CS330 Final Project Reflection

Name

Institution

I chose elements that are in my sitting room for the 3D scenario that I figured I could replicate with simple shapes. I selected a table, a chair made from wood, and the surrounding surfaces and walls in particular. I was able to reconstruct the hardwood table with the help of a box and a plane. On the other hand, the chair and the walls were recreated with cubes. Moreover, as for the table and chair, I used wood texture whereas for the brick I saw the brick texture suited best. When I reconstructed these things in OpenGL, I thought the difference between all of them would make them distinctive. The light source is a simple light cube, however, I thought it was adequate to reflect the room's overhead light.

This setting ought to be pretty simple to navigate, particularly for those who have engaged in video games. Within the scenario, the W command takes the camera forward, the S command moves it backward, while the A command shifts it left, and the D command shifts it right. To add to these commands, the E and Q command keys will shift the camera down and up, respectively, for more usefulness. By using the P command, the operator can transition from orthographic and perspective projects. Even though all of the commands will enable the operator to navigate the full scene, also, the code allows the user to navigate the scene using the mouse. Dragging the mouse around the scene rotates the camera angle. Also, comparable to utilizing the S and W commands, the scroll wheel of the mouse creates a zoom-out and in effect. With each of these features, using a mix of command strokes and the movement of the mouse would be the most efficient way to access this scenario. Furthermore, the mouse is probably the quickest method to move around the screen, but using the S, W, D and A commands will allow the operator to localize the camera's placement to the required spot.

The major way this code can be modularized is by rendering each item in the screen, as well as each of the connected variables like shaders, VAOs, and VBOs by basically copy-pasting the code as well as altering the names of the variable. Everyone reading this code ought to be capable of adding or removing items by applying the very same consistent trend. The final method of modularizing this code is to create distinct capacities for the viewer to traverse the scene. The code includes features for processing input, such as keystrokes that enable perspective or navigation changes, processing the movement of the mouse, and creating the scene's rendering screen. It's very advantageous to modularize the code for exploring the scene because it may be reused in other applications without rewriting it.

Generally, I am pleased with the outcome of this job. I think I might utilize this code as a starting point for future productions, and all I would have to do is change the textures and shapes to make an entirely distinct scenario. Furthermore, this project has provided an excellent introduction to OpenGL as well as the creation of more sophisticated future works. I believe that this project has enabled me to evolve in a way that I understand better the fundamentals that I will require to develop complex sceneries. In addition, I believe that I am now more ready and capable of learning more advanced areas of OpenGL and creating larger, more complex worlds.