**AGGP 225**

Lab 1: Photon – The Basics

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 01 folder.

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

# Lab Requirements:

Create a Unity project that uses Photon PUN to connect to a room and demonstrates how to use RPC’s.

# Part 1: Photon & Unity Setup

* Install Unity version 2020.3.15 if not done so already
  + The Unity install is located under **Admin** of the course’s repository
* Create a Unity project and import the Unity package found under the **Admin** folder of this course’s repository
* Sign up for a Photon Pun account [here](https://id.photonengine.com/en-US/Account/SignIn?returnUrl=https%3A%2F%2Fid.photonengine.com%2FAccount%2FSignIn%3FReturnUrl%3D%252Fconnect%252Fauthorize%252Fcallback%253Fclient_id%253DLive.Doc%2526redirect_uri%253Dhttps%25253A%25252F%25252Fdoc.photonengine.com%25252Fsignin-oidc%2526response_type%253Dcode%2526scope%253Dopenid%252520egweb.profile%2526code_challenge%253DiCHmBpoFp4Rmlck-4_XoQPvPzgx4d3JuATgOFF7OKuQ%2526code_challenge_method%253DS256%2526response_mode%253Dform_post%2526nonce%253D637654421898035870.NzY1MmZjNzgtMTVlZC00NzAyLTg4MmYtNmQ2OTJjOWMzMGRiMjg1ZGE5OWEtNzYyYi00MDM0LWFiOWYtZWUxZTBlZmMwZTcz%2526ui_locales%253Den-US%2526state%253DCfDJ8B3k2MG0bMFGkCeMaBU8wEJf5KIoddZshPRmmxhr-2XQmxQxZQJRDGIex2HuJC8PpY93FZmhjB8g4zq6Qi7F69WVq42iEtGkh9VxN-GQNt2dHE9JgYHuEqS8D4dtX6fnEDW82W9hhK77x_l3XNqNKGfctzK9CEhNfrmHr-aU1Mkq3GvRqtkXt62wjB9klvrGSkDBJzjru667i21oeRx2aiQFJfMR-r7f9JEYx1Z3d3dRSP_FKdgyxJ9iXFCAiwARh2JoG7klWNGNzA8s5PupGDsuuptnffNI-RxNMocNWkEs_vHprTz2xgzWOMzonV0H2810Tus3ZewY8KJc0ub2i_kFWq9RHJBnRPvR2aulFuPyuqNtkL9cRX1w7DNUYjPKopzFKfmOQAf3gBWNrmgp-JvvDhPrYu8uZqscwIUIik23r079J6zr-oE-1j71TFhe8RAyygtY414izeXHCQNa-Ig%2526x-client-SKU%253DID_NETSTANDARD2_0%2526x-client-ver%253D5.5.0.0) and navigate to your dashboard
* Click **Create a New App**, select **Photon PUN** for the Photon Type, name your application, and click **Create**.

Graphical user interface, application

Description automatically generated

* Navigate back to your dashboard and click **Manage** under your newly created app

Graphical user interface, application

Description automatically generated

* Here, you will want to copy your app ID

Graphical user interface

Description automatically generated with low confidence

* Open the Unity project previously created and navigate to **Window** > **Photon Unity Networking** > **PUN Wizard**

Graphical user interface, application

Description automatically generated

* Click **Setup Project**, enter the App ID copied from earlier and click **Setup Project**

Graphical user interface, application

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* You are now set up to use Photon PUN!

# Part 2: Joining Rooms

Joining rooms is essential to creating a multiplayer game with Photon PUN.

You will need to be able to connect to Master and Connect to a room both by PhotonNetwork.CreateRoom() and PhotonNetwork.JoinRandomRoom ().

Once the player has joined a room, they should load into a gameplay scene.

# Documentation for this can be found [here](https://doc.photonengine.com/en-us/pun/current/demos-and-tutorials/pun-basics-tutorial/intro).

# Part 3: RPC Basics

RPC’s enable players to send out information to other players in each room.

After connecting to Master and a room, you will need to:

* Load into a scene using PhotonNetwork.LoadLevel(string scenename)
  + Using “PhotonNetwork.AutomaticallySyncScene = true;” will force any new players that join this room to also load into the same scene
* Create a player prefab with a PlayerManager script that handles:
  + Creating a random Color variable
  + Sets the color of an object on button press through an RPC
  + Changes the Color variable locally on button press
* Load in a player prefab using PhotonNetwork.Instantiate()

Documentation for RPC’s can be found [here](https://doc.photonengine.com/en-US/pun/current/gameplay/rpcsandraiseevent/).

# Due

This lab is due at the beginning of class on 9/8.