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CS- Southern New Hampshire University

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CS-330 Comp Graphic and Visualization

Project

1. **Justify development choices for your 3D scene**. As you write, think about why you chose your selected objects. Also consider how you were able to program for the required functionality.
   * I chose to replicate a lantern which was composed of several different shapes. First, we have the candle which is a cylinder with a unique square wick. That candle is placed on an elevated plane and surrounded by four rectangular pillars which hold up the roof which is a pyramid. I probably could have stopped there but I was unsure if it would be enough in my scene or not, so I decided to add in a wooden picture frame. I also textured every surface although it was not a requirement, I wanted to challenge myself with the material and prove to myself I was capable of doing it. I messed around with the positions of each object to get it just right and even my table length so that the lights would reflect properly. I changed the shade of the lighting to a more yellow or warm hue instead of bright white as it did not look very natural.
2. **Explain how a user can navigate your 3D scene**. As you compose your thoughts, discuss how you set up to control the virtual camera for your 3D scene using different input devices.
   * I really loved this added functionality. I found navigating the scene a bit slow and hard to navigate before implementing the scroll wheel speed and also the Q and E keys for navigating the camera up and down. It was a simple task of finding the input variables that were already in use and replicating them to add in the keys Q and E and setting them to the camera to obtain the correct functionality.
3. **Explain the custom functions in your program that you are using to make your code more modular and organized**. Ask yourself, what does the function you developed do and how is it reusable?
   * The input function and the mouse scroll wheel were very organized and were able to be changed and reused very easily if the future determined that was needed. I was very easily able to manipulate the code to add in the functional Q and E keys to control the camera movement in two more different ways than it was initially. This can be done over and over depending on what keys you want to push to facilitate the camera movement. The same idea goes for the scroll wheel. The method already reads in certain parameters, I was able to find the parameters needed and manipulate the code to correctly achieve the scroll wheel as a speed modifier for the camera in both directions.