

Semester work APO 2024

“Game of life”

User manual

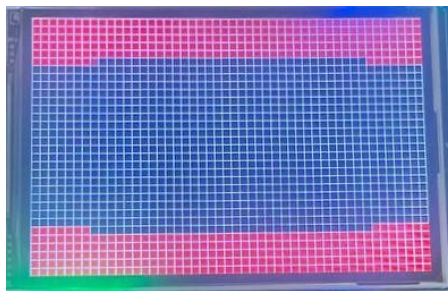
Author: Oleksii Kolesnichenko

e-mail: [kolesole@fel.cvut.cz](mailto:kolesole@fel.cvut.cz)

The Game of life is a cellular automaton devised by the British mathematician John Horton Conway in 1970.

### Loading screen:

After starting the game you will see a loading screen.



### Menu:

After loading you will immediately see a menu where you will have the opportunity to select the play mode or ready layout mode.

Selection is made using the green switch, move the cursor to the mode you need and click on this switch.

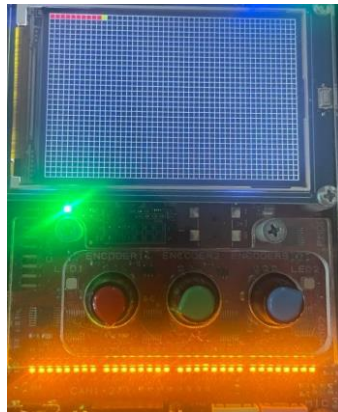


## Selection mode:

This is the mode for selecting initial position of the cells, during this mode the led line lights up.

The initial position of the cells is selected using the red and blue switches:

- red switch - horizontal cursor movement(the yellow cell is the cursor);
- blue switch - vertical cursor movement (the yellow cell is the cursor);
- pressing the red switch - cell revitalization(black cell turns red);
- pressing the blue switch - killing a living cell(red cell turns black).



The game starts when you press the green switch.

## Play mode:

Rules for the development of civilization:

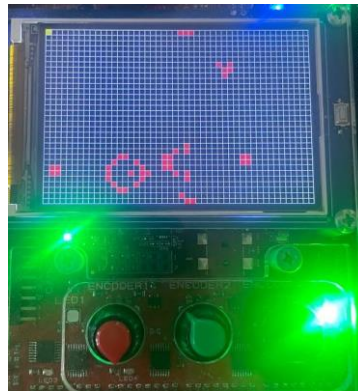
- if the cell is alive & quantity of neighbors  $< 2$  or  $> 3$  ----> the cell dies;
- if the cell is dead & quantity of neighbors = 3 ----> the cell is reborn.

Also, every 50 iterations the left rgb light turns red or the right rgb light turns green:

- if the red light is on, it means that 50 iterations ago the civilization was larger than it is now;



- if the green light is on, it means that 50 iterations ago the civilization was less or equal to what it is now.



You can return to selection mode or menu by pressing the red switch or green switch:

- pressing the red switch - return to selection mode;
- pressing the green switch - return to menu;

## Ready layout mode:

In the menu you can chose a ready layout mode.

In it you can select a ready-made arrangement of cells and start the game with this arrangement.

Selection is made using the green switch, move the cursor to the layout you need and click on this switch.

After this the play mode will start with the arrangement of cells you selected.

