Life UML Diagram

Cell

- p: AbstractCell*

+ Cell(alive: bool)
+ operator=(other: const Cell&): Cell&
+ deadOrAlive(neighbors: int): bool
+ getAlive(): bool
+diag(): bool
+ printStatus(w: ostream)
+ execute()

Life

- _x: const int
- _y: const int
- _size: const int
- _pop: int
- _board: vector

+ Life(y: const int&, x: const int&)
+ prepareBoard(r: istream)
+ simulate(w: ostream)
+ find_neighbors(pos: int, needDiagonal: bool): int
+ statusOfNeighbor(pos: int, dir: enum): bool
+ outOfBounds(coord: pair): bool
+ changeToCoord(pos: int): pair
+ changeToPos(coord: pair): int
+ printGrid(w: ostream, gen_gone: int)

Relation

0..*   0..1

1

0..1   0..1

AbstractCell

_alive: bool
_stateToChange: bool
_cellType: enum

+ AbstractCell(cellType: enum, alive: bool)
+ virtual deadOrAlive(neighbors: int): bool
+ virtual execute()
+ virtual printStatus(w: ostream)
+ virtual diag(): bool
+ getAlive(): bool
+ virtual clone(): AbstractCell*

Extends   Extends

0..*

ConwayCell

+ ConwayCell(alive: bool)
+ deadOrAlive(neighbors: int): bool
+ execute()
+ printStatus(w: ostream)
+ diag(): bool
+ getAlive(): bool
+ clone(): ConwayCell*

FredkinCell

-_age: int

+ FredkinCell(alive: bool)
+ amITwoYears(): int
+ deadOrAlive(neighbors: int): bool
+ diag(): bool
+ printStatus(w: ostream)
+ execute()
+ clone(): FredkinCell*

0..*