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**Virus Simulation**

**Working Names: Strain of Death, Raisin Strain, Code Red, The Californian Rot, Walking Death, Darkness Descendance, Ghoul’s Elixur**

OutLine

* Description
  + General Overview of Game
    - This virus spreading game will be oriented as a top down movement strategy game mainly. There will be several phases
      * Phase 1: Initializing the Virus in the environment
      * Phase 2: Spreading of the plague
      * Phase 3: Clean-up
  + Mechanics
    - * Phase 1: Top-down view: Placing several viruses in slots on the map where you will initialize the virus and then be able to refill at when the game starts. These refill stations can then be cleaned up and destroyed by enemies (police, etc.).
      * Phase 2: Walk around, try to sneak up on people and infect them. When you run out of vials to infect people with, refill at your stations that you stashed in phase 1.
      * Phase 3: The good guys come to clean up the virus and kill you! Stealth is of the utmost importance here.
  + Goals of Game

To observe the effects of a virus upon a population of people and understand the dynamics behind controlling how it spreads.

Also, to make a fun, involved 2D video game that people will love to play!

* Check existing Software

Plague Inc. and Pandemic Inc is a similar concept.

* What’s New? Why Choose this Project?
  + There have been several games made in which the goal of the game is to spread a virus to as many people as possible. These games have mainly focused on the statistical side of population areas and how that affects virus spreading. This will be a much more direct game; in the initial phase, we will initialize the virus in a certain location, and make more locations more prone to infection. In the second phase however, we will have the player actually walking around trying to physically spread the virus to as many people as possible. So this will involve strategic, critical thinking, along with a fun, top down controller type of stealth concept.

Modularization

M1: World Building

* This will involve building the city in which the virus will be spread. It will also involve setting up the 2D overview map of the city in which the player initializes the virus by placing virus modules in various locations around the city. This phase will involve the Unity Editor and possibly some external tools.

M2: Player Controller

- controls the player movement in the 2D city, along with various actions the player can take.

M3: AI Controller

* This will control the various AI components, mainly people, moving about the city

M4: Virus Controller/Game Controller

* This will be utilized to spread the virus; it will take input in the form of actions by the player in which it determines if the virus is spread to something, and it will keep track of/ have data-bases of all the AI and keep track of how far the virus is spread

M5: Audio

* Sound effects, music control on the various components in the game

M6: Visual Design

* Visually designing for the sprites, whether these are assets or designed in an external program.

M7: Menu Design

* Main Menu (separate scene)
* Mid-Game Menu
* Possibly an end game menu.

Implementation

* Unity Development Kit

C#/JavaScript Scripting will be used for game logic and mechanics programming

Modeling and visualization/editing software

* Flash
* Illustrator
* Photoshop
* (3D) Maya
* (3D) Blender

Audio Editting Software

* Audacity
* FL Studio

Online Art Asset/Audio Asset resources

Github - Source control