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CS 330

SNHU

**Reflection**

The scene I chose was one that I thought would be a good challenge for me. The tea pot was the first object that I wanted to complete, being that it was the most detailed and thus took the most attention to detail and finesse to complete. I knew that if I had completed that first, I would understand a lot more when it came time to do the rest of the items. The other items I included were a box with a crease near the top, a white cooking pot with a wooden handle, and an orange. I decided to add textures to each one to make the scene more realistic and engage the viewer a bit. The pot was definitely the second most challenging item as I had to line up the handle just right for it not to look lopsided. Each x and z coordinate had to be precise, or it would throw off the look of the object. The box consists of three cube meshes that are stacked with the middle one being slightly smaller on the x and z axis to simulate the crease in the picture. The orange is a slightly squashed sphere with an orange texture on it.

Navigation is simple. The W and S keys can be used to move forward and backward and the A and D keys can be used to pan left and right. Q and E are used to increase or decrease the camera elevation and the mouse controls the direction of the camera. When the user scrolls in and out, the speed of the camera increases and decreases respectively. I enjoyed working on the camera navigation as it made me feel like I was working on a video game character’s movement. Being a big gamer, there is no better feeling than knowing that I created a scene that a user can move around in to discover each part. The functions used in the code define the look and feel of the scene. LoadSceneTextures, for example, is used to create a custom look to each item with a CreateGLTexture function defining which texture file each keyword should be associated with. This could be used in any program that needs to define the look and feel of an object by designating the correct image in the textures folder and a keyword to match. Once the texture is defined, the keyword can be applied to a created object using SetShaderTexture in the RenderScene function. The scene lighting was another fun project. Figuring out exactly where the light source should be to mimic the look and feel of the image was a challenge in itself, especially when dealing with various reflective properties of the items in the scene. I feel this is a very reusable function so long as you know where you want the light source to be. If you are creating a daylight scene, the light source should be moved above the scene to imitate the sun. Other light sources may need to be added depending on the amount of lighting you want in your scene, but each one would fit nicely inside the SetupSceneLighting function.