Final Project

CS-330-T6638

Zachary Carper

11 August 2022

**Photos:**

Graphical user interface, arrow

Description automatically generatedGraphical user interface

Description automatically generated with medium confidence

Graphical user interface

Description automatically generated with medium confidenceGraphical user interface

Description automatically generated

**Justify development choices for your 3D scene. As you write, think about why you chose your selected objects. Also consider how you were able to program for the required functionality.**

Initially my idea was to not do this but due to me not realizing the difficulty at hand I decided to go with something simpler. This seemed relatively easier to create in comparison to what I initially had planned. I went a little overboard with my first idea not realizing how in-depth and difficult OpenGL can be. I didn’t realize the sheer difficulty it would take to create these, and it was an eye opener. I take the approach of lifelong learning and I’ll continue to learn OpenGL after I’m done with this class. I was able to create this to meet the required functionality necessary by utilizing what I made in previous modules that utilized and manipulate the vertices into squares. I used work I built off in the previous modules including the modules where we followed the direction in order to make my work more efficiently.

**Explain how a user can navigate your 3D scene. As you compose your thoughts, discuss how you set up to control the virtual camera for your 3D scene using different input devices.**

For a user to properly navigate my 3D scene they just need to utilize the w / a / s / d keys on their keyboard as well as the mouse. The mouse helps navigate up and down movement and turning motions while the mouse helped properly angle the camera to move. As you see in the photo it was programmed to be able to view from a distance so the user can have a better overall view of the project at hand.

**Explain the custom functions in your program that you are using to make your code more modular and organized. Ask yourself, what does the function you developed do and how is it reusable?**

Throughout the course I learned more progressive ways to organize and make my code not only more neat but more efficient. Learning to optimize and use less to ensure its not as cluttered and easy to follow along made it much easier in the case of someone else viewing my project code as if it were a real-life scenario in a job setting. Thankfully I was able to reuse code throughout all of my modules and just build on that. Being able to recycle and use the lighting, camera movements, design code, and more save me tons of time. If I had to redo it each module, I’d be in deep waters this week. The provided code throughout the modules helped tremendously as I didn’t have to create much from scratch.