Module 7 – Project Reflection

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Throughout this course and during the development of this scene, I was planning out which shapes I would need to build the items in my scene. I chose the objects that I chose for a couple of reasons. First, each object could be broken down into 1 or more simple shapes. For example, the cup was comprised of a cylinder for the cup part and two more cylinders for the lid, to show a small riser to drink from. The table is a cube to give it depth and I felt that a cube added a little more weight than a plane does. The cube looks more like a table when built correctly and the plane looks more like a sheet of paper, which is what I utilized it for. The unsharpened pencil is comprised of two more cylinders, one that is round and another with 8 sides. The round end is an eraser. The donut is a torus. Secondly, I felt that some of the items in my scene would present a challenge. I knew that the donut (torus) would be a challenge to code as it is a little more complex than the other shapes. I was not able to implement the lighting correctly.

The user can navigate my scene by using the W, A, S, and D keys to move forward, backward, left, and right, respectively, and by using the Q and E keys to move up or down, respectively. Finally, the user can press the P key to change from perspective to orthographic views and back.

There are several custom functions in my program. They all draw shapes in the scene and take various parameters to be able to draw the shapes correctly. As an example, the drawTable function utilizes the textures for the object, sets the transforms, and uses the glDrawArrays function to draw the object when called. I chose to use this function and the others like it to introduce some organization into my code. I can also utilize these functions to create multiple instances of the same object. For example, if I wanted to add another cup, I could just call the drawCup function again in the code and add its respective parameters and the cup would be created. One thing that I did not implement was the ability to chose the set of vertices into the functions so that I could use one function to create different objects.

Conclusively, this scene was a challenge at times. There were components that I did not get to implement fully or at all. I struggled especially with lighting and the positioning of some objects. The design choices that I made at the end were not entirely the same ones that I began with. I was able to create multiple objects, all with textures.