For my project, I chose to try and recreate certain aspects of my current setup that I use for gaming/homework. I have always like the setup I have and while a lot of the intricacies that make it unique for me are a bit too complicated to put in this project in this amount of time, I thought getting a couple aspects in the scene would satisfy what I wanted to do for this class and I would say it has. With the textures and the unique properties we can apply to our shapes, there is plenty of customizability to work with and plenty of room for problem solving along the way, because there were certainly a lot of problems to solve.

In terms of navigating the 3D scene, this was probably the easiest part of the project for me to implement. From the tutorial code, there were not that many changes to make on top of that. The camera movement feels very fluid using the WASD keys to go forward back and side to side. Q and E were added to go objectively up and down from the camera angle along with being able to speed up and slow down the camera movement with the scroll wheel. Changing the camera angle is also a simple process just my moving the mouse. By doing this, one can easily see the different light systems being utilized in the program, especially specular lighting.

There are a couple of practices I have in my code that I would consider reusable and efficient as I can use them in other applications with a rather easy implementation procedure. This includes the camera movement header file, the mesh header file, and the image editor header file. The image editor is simply ported to the project for the textures to function properly and be easily editable. Camera movement is a bit more of my implementation as there were changes needed from the tutorial code for up and down movement along with camera speed and how it interacts with the scroll wheel. A header file implemented for the shape meshes was extremely helpful throughout the whole project since instead of having to map every single vertex and triangle and texture coordinate, this allows the ability to only map all these vertices once and moving the shape via transformations and scales and functions of the like. Using it vastly simplified implementation and utilization of the different shapes for the project and made it overall much less daunting and drastically simplified the project.