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CS 330

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Final Project

For this project, four 3-dimensional shapes were chosen. I choose to render the perfume bottle, eyebrow pencil, tea box, power bank and plane for the project. I utilized two cylinders to represent the perfume bottle's two cylinders in my drawing. A cube and a pyramid were used to reproduce the eyebrow pencil. A cube was used to produce replicas of the tea box and power bank. Two triangles make up the plane. I was able to position and depict the objects after carrying out a variety of calculations and tweaks and building upon the information learned from each module. The items were difficult for me to duplicate, but by using them, I was able to portray the scenario in a recognizable way.

The objects' textures were used to give them the appearance of the objects they represented. I experimented with a variety of textures until I was happy with them. A glossy cover makes up the box. Before choosing the one that was used, I sifted through a lot of various textures. Because the texture of the plane resembled the floor in the original image, it was chosen. To replicate how the box appears in the original image, an additional light source was added. I experimented with the lighting to see how it affected the scene. I ultimately decided to use a cube as the primary light source.

The render code was placed above the construct mesh code in a logical order. The naming conventions were chosen to make it easier to distinguish between the processes, and all the functions are separated. Finally, destroy routines were built up once the objects were rendered to free up memory for the shader, textures, and meshes. Each item was arranged and annotated in an identifiable way. I positioned the pieces correctly, then applied texture and lighting to make them more recognizably rendered. Although more classes may have been added to boost code encapsulation, the way the functions were separated made the code legible.