Project 2D to 3D

I chose this scene as it is visually pleasing, and items are of that being relatable to these in school, especially online. I made two light sources, one from the computer screen and one from a desk lamp. I want to make the screen as realistic as possible with the textures and I made the keyboard using a for loop with a full keyed keyboard. This would’ve been too cumbersome if I created each key individually from scratch every time. Each item uses a basic shape and the shapes used were, cylinder, cube, torus, and sphere. I used textures that were high quality and vibrant so that when light hits the objects, the color will pop. I made sure that I placed items in a way that would be easy to navigate around the scene. Each item was scaled, rotated, and positioned to represent a 3D environment.

The way the user can move around the scene is to use a for move left, d for move right, w to zoom in, s to zoom out, q to pan down, and e to pan up. To change the camera view or to look around, this can be done by controlling the mouse. The speed of the movement is done by moving the scroll wheel to adjust the speed. O and p keys are used to change from 2D view to 3D view. Now for responsiveness of the events, GFLW’s library has a set of functions that uses event listeners on the window and uses a callback to render input. The input is represented in bits such as 0-255 where 0 is off or no input.

My custom functions used helped keep me from repeating writing of code. For example, when loading a texture, you have to grab a memory address, bind the address, active the texture, load the file, etc… for each time you want to load a texture. So what I did was make a function that takes a file name and a memory location and every time the function is called it loads a new texture without have to write the entire code out again and again. Anytime there is code that is repetitive in the project I would find a way to make it modular to lessen the amount of code written where it is easier to navigate through it.