CS 4900
Week 3 Writeup
Group 1: Merritt Hancock, Kenda Blair, Alan Bettis, Ryan Trull

Details

Changelog:
1) Refactored cursor_movement.js class
   - Merritt 2/08/20
2) Refactored player and enemy class
   - Merritt 2/08/20
3) Created height based terrain generation for plane tiles
   - Ryan 2/09/20
4) Scaled heights
   - Ryan 2/09/20
5) Replaced Tiles with 3D generation to board creation
   - Ryan 2/09/20
6) Added classes for Board and Tile
   - Ryan 2/10/20
7) Cleaned up and refactored all board generation code
   - Ryan 2/10/20
8) Added Entity, Player, and Cursor classes
   - Alan 2/10/20
9) Added Board class and modified Tile class to implement 3D terrain generation from heightmap and tilemap arrays. Disabled water terrain. Modified gap terrain to only scale cubes to 1/10th of the average block height, to better represent a pit.
   - Alan 2/11/20
10) Researched A* Looked up and watched Tutorials
   - Kenda 2/7/20
11) Researched A*/pathfinder.js and investigating Voxel Paint as a level editing option. Removed superfluous camera code.
   - Kenda 2/9/20
12) Created enemy object
   - Merritt 2/10/20
13) Added methods to enemy object
   - Merritt 2/10/20

Decisions
   - Object oriented design
   - Refactor our entire codebase
   - Combine multiple entities into an individual file to simplify the codebase
   - Use A* for our pathfinding algorithm

What we learned

- A* exists and will help us efficiently find paths for the cursor, player, and enemies.
- Pathfinder.js is a potential option for A* implementation.
- We may have to write our own A* algorithm on account of having a height element to our grid.