**Final Project Reflection**

**Development Choices:**

I chose these objects because they seemed to be the most popular parts of a computer setup. You can look at it and easily tell what it is just by seeing these objects. The cube was easy as most objects in the scene are built out of cubes. Like the monitor, keyboard, and computer case. I chose to include a cup so I could have a cylinder in the scene. A plane was the best choice for the desk. After I finished including all these objects, I realized I did not have a fourth simple object. So, for the last simple object, I was debating between a desk knickknack that looks like a pyramid or a computer mouse. However, I was not sure how I would create a mouse, so I went with the pyramid. Most desks have knickknacks on them, so I thought a couple pyramids would fit right in as my fourth simple object.

**Navigation:**

Navigation for this 3D scene is relatively simple. You use the “w,” “a,” “s,” and “d” keys to move the camera forward, left, backwards, and right respectively. Furthermore, you can use the “e” and “q” keys to move the camera up and down respectively. The mouse can be used to change the position that the camera is looking at. Also, the scroll wheel can be used to either speed up or slow down the speed at which the camera moves. To achieve this camera movement, I used GLFW functions to take keyboard input and used my own functions to react to the input. For instance, if you were to click the “w” key it would process that input and call a function that causes the camera position to move forward. As seen below,

A black background with white text

Description automatically generated

A screen shot of a computer

Description automatically generated

**Custom Functions:**

I used many custom functions to make the code more modular and easier to use in future instances. For example, my function to create a texture was used extensively in my 3D scene. Instead of repeating the same code for all my textures, I just used one function that could easily load any texture I wanted into the scene. In the future, I could easily just copy this function into any project to load a texture. Another function that could be used in many future projects is the initialize function. I could also expand this function to include more functionality if I needed to initialize more programs than what is already included. For instance, when I had to add camera controls, I could easily edit the function to include this functionality. So, I’m sure more functionalities can be found in the future once I understand everything I can do with it.