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SNHU | CS330

Module 7 Final Project Reflection

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**Final Project Design Decisions**

For my final project, I chose to take a picture of my computer setup to replicate in 3D. Initially, I did this because I felt the objects on the desk would be neat to have replicated in 3D. As the project progressed, I realized how helpful it is to have the actual objects near me that I can observe from different angles to get a better idea of how I can use simple shapes to form the whole object. In addition to this, some of the objects I chose are irregularly shaped like the trackball mouse and controller. These required a bit more creativity when reproducing them in the scene.

Users can navigate the scene by using the camera, which is controlled with the W, A, S, and D keys to move forward, left, back, and right respectively. Q and E lets the user ascend and descend and the view can be changed to orthographic and perspective my hitting O and P on the keyboard for each respective option.

The custom function’s I’ve added to my project are: SetupSceneLights(), SetShaderTextureOverlay(), and DefineObjectMaterials(). Other function are meant to organize details for rendering each object. This functions include: RenderController(), RenderTableAndPlacemat(), RenderMonitor(), RenderKeyboard(), and RenderMouse(). Starting with the first category of functions, SectupSceneLights() contains a couple of light sources to brighten up the scene, it contains a direction and point light which reflect off of the materials given to objects within the scene. ShaderTextureOverlay() is an easier means of combining two textures so that one is overlayed on top of the other , and DefineObjectMaterials() was a means to organize four different materials that have interactions with the lighting system and are designed for each of the various objects in the scene like “wood” for the table and “matte” for the monitor frame. RenderScene() main purpose is to call each of these other functions to render one of the objects I’ve chosen to replicate. Within each of my Render Object functions, there are more specific details regarding the means by which I altered and transformed various shapes into what I had envisioned.