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CS330: Comp Graphics and Visualization

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Module 7: Final Project

For this project we were to choose a self-made image to recreate. The image I decided on is a dining table with a laptop, glass bottled beverage, novel book, and a centerpiece. To recreate this image, I had to use basic shapes and put some together to make more complex shapes. The table was a plane as it was a flat surface. The laptop was a box and a plane together, where the book was a box by itself. The bottle was a fun one where I had to use a cylinder, tapered cylinder, and another cylinder to create the neck of the bottle. The centerpiece was a tricky one as it had 6 sides to create. I had to tell the program what shapes I would be using and then I had to go ahead and create each shape separately with its own coordinates and sizing. Once this was done and all flowing together it was time to add some navigation.

Some of the functionality added was the camera movements. We added navigation to some extra keyboard keys so the camera view could zoom in and out, move to the left and right, and move up and down. Letters Q and E moved the camera up and down, W and S moved the camera in and out and A and D moved the camera left and right. After this we added in details to the scene such as textures and lighting. The textures were made to adhere to the surfaces of the shapes of the objects. The lighting was to show the depth of the objects by adding ambient lighting over the scene and reflections or specular lighting and diffusing lighting on objects.

Some of the functions that were previously created were reimplemented and adjusted slightly. For example, we utilized the already existing camera movement functions and created the ability to be able to move in and out and adjust the speed of the movement. This made it quicker to be able to adjust the key functions without error or losing time. One way I kept my code organized was by putting all the smaller shapes together in one render to create the bottle object. This helped keep the code together and easier to navigate through as I made changes to the scene.