Brad Peterson

CS 330 – Final Project

December 22, 2024

Final Project Reflection

For this project I tried to pick objects that had a bit of complexity to their shape as well as orientation spatially. The flower vials consisted of 3 basics shapes and getting to play around with orienting them made me much more comfortable with how units in OpenGL worked on a 3D plane. There are also a couple objects like the frame of the flower vial stand that are slightly rotated and that process cemented in my mind which axis I was working with to rotate objects around. I had also selected a lamp because I knew lighting was one of the topics we were going to be covering so I thought that would be a good choice. Unfortunately, I think lighting is still something I struggle to understand fully, and I wasn’t able to create a light effect emanating from the lamp like it should be. I was able to create different materials like the glass vials and wood that reflect different amounts of light.

For navigation I stuck to the basic inputs of “A” and “D” to pan the camera around the scene along the X-axis. I used “W” and “S” to pan the camera along the Z-axis as a zoom. And then “Q” and “E” are used to pan the camera on the Y-axis up and down. Additionally, the orthographic view can be seen with the “O” button and the isometric view hotkey is the “P” button. I also locked the mouse to the window so when you move it around the camera follows the mouse to change what angle you’re viewing the screen from.

While coding this assignment I quickly found myself doing a lot of scrolling through code because it can take many lines to create all the shapes, textures, and lighting effects that go into a simple scene. To lessen this, I wrote a custom DrawVials function that can have the XYZ coordinates passed into it to draw a vial at those coordinates. Because I needed to draw three of these complex objects, simplifying this with a function cut down on a lot of repeated code that only had different coordinates in it.

Another struggle I found I had was this repeated error message when I attempted to build my project:

I haven’t been able to resolve this issue, and I found I can touch absolutely nothing in the code and rebuild it about 30 seconds later and it will build this time. In dealing with this issue, I found there were textures I just couldn’t use that I would have liked to better recreate the scene I had intended to create at the outset. Even now I have found that error still persists and some attempts at building the scene just fail while others will correctly build with no code changes on my end. I’m unclear if this is somehow a local problem to me or some kind of memory leak within the code that causes it. In case the .EXE file fails to build I attached a couple of screenshots of the completed build on my end now. I’ve found that either building the code from VisualStudio or opening the .EXE has inconsistent results, some attempts it’s perfect, and others simply error out. A computer screen shot of a lamp and a lamp

Description automatically generatedA screenshot of a computer generated image

Description automatically generated