Francis Lapointe

CS330 Final Project Reflection

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When choosing my scene my first thought was to take a picture of something that was already in my room, so I naturally chose my desk. I chose a couple of simple objects and was informed that I should instead choose other ones that were also on my desk in view and ended up going along with that advice. I ended up aiming to recreate my keyboard, my pc 4k definition monitor, my Elgato wave: 3 microphone and my PlayStation 5 video game controller. In this scene my desk is used as a wooden plane with everything situated on top of it, my keyboard being in the center of the world with my monitor just in front of it, to the right and a little to the bottom of my keyboard sits my microphone, on the opposite end of the keyboard my PlayStation 5 controller sits nicely and flat.  
 Going into this project initially I had never used OpenGL before so I had no knowledge of how in depth or how easily I could make certain shapes or curved edges or anything and that was a massive challenge in a lot of my objects that I wasn’t thinking about when they were chosen, for instance I didn’t think about how my keyboard was curved around a lot of the keys or how my microphone is rounded at the top and its stand itself, I wasn’t able to overcome a lot of these with my current skillset but I think I substituted the design the best I could by utilizing similar shapes however the PlayStation 5 controller is absent from the final project as the amount of curvature in its design just felt beyond my skillset despite numerous attempts to achieve it. For navigation the scene can be navigated through the use of the WASD keyboard keys, you can change the speed at which the camera moves with the scroll wheel, you can use the Q and E buttons to move on the Y axis up and down. By hitting the O key on your keyboard you switch over to Orthographic view, in this view the camera is locked to only being able to move left and right through the A and D keys although you can angle it up and down using the mouse. In terms of adding modularity I created a function to handle lighting, Material and Texture definitions allowing you to reuse the code in other projects. I also attempted to create a loop to create the keys on my keyboard but the placement is most definitely not perfect and could use a lot of fine tuning but I figured it was easier than trying to place each individual key. Since getting the textures for each individual key and object would be an impossible task without designing it myself I chose to use a lot of basic Black or White textures through Google’s advanced image searching. Honestly if I were to continue with this project or redo it I would take my current knowledge and pursue researching more unique methods of creating certain shapes because not having that knowledge definitely held me back. Overall I’m proud of what I was able to accomplish and I hope to use the knowledge I gained here in future projects.