Project 2 Overview

Overview - Phase 1

1. Create UML of ENTIRE project (both parts 1 and 2)
    - Avoid using public variables/ fields
    - Try to split everything into function calls which in turn access private variables
    - Think about how you will keep track of all units (list, grid, etc…)
    - Really practice abstraction!
2. Add humans
    - Move in current direction
    - 10% chance to change direction
    - Can’t run into walls

[Human Demo]

Overview - Phase 2

1. Add zombies
    - Starts in random location
    - Moves like human, except 20% chance of random turning
    - If zombie ‘sees’ a human in 10 squares in direction it is facing => Chases it (no longer randomly turns)
    - Infects adjacent humans (not diagonally)
2. Humans now run away
    - If a human sees zombie in 10 squares of facing
    - Jumps 2 squares away, after which returns to normal movement

Overview - Phase 2

3. GUI

- Space -> resets simulation
- Click -> adds new zombie

4. Add your own feature!

- New unit type
- New UI feature
- New unit behavior
- etc...

Tips - Movement

- 10% of randomly turning, otherwise same direction
- => Need to keep track of this current direction

- Moving against walls
  - If you randomly generate left, but there is a wall to your left, what do you do? Generate again?
  - Walls on 2 sides? 3 sides? 4 sides?

Tips - Edges of the Screen

- Let’s say that human is at the bottom left of the screen (0, 0).
- If you randomly turn left or down
  - => would go out of bounds ((-1, 0) or (0, -1))

- Abstract error checking to a function rather than implement it in every class that needs access
- => Think about this for everything in your project.