Bonus assignment 6: The Meaning of Life

Course 'Imperative Programming' (IPC031)

1 Assignment

Extend the Game of Life program with an interface that allows a user to perform the following actions:

1. Open a universe configuration file by entering the name. If the file can be read successfully (`read_universe_file`), then the universe is displayed (`show_universe`).
2. Run a given number of steps. Each intermediate universe configuration must be displayed on screen. It is optional to create an animation of this. If you want to do that, proceed as follows:

   (a) On Brightspace you can find "`assignment-06-bonus-files.zip`" that contains the "`animation.h`" file. Note that you are <u>not</u> allowed to modify this file.
   (b) Add this to your project by ensuring "`main.cpp`" contains the following line at the top:

   ```
   #include "animation.h"
   ```

   (c) You can pause the animation `t` milliseconds with the function `sleep` (t). You 'clear' the console window with `clear_screen()`, and you can place the cursor position to a given column and line number with `set_cursor_position` (column, line), causing subsequent output to be printed at that position.

3. Store the current universe configuration in a text file by entering the name of the text file into which the universe configuration must be saved.

You can add any number of other functionality if you wish.

2 Products

As product-to-deliver you only need to upload to Brightspace "`main.cpp`" that you have created with your solution regarding the bonus assignment.

Deadline

Bonus assignment: Monday October 16, 2023, 15:30h