AI Game Progress

# Spawn Zones

Task: Create 4 spawn zones which surround the players camera (outside the camera view so that they are not visible). Have enemies continuously spawn at random locations in the zones.

Firstly, I retrieved the camera object and stored its position and size. I then set the four spawn zone rectangles to have the appropriate size and position, using the camera’s size and position.

Example Spawn Zone Rectangle Code:

Note: spawnBoundsSize = How far the spawn is from the camera border

Result:

Note: The rectangle gizmos represent the four spawn zone rectangles.

The next objective was to prevent enemies from spawning on top of each other. I started by entering a while loop which continues to loop while the spawn location is not suitable. In the loop, an overlap circle (position = spawned enemy position, size = spawned enemy sprite width / 2) is used to check if it is overlapping with any other enemies. If it is, then the enemy is moved to the right and the loop continues. If it isn’t, the loop is broken.

Result:

Next, I set the enemy to spawn and random positions inside the spawn zone’s perimeter.

Result:

I then made the enemies spawn in random zones. This was achieved by generating a random number (0 <= x <= 3) followed by a switch statement which changes which spawn zone to use based on the generated number.

Result:

Lastly, I changed the adjusted spawn position to change based on which zone the enemy is in (as currently, overlapping enemies always move to the right.

Result: