AI Infection- Final Project Proposal

The goal of this project is to build the basic cyberspace mapping software for the game, and a basic UI that allows traversing through the generated maps.

# Goals outline

## Mapping Software

* Dynamically sorted file save of objects
  + Use a modified Linked List data structure for play and storage
* Binary search of file to load saved objects for continued play
* Mechanism to generate new objects and return pointer address to caller
* Mechanism to find null pointers that come within 3 pointer jumps of selected object and use uniqueID to find and load the object pointed to from file or generate new object to fill the pointer
* Mechanism to unload from memory and nullify any pointers to any objects that are more than 3 jumps from selected object

## User Interface

* Main Menu with options to:
  + Start New Game
    - Name of Game
    - Seed (blank for random seed)
    - Difficulty (Unused for now)
  + Open Saved Game
    - List of existing games
    - Select the one to open
  + Delete Saved Game
    - List of existing games
    - Select one to delete
    - Confirm deletion
  + Exit
* In-game Menu with options to:
  + See Detailed Stats
  + Move to connected Object
  + Save and Exit to Main Menu
* Show currently selected object with stats
* Show connected objects that can be accessed from current object
* Allow input to move to connected objects