**AGGP 225**

Lab 3: Creating an FPS

Photon Pun v2 documentation can be found [here](https://doc.photonengine.com/en-us/pun/current/getting-started/pun-intro).

There is a demo build of what this lab should look like located in the Lab 03 folder.

To test your work, make a build of the project and run both the build and through the editor.

\*\*\*This is a two-week lab\*\*\*

# Lab Requirements:

Create an FPS using Photon PUN.

# Part 1: Using the Previous Lab

Use the previous lab (connecting to master & room) as the basis of this lab.

You should have a Main Menu and Chatroom for scenes.

# Part 2: Creating the FPS - Deathmatch

Using everything we have learned thus far, create an FPS that:

* Game rules
  + Only allows 4 players per room
  + Game ends after an allotted time
    - There does not need to be a win screen
    - Have the players leave the room and reload the Main Menu
* Uses a capsule as the player prefab
  + Should have a player manager
    - handles RPC’s and calling RPC’s when the player does something
    - handles the live/die cycle of the player (spawn in, health hits 0, dies, spawns back in)
  + Should have both the username and health bar hovering over the prefab, which is also visible and works (increase/decreases depending on health) over the network
    - Health bar level changes over the network depending on player health
    - Username is saved at the Main Menu screen and is correctly displayed over the player prefab
  + Movement of this prefab is visible to other players in the same room
    - Movement is networked
* Handles Disconnection/Join failures
  + In almost all cases these events should cause the game to reload the Main Menu screen and restart the joining master/room process
* An animation (whether it is a weapon animation, player animation, etc) networked and visible to other players in the room
* There should be in-game music and sound effects that are networked
  + The in-game music should not be networked (only one song)
  + Sound effect for each weapon (this should be 3D sound)
  + Sound effect for footsteps (this should be 3D sound)
* One weapon/way to inflict damage on other players

# Extra Credit

* Multiple weapons
* Add the option to change the color of your capsule person on the Main Menu
* Multiple animations
* Multiple networked sound effects

\*\*\*Please add these to the lab submission via a text doc so I know what to look for.

# Due

This lab is due at the beginning of class on 10/06 (two-week lab).