

Programming Assignment #3

Unity version used: 2020.2.1f1

Requirement 1:

A map like programming assignment 2 was made. This time, each wall is sectioned and can be destroyed with a cannonball shot. The player spawn locations are approximately the bottom two corners. The zombie tanks go back and forth between two sets of nodes. One moves horizontally, the other vertically. The powerups are located at the four corners.

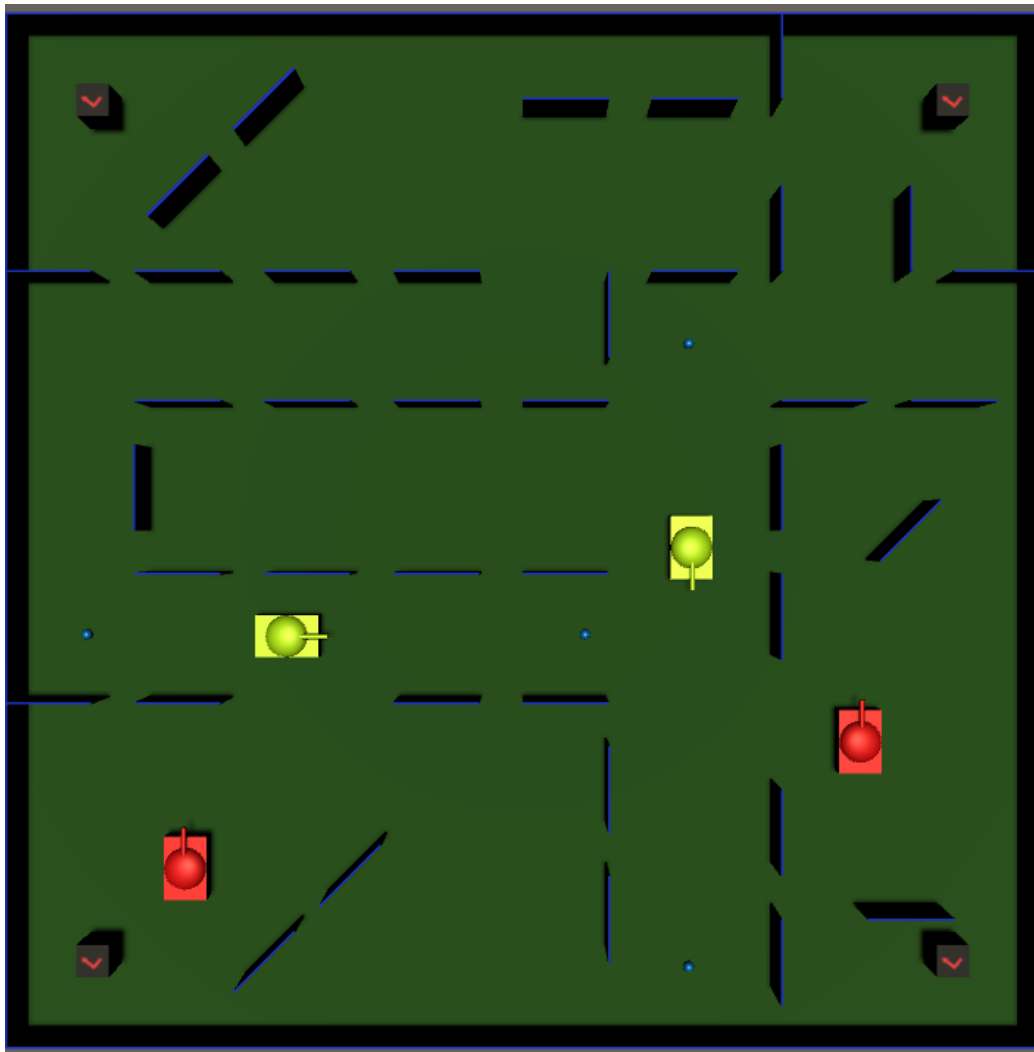


Figure 1: Both players (red) are seen within the game room. The zombies (yellow/green) are seen moving between their respective node points. The powerups are at the four corners. Each wall section can be destroyed. The borders are fixed.

Requirement 2:

A lobby system was implemented to make starting the game smooth and controlled. First, a loading scene is made for the initial connection to the photon server.

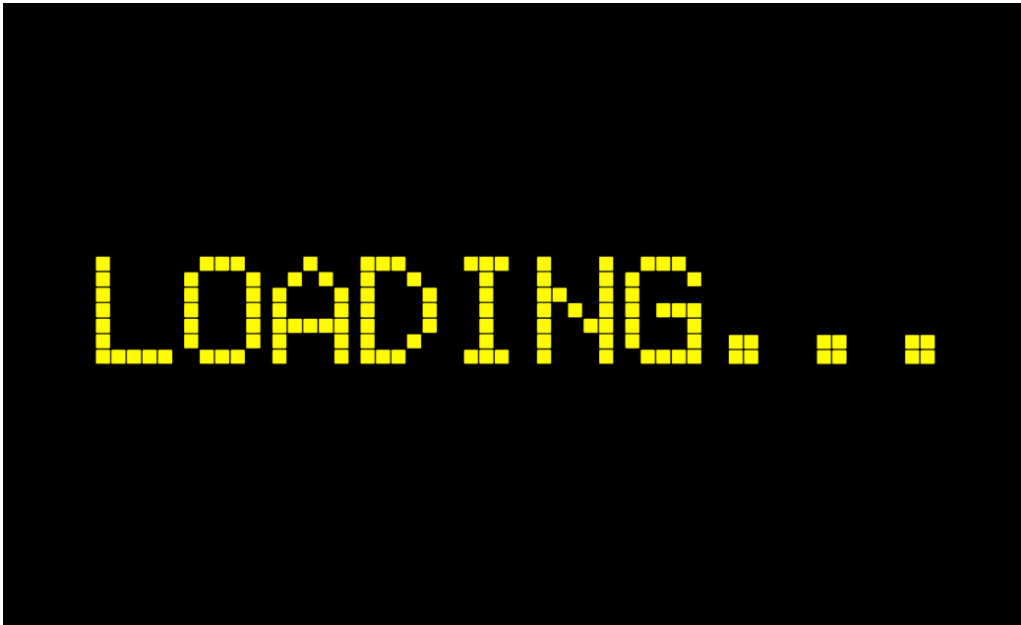


Figure 2: Loading scene for the initial connection to the photon server.

Once the connection is established, the lobby scene is loaded. A room can be created and then joined. If a game is already running, just join!



Figure 3: To create a room, enter a name and click create! To join a room, enter the name of a room that has already been created and click join!

Here is a summary of all the implementations within this hand-in. All requirements were met on the assignment sheet.

- Each player has control of their own tank.
- Movement of the play tanks is only in four directions, but you can rotate in between for 360 directionality with your shots. All is implemented on WASD.
- Players have 1 hp. You get shot; you die.
- Game over screen comes up when the game is determined to be over.
- All moving objects (shots, zombies, players) are synced.
- Only one shot can be fired at once. You'll be able to shoot again once the shot has hit another object.
- Sectioned walls can be destroyed. Everything else cannot.
- The powerups make your shots bounce. They last for 30 seconds. Again, only one shot. So, if the cannonball keeps hitting sectioned walls, you'll be out of a shot for possibly a long time.
- Just approach the powerups with your tank to collect.
- The shining animations on the powerups are synced.
- Two zombie tanks have been placed. One moves horizontally, the other vertically.
- Zombie tanks are slower in movement and shots and are near sighted. If two players are in sight, the closest is targeted.
- Zombie tanks can't be destroyed.

No special requirements are needed to run the game. No external packages were used apart from Photon.