**7-1 Final Project**

Christopher King

Southern New Hampshire University

CS-330 Comp Graphic and Visualization

Professor Gray

December 10, 2023

**7-1 Final Project**

* **Justify development choices for your 3D scene.**
  + For my scene, I decided to do a mockup of my desk when I am doing school work. Though in real life I have three monitors and a wireless keyboard, but I wanted to keep it a little simple. The items that I included in my scene was my laptop, notebook, cell phone, portable speaker, and of course the desk. I arranged these items roughly how I would if I were working on a surface other than my desk.
* **Explain how a user can navigate your 3D scene**.
  + The controls to navigate my 3D scene are a combination of keyboard keys and the user’s mouse. For movements forward, backward, left and right, the user utilizes the “W, S, A, D” keys respectively. To traverse up and down the user will utilize the “Q and E” keys respectively. To switch between orthographic (2D) and perspective (3D) views the user will utilize the “P” key. The last key used on the keyboard is the “esc” key which will allow the user to exit the program. The mouse is used by moving around to allow the user to change the view of the camera (up, down, left, right) and the scroll wheel is used to change the speed at which the user is moving through the 3D scene.
* **Explain the custom functions in your program that you are using to make your code more modular and organized**.
  + In the beginning I did a poor job at keeping things organized in my code which resulted in more confusion on my part. It was at this point I took a step back and reorganized all aspects and created more functions that I could call instead of repeating code and allowing me to store these functions in different areas. For example, I created a .cpp called shapeBuilder that was dedicated to the code required to create different shapes. Then I created a .cpp called sceneBuilder that utilized shapebuilder to build my scene. Doing this allowed me to utilize the same code over and over while only changing minor details to fit each item in my scene.