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CS-330

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**Project Reflection**

The items I chose included all of the requirements for the project as a whole. For this project, four three-dimensional shapes were chosen. The objects I decided to render for the project were the plane, pencil, water bottle, and headphones/EarPods. I rendered the water bottle using two cylinders, which make up the bottle. A cube and a pyramid were used to replicate the pencil. Using a cube, the earphones/headphones were replicated. There are two triangles in the plane. Eventually, I was capable of positioning and rendering the objects by utilizing the knowledge I had learned from each module and performing numerous calculations and modifications. Even though it was difficult for me to replicate the objects, I was still able to depict the scene recognizably by using them.

The objects' textures were used to give them the appearance of the objects they represented. I experimented with a lot of different textures before I was happy with them. The glossy cover of the EarPods/headphone case is affected. I went through a lot of different textures before deciding on the one to use. The plane's texture was chosen because it resembled the floor in the original image. To get the same reflection off the earpads as in the original image, another light source was added. I experimented with different lighting configurations to observe any effects on the scene. I ultimately decided to use a cube as the primary light source. Since the back was initially set to black, I altered the color scheme to make the top of the beverage container visible.

The mouse or certain keys can be used to move around the surroundings. The WASD keys' capabilities were required by the rubric. The W and S keys control forward and backward movement, respectively. The camera can be moved left or right using the A and D keys, respectively. Q and E control keys were also added. The motion can be controlled by the Q and E keys, respectively, for both upward and downward motion. The camera's introductions are also adjusted by the mouse cursor, allowing it to look in every direction. The movements accelerate can be changed using the mouse scroll in accordance with the rubric. The P-key switches the scene's projection to either orthogonal or perspective.

The render code was placed beyond the one that generated mesh code in an obvious organizational structure. The conventions for naming were chosen to aid in the identification of the processes, as well as each of the tasks was divided. Lastly, destroy functions were configured to release memory for the shader, textures, and meshes after the components were performed. Every item was arranged and labeled in an identifiable way. After positioning the objects appropriately, I added lighting and texture to help make them look identifiable. Although the code could have been more encapsulated by adding more classes, the way the functions were separated made the code understandable.