Exercises XP Ninja

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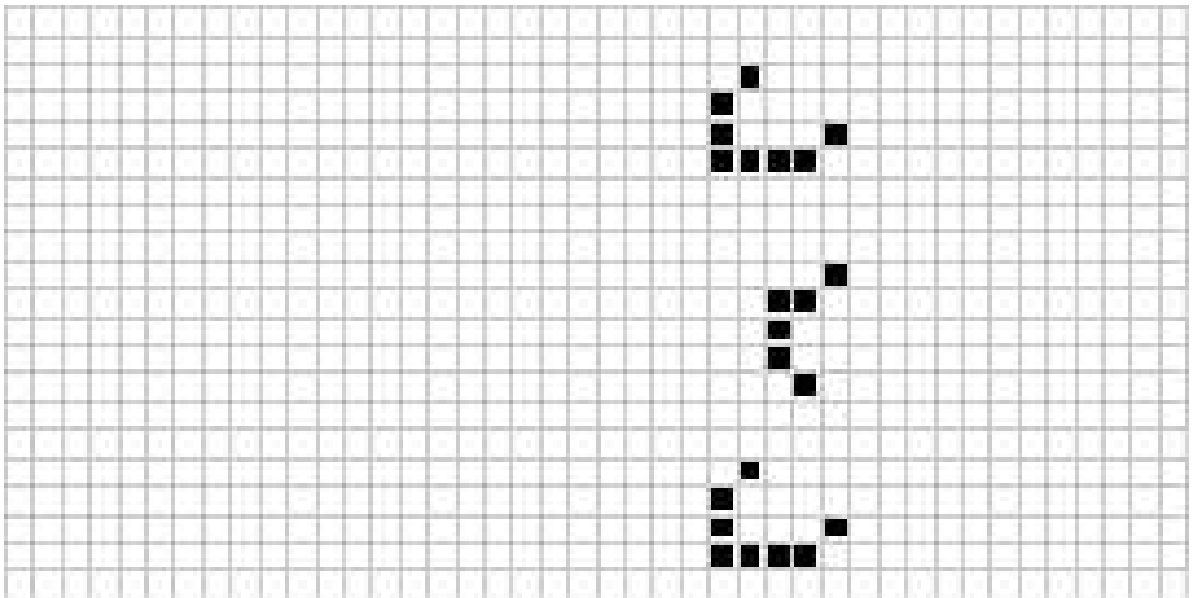
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What You Will Learn:

- Inheritance

Exercise 1 : Conway's Game Of Life

What You Will Create

Instructions

These are the rules of the Game of Life (as stated in Wikipedia):

The universe of the Game of Life is an **infinite**, **two-dimensional orthogonal grid** of square cells, each of which is in one of two possible states, **alive** or **dead**, (or populated and unpopulated, respectively).

Every cell interacts with its **eight neighbours**, which are the cells that are **horizontally**, **vertically**, or **diagonally** adjacent. At each step in time, the following transitions occur:

- Any live cell with fewer than two live neighbours dies, as if by underpopulation.
- Any live cell with two or three live neighbours lives on to the next generation.
- Any live cell with more than three live neighbours dies, as if by overpopulation.
- Any dead cell with exactly three live neighbours becomes a live cell, as if by reproduction.

Using these rules, implement the Game. (Hint: use **Classes** !!!!)
Use a few different initial states to see how the game ends.

Notes:

- Display the grid after each generation
- The end of the game is fully determined by the initial state. So have it pass through your program and see how it ends.

- Be creative, but use **classes**
- The game can have fixed borders and can also have moving borders. First implement the fixed borders. Each "live" cell that is going out of the border, exits the game.
- **Bonus**: Make the game with ever expandable borders, make the maximum border size a very large number(10,000) so you won't cause a memory overflow

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More Info

Duration (approx)
> 1h30

One Last Thing: **Good luck!**

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