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CS-330 Project Design Decisions

I chose my primitives as they matched most closely with my scene, and were easily reusable with creating other objects. The one that I was most concerned with was the glasses case, and that shows in the way that the texture isn’t quite right. I was proud of making the Monster on the left, as it was a composition of several shapes. Programming the functionality required lots of study, and I was working just on the movement and camera portion when not finishing the milestones and assignments. I would have liked to have made the program more modular, but ran out of time.

The way that the user can navigate the scene is by using WASD keys to move forward, left, back, and right. Additionally, the user can use the Q and E keys to move up and down relative to their position. The [SPACEBAR] and O key are available to trigger wireframe mode, as well as orthographic, and the F key is used to reset the camera position if you get lost. The mouse scroll wheel is used to slow down or speed up the movement speed. The cursor is used to pan the camera around, and can move quite fast, so using the scroll wheel to get to a comfortable speed will provide the best experience.

The camera header provides the programmer with a nice way to abstract the movement and camera. I ran out of time to do the same with the shapes, but ideally, they would have had their own file as well. Instead of creating a more modular shapes file, I was able to reuse several of the VAO’s, and for some of the objects, I was able to use a for loop then modify each object in the loop to minimize the code I had to write. By changing the translate, rotate, scale, and shaders, I saved myself a lot of code, and freed up resources by using the same array objects. In so doing, I was able to quickly get the new objects added to the scene.