Hanah Deering

Final Project Design Decisions

CS 330

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For my project, a lot of consideration went into exactly what scene I wanted to recreate and how I wanted to use my knowledge of OpenGL to do so. When first choosing the scene, I remember in the requirements it said that we had to pick a couple of different objects and create a scene. I think that a lot of my trouble started with picking the wrong scene. Although, the scene I picked included plenty of objects to comply with the project requirements, and some of the objects would require multiple primitive shapes to create, it was incredibly challenging. The objects in the picture would require multiple primitive shapes to accurately create. Here is a copy of the image I attempted to recreate:

A picture containing indoor, floor

Description automatically generated

I initially had a lot of struggles with my scene. Trying to figure out exactly how to use/create multiple Vertex Array Objects and Vertex Buffer Objects to create multiple shapes was very difficult for me. Between working and being a parent, I did not have the amount of time I would have liked to have to finish this project. I also had some difficulty getting the normal and texture coordinates to properly apply to the cylinders and spheres, thus they look not quite correct in my scene.

To navigate my program, the user can use the WASD keys to navigate forward, left, backwards, or right depending on the direction the camera is facing. Using the Q and E keys will allow the user to move the camera up and down. The user can also move the mouse to change the camera angle. To switch between a perspective and orthographic view of my scene, the user may press the P key. The user may also adjust the camera movement speed by using the mouse’s scroll wheel. This did not turn out so well for me either because I wasn’t able to construct the actual objects. However, in my program I can see movement.

To make my program as clean and easy to understand as possible, I made use of separate functions to Create/Destroy the shaders, object meshes, and textures. The main render loop also exists within its own function in the program.