cell is born if it has exactly three neighboring cells.
- A cell that has zero or one neighbor dies from isolation.
- A cell that has four to eight neighbors dies from suffocation (lack of resource).

Your program will take 2 arguments: the path to a file containing the initial map and a number `n` (`n`>=0) indicating the number of iterations to be done on the map.

Your program will display the resulting grid after n iterations. Cells are represented using `'X'`, empty squares are represented using `'.'`.

Each step is independent, which means that the grid that corresponds to the n iteration is SOLELY based on the one that corresponds to the n-1 iteration

Terminal

```
~/B-CPE-210> cat -e map.txt
...X..$
..X...$
..X..X$
....X.$
~/B-CPE-210> ./gameoflife map.txt 0
...X..
..X...
..X..X
....X.
~/B-CPE-210> ./gameoflife map.txt 1
......
..XX..
...X..
......
~/B-CPE-210> ./gameoflife map.txt 2
......
..XX..
..XX..
......
~/B-CPE-210> cat -e 10cellrow.txt
..............$
..............$
..............$
..............$
...XXXXXXXXX...$
..............$
..............$
..............$
..............$
..............$
~/B-CPE-210> ./gameoflife 10cellrow.txt 2
..............
..............
.....XXXXXX.....
....X......X....
...X........X...
....X......X....
.....XXXXXX.....
..............
..............
..............
```