My 3D scene is of my workout equipment including a yoga mat and blocks, stepper, medicine ball, and dumbbell. I choose objects that I thought represented the pieces of equipment the best. The stepper is a rectangular prism, so I drew a cube and adjusted its scale to create the rectangular shape. I went about the yoga blocks in a similar way. The medicine is a sphere. The dumbbell was the trickiest object for me because it required three shapes. I decide that an octangular cylinder was the best option for the shapes. Using the translation, scale and rotation the dumbbell came together nicely.

Navigating the scene is fun! Using the mouse, the user can get around the objects to look from above, below, all around the sides to get a good look at all of the equipment. There are also keys programmed to help the user get around the scene as well. The W and S keys move the scene in and out, A and D move the scene right and left, and Q and E move the scene up and down. This can be really helpful to the user that does not use a mouse.

Code organize is important and so is the DRY, don’t repeat yourself, concept. While I worked on this project, I strived to keep everything organized and readable. Different blocks of code have corresponding comment block for identifications. The variable names are clear and depict what they represent. As for DRY, I used functions to isolate code and also allow for it to be called multiple times. For example, my scene has three cubes that reuse the same vertices which are then changed using scale, transform, and rotation functions. The cylinder, sphere, and plane all have independent classes that allow them to be used multiple times for other objects.