Battle School OSU

Capstone project for CS 467

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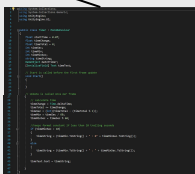
Managing the Game

Counters for the remaining number of players are handled by separate scripts that access the overall game management script

Variables accounting for the score are collected within an overall game management script that controls when the game ends and what scene is loaded next.
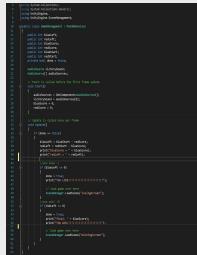

The Enemies Stunned counter tracks stuns by the player by accessing a tracking variable within the scripts controlling player behavior.

This tracker is in turn controlled by the hit detection script attached to the projectiles fired from the player's gun.

The script for the match timer makes use of the built in Time C# class. Several simple equations are used to maintain a consistent minutes : seconds format.

Game Flow

To the left is a basic description of the main scenes and modes of the game.
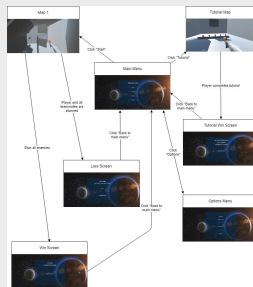
AI Scripting

- NPC characters are scripted to move across the map, check for targets in range, and fire accurately at moving objects.
- Left: snippet of AI movement behavior, determined each frame
- Lower left: Line of sight and determination of closest target
- Lower right: target acquisition upon entry into sphere collider
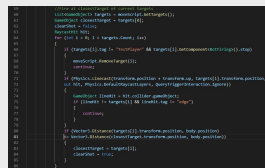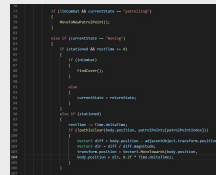
Character features

Our playable character features a camera overlooking the UI, a box collider for hit detection and a gun to shoot projectiles
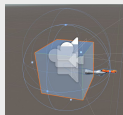
Our AI character features a capsule object with a capsule collider for hit detection and a scaled down sprite with corresponding animations for idle and shooting actions

Features

- Zero-gravity three-dimensional environment that is both fun and challenging to navigate.

- AI non-player characters that seek out and attack members of the opposite team.

- Physical projectiles that retain the shooter's velocity allowing for interesting trick shots.

- Contextually triggered events including audio, visual effects and more.

- When the player is stunned the game is not over, take control of an AI teammate and continue the match!

Description

Battle School OSU is a zero-gravity first person shooter video game inspired by the Ender's Game sci-fi universe created by Orson Scott Card. In the game, players must navigate the map by jumping between, then latching onto pieces of terrain while hunting members of the enemy team. The goal is simple: stun all members of the enemy team while avoiding becoming stunned yourself.