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CS 162 OSU W14

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Conway's Life Initial Design Document

**Structure**

My design of life will be built with three classes, one for cells (called Cells), one for collections of cells, which I will call Boards, and one for games, which will provide the user interface for running a game.

The Boards and Cells classes and all their functions will be defined in an interface/implementation file pair called life (life.h and life.cpp).

Boards will come with no loaded configurations, but several will be provided as constants in the life library. The user will be able to define more as he/she wants and load them into the interface using a method of the Game class.

**Algorithm**

Running a game of life means the following:

1. An initial configuration will be loaded by filling an array with boolean values.
2. The next generation will be calculated by leaving the original array intact and filling a second array by determining the fate of each element in the first array.
3. The first array will be replaced by the second.
4. Return to step 2 until a generation produces no change or the user issues a keyboard interrupt.

**Classes and Functions**

**Cell class**

**Functions**

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