11030361 - Tom Redwood Personal Reflection

My main responsibility for this game was to program the enemy behaviours.

Implemented behaviours

* Player tracking - The enemies keep track of the players location and constantly move towards them.
* Attack and death functions - For the attack function a timer would start when the player collides with the enemy, then if they are still colliding after a length of time the player will take damage. There are 2 weapons implemented in this game and they both damage the enemies in different ways. When colliding with the bat, a force is applied to the enemy to knock them back, the enemy then checks to see if it has been hit before, if it's false the enemy is paralyzed for a few seconds and the collider layers are changed to allow the player to walk through them. If they have been hit, all colliders are deactivated then they fall through the level and despawn. When the enemy is hit by the needle the despawn immediately.
* Multiple colliders - 2 colliders were added to the enemies to allow them to interact differently with different objects. The main collider, covering the whole sprite, handled collisions with the game world and the player. The secondary collider covered a thin strip down the centre, this was used to allow the enemies to overlap slightly so the player could hit a group of them with the bat if they got overwhelmed.

Possible improvements

* Collider improvements - In the games current state the player can quite easily get caught on the enemy colliders, meaning if the player gets overwhelmed it's hard to get away. One solution to this could be to add another collider and set it to a trigger, then have the player only interact with the trigger, this would solve that problem.
* improved AI - The main feature of this game is how it changes depending on the players level of freedom, the enemies could be improved by adjusting their behaviours for each level, for instance at the lowest level when the enemies become human it would make more sense for them to try and avoid the player. There were also plans for the levels to have more verticality, this would require the enemies to also keep track of the players height and to give them the ability to jump.