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Final Project Reflections

My 3-D consisted of some objects in my living sitting on my coffee table. These objects were a wooden block that my wife and I received as a gift when we got married, the remote for our Chromecast, and a stuffed star toy that my wife used for Halloween. Originally my scene also used three golf balls as well but with the way my code constructs spheres, I would have gone well over the 1000 triangle limit for this project had I still included the three balls. I chose these objects because together they provide a good sampling of the different shapes we learned to construct in this course.

Users can navigate through this 3-D scene using the mouse and several of the keys on the keyboard. The mouse is used for controlling the pitch of the camera. Moving the mouse will change where it is pointing without changing the position of the camera. The scroll wheel on the mouse is used to control the speed at which the camera can move when the user uses the keyboard to move the camera around. Scrolling up will increase the camera speed, and scrolling down will decrease the camera speed. The speed is capped in both directions, the camera has a minimum and maximum speed it can be set to. The A and D keys are used to move laterally, the W and S keys move in and out of the screen, and the Q and E keys move the camera vertically. Pressing the P key will change the view between an orthogonal and perspective view.

I attempted to condense some of my code into functions after I had everything running the way I expected it to but I was running into bugs and decided to scrap the attempt to make sure I had time to finish and submit the project. Ideally, I would like to have made functions that would construct each of the objects I use. These functions would take in the dimensions of whatever shape were meant to construct and return the array of vertices. I also had planned to make a function to set up the lighting used by the scene. It would take in the counts of each kind of lighting, and the positions for those lights and place them in the scene.