Pong

I started the Pong project by adding onto the hello world project and disabling the UI text objects and the script that went with them. I then added a ceiling and a floor to the level as well as two paddles for the players. These were all 3D cube game objects that I resized. The next thing I added was one single 3D sphere game object and added a script to it for adding velocity on collision and keeping score. Doing a quick search on YouTube, I found a much better way to control the ball. The method involved making a “Bouncy” physics material in unity and adding it to the unity physics settings. Once I had the ball bouncing off objects, I continued to edit the script adding velocity randomly left or right when the game starts or a new ball is spawned. When all these features were done, I decided to continue adding onto pong with a score counter, supers, and how to play the game text when the game is paused. The super “meter” I placed at the bottom of the screen is performing an InvokeRepeating() from the start function of the script to add one to each player’s super every second. Once the player accumulated 15 super, I added some if statements to the update function that would AddForce() to the ball that hit the player’s paddle. Once this was all working decently, I decided to add another super which would Instantiate a second ball prefab and even a third ball to the field if a player had acquired at least 25 super. Once the game ends, all objects with the tag “Ball” are destroyed and the “R” button will allow players to play another game. To add an indication that the player had one or both of his/her supers available, I went to the unity asset store and found some particle effects. Once the players hit 15 super the first particle effect appears and when they reach 25 the second will appear and disappear if they do not have enough super to use them. I also instantiate a particle effect and destroy it whenever the ball hits a player’s paddle. Once a winner is decided I display a UI text with “Player (1 or 2) Wins!” and more particle effects appear, this time some fireworks for the winner to enjoy. I also included background music that I found online (I have no rights to the music as it was not found on a royalty free site) and should not be used in a final build. Another sound effect I added was added to the on-collision function of the Ball Controller script.

There were two main issues I ran into when making pong, the first was trying to hardcode what happens to the ball, which is why I switched to a bouncy physics material. The other issue was Instantiating and destroying objects, in the past I found that Unity won’t complain as much if the object you want to destroy is a child of an empty game object which you destroy instead.