In my design I presented an airplane that was landing on a runway with a tower in the background. Most of the design had to be centered around the body which was a cone. The wings were comprised of one giant cylinder that slipped through the body. The propellers were made of stretched out half spheres, the wheels made from full spheres. The axel was made from a 4-sided pyramid. Markers at the end were cylinders topped with spheres and the control tower was made of a tapered cylinder.

The plane itself is made up of three colors, red and blue and gray. The body of the plane is meant to have more of a stainless-steel accent referring to the previous flash I spoke of. Additionally, the red and the blue, which make up the wings, fins, and propellers, in my opinion, contrast the silver/gray body nicely. The wheel was an asset that is meant to mimic rubber like that of a tire. The warning posts are made from a gray variant, topped with red spheres. These are meant to mock runway markers that flash in the night. The ground is made of an asset that was made for asphalt. Finally, the tower takes on the same color as the axel but with a different material.

The shader materials do not change much throughout the project. The plane is set to have a glossy mirror-like body. This allows that shininess to come through and show its place as it lands. The warning lamps have more shine but emit a red tint as most caution lights on runways do. The last texture is one titled dull. This one, primarily red in color as well provides the control tower that same caution with less emphasis in the background.

Movement in space can primarily be accomplished using the keyboard. The WASD combination will allow the user to move up, down, forward, and back. This gives the user a great overall view but also is limited at various angles. The mouse backs this idea with the ability to rotate the camera based on its movement. Initial movement speeds are slow but, moving the cursor wheel forward allows the user to speed the rate of rotation. Scrolling back on the wheel allows the user to slow that rate. This will allow for an all-encompassing view from virtually all angles.

The main custom function that I implemented was the scroll callback. This allowed me to manipulate the rotation rate for the camera. Most of this was based off the mouse position function. That allowed me to grasp what I needed to do and how to do it, using what.

Overall, I’m extremely excited about my design. I started off with children’s toys, the plane wasn’t in my original proposal, but I found it while playing with my kid. It’s nowhere near a perfect design but I’m happy with the various shapes that I had made. I’m happy with the textures. If there was one thing I would change, I would try to get a better grasp on lighting a scene. I found this to be the most challenging aspect of this entire design.