Oliver Milani

CS-330: Comp Graphic and Visualization

Professor Malcolm Wabara

February 2022

![A picture containing indoor

Description automatically generated]()**A picture containing indoor, floor, wooden, wood

Description automatically generated**

**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 my selected objects specifically because it was a part of a project my friend was doing for his modeling class. He modeled the top image using modeling software, and I wanted to see how much hard it would be to create similar objects using OpenGL. It also provided a few different shapes. The books used rectangles, the paint scrapper needed to be more triangular, and the bottle needed to be circular. I think I did an ok job of all of the shapes. The circular bottle was the hardest, and to improve that I could have added more and more sides.

**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.

A user can navigate the 3D scene with a few different inputs. WASD keeps will move front, left, back, and right respectively, Q and E will go up and down. Scrolling with the mouse wheel will go in and out. Setting these up was easy as the camera header file allows you to set any input to the desired output.

**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 custom functions in the program are for each object. Instead of putting them all in one function, I created separate functions for each model. This allows for editing of the scene to be a lot easier. Adding new models is easy as these functions can be duplicated quickly.