
Critter
- grid: Grid*
- x: int
- y: int
- moved: bool
+ Critter(grid: Grid*, x: int, y: int)
+ move() = 0
+ breed() = 0
+ die() = 0
+ print() const = 0
+ has_moved() const
+ set_moved(bool moved)
Cell
- critter: Critter*
- x: int
- y: int
+ Cell(int x, int y)
+ is_empty() const
+ set_critter(Critter* critter)
+ get_critter() const
+ clear()
+ get_x() const
+ get_y() const
Ant
- time_since_last_move: int
+ Ant(grid: Grid*, x: int, y: int)
+ move()
+ breed()
+ die()
+ print() const
Doodlebug
- time_since_last_eat: int
- time_since_last_breed: int
- direction: int
+ Doodlebug(grid: Grid*, x: int, y: int)
+ move()
+ breed()
+ die()
+ print() const
Grid
- cells: vector<vector<Cell*>>
- width: int
- height: int
+ Grid(width: int, height: int)
+ ~Grid()
+ update()
+ print(int time_step) const
+ get_cell(int x, int y): Cell*
+ set_cell(int x, int y, Cell* cell)
+ get_width() const
+ get_height() const
QueenAnt
- time_since_last_breed: int
- has_found_colony: bool
- has_mated: bool
- is_cataglyphis: bool
+ QueenAnt(grid: Grid*, x: int, y: int, is_cataglyphis: bool = false)
+ move()
+ breed()
+ die()
+ print() const
- is_adjacent_to_male_ant() const
WorkerAnt
+ WorkerAnt(grid: Grid*, x: int, y: int)
+ print() const
Game
- grid: Grid
- time_step: int
- fast_forward: bool
+ Game(width: int, height: int, num_doodlebugs: int, num_ants: int, num_queens: int, fast_forward: bool)
+ run()
- init_grid(num_doodlebugs: int, num_ants: int, num_queens: int)
- is_simulation_over()