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CS 330 Project Reflection

In this project of using OpenGL 3D to make a 3D scene, I have decided to replicate a small circular table with a few items on top of it. I chose to replicate a small circular table with a mini rectangular table on top with a spoon as well on top as well as a potted plant on top of the table as well. The flooring is textured as well to match a room. I chose these objects from an image I decided to replicate. I did not have time to add all the objects I wanted due to running out of time and code not working perfectly. I programmed these objects and lightning using tutorials and trial and error. I loaded up all the meshes I needed and created various different textures from images on the internet while creating object materials as well for the scene. I then also added multiple scene lights to light up the 3D scene, though I had problems with certain areas being too dark. The last part was loading these objects in the right scale, rotation and transformation with the proper material and texture.This allowed me to create this 3D scene. One of the hard parts was figuring out the right scale, transformation and rotation for the various objects.

A user can navigate the 3D scene with “WASD” to move around the scene and “Q and E” to move up and down. You can also use the scroll wheel to adjust the speed of the movement and move the mouse to turn. Pressing o switches you to orthographic mode while p switches you back to normal mode. I set up control of the virtual camera for this scene using the keyboard for input and code to bind the different inputs to different commands. The orthographic mode was working fine until I had to add lightning to my scene. My fix is not perfect but I slightly adjusted the camera so that the light can be shown into the scene.

Custom functions I am using to make the code more modular and organized is separating certain parts of my code into their own functions. I made LoadSceneTextures(); ,

DefineObjectMaterials(); , and SetupSceneLights(); and called them so that the code can be more modular. I also used comments in the object creating part of the code to split the different objects into their own sections so that you can read what code is spawning which object more clearly. Comments also allowed me to organize the different materials and lights into their own sections so that the code is more organized to a reader.