CS-330 Design Decisions

Final Project

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10/14/2021

**Justify development choices for your 3D scene**.

I chose to develop a tabletop scene for my final project. The objects included were a box, a red ball, a teapot, and a roll of painter’s tape. I ended up having so many problems with the teapot that I ended up switching it out for a desk lamp. I wanted to be able to create multiple objects, and this also allowed for the use of multiple textures. The tutorials that were provided helped a great deal and I also had a tutor explaining different coding techniques and the best order to put things in. I dd find it easier to code each object then and texture before moving on to the next object. This helped keep the size and proportion in line with the other objects and helped keep me from placing objects on top of one another.

**Explain how a user can navigate your 3D scene**.

When first setting up my camera movement, I ended up overthinking things and ended up with a mess. With the final version of the project the user has the ability to freely navigate around the scene by using the W, A, S, D keys on the keyboard. The “A” and “D” keys move the scene left or right and the “W” and “S” keys zoom the scene in and out. There were also several tutorials available online and that were provided with each weeks learning modules that helped with these functions.

**Explain the custom functions in your program that you are using to make your code more modular and organized**.

I tried to keep the code organized with similar things near each other, such as, all the code for the objects is together. This makes it easier to find the code block for a specific object and all the object code section are labeled. For example the painter’s tape outer ring has a code block and the inner ring has a separate code block each is labeled to indicate which block it is and there follow one another in a logical order. By making sure that my code was well commented, there is the ability for another programmer to utilize the code I created and add to it for more functionality or to remove or comment out items. I also created separate cylinder and sphere “h” files this allows just those objects to be reused instead of creating code from scratch.