

# Project Report

**Project title:** Conway game of life

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## Project Design

A program that depicts a system involving cellular automation graphically, where people (represented as cells in a grid) evolve in accordance to the rules that govern their world. In this program the world would be assumed to be of finite size.

### Key modules:

- Animation.c- To and implement the system .
- unit\_tests.c- To see if functions of Animation.c pass the tests
- Main.c- To render the game to a graphical interface
- Animation.h- Consists of function prototypes of the functions implemented in Animation.c

### Test plan:

Function: `int set(char grid[10][10], int row, int col)` Expected behaviour: Sets cells to the state of being alive at given coordinates. checked exceptions: returns -1 if the given coordinates are out of scope

Assertion: Returns an integer value.

Function: `int no_of_neighbors(char grid[][], int row, int col)`

Expected behaviour: Returns the no. of neighbors of a particular cell in the grid.

Assertion: Returns the correct number of neighbors

Checked exception: N/A

Function: `char update_state(char grid[5][5], int row, int col):`

Expected Behaviour: Given the current state of a cell, the function computes the next state based on the number of neighbors.

Checked exception: N/A

Assertion: Returns '\*' to indicate that the cell at given coordinate is alive and ' ' to indicate that cell at given location is dead.

### Project Schedule:

Week	Task
6	Designing header files and function prototypes.
7	Writting unit tests for functions and implementing functions in the corosponding modules.
8	Running unit tests to see if edge cases have been covered in implementation.
9	Visulaising the game graphically.
10	Add ing the functionality of making the world more configutable by user
11	Refactoring code to improve readablity