When I first started this class I wasn’t sure exactly how we would use the scene we were asked to take a picture of. Still there was some guidance in the requirements of the items in the scene. This is why there are some complex shapes like the glasses case that closer resemble a triangular prism. The rest of my objects are made of much simpler shapes like basic prisms and a cylinder to make up the rest of the scene. Even though this is true there is still some complexity in these shapes because objects like the jewelry box consist of two prisms with one needing to be placed higher. Other shapes are still scaled to create different sized objects using the same basic shapes to fully construct the scene. With all of this being mostly made up objects being colored black or white I thought it would be better to change the background plane to allow the objects to be more visible. This is why I decided to go with a wood texture to make the objects appear to be on a table instead of the counter that I used in the original picture I took of my scene. The shapes were all able to be created in a single file and then in a different file I used to build the scene I would scale and reorient the shape to better fit the scene to match my image. Without the uses of these features I would not create an accurate scene because all the shapes would be one size and they would all be in the center of the scene not making use of the space.

I used w,a,s, and d simple commands to allow the user to navigate through the scene in side to side and forward and back. This is the easiest way for the user to interact within the scene and allows for a different perspective to ensure the entire scene is built correctly. I also included functionality for the mousepad and mouse to be used as a way to look in different directions while remaining still. This allows the users to adjust what they are looking at to further inspect everything and keep focus on the main point of the scene. Along with these feature I also added function to the q and e keys that will give the users the ability to move the camera vertically up and down. I was able to keep this organized into a camera.h file that was called into different files to allow the program to run properly and keep everything well organized. I was also able to add a feature using the right and left arrow keys that can change the view of the scene to display the lines that are used to make up the shapes. This is a good way to get a better visual of the shapes to make adjustments that may or may not be required to improve the overall quality. I was also able to u, i, j, and k keys to move the light source vertically and horizontally without stopping it from continuing its circular path. When using different keys it is important to keep everything well organized and labeled to ensure it is accessible for all users. This is the goal I had in mind when using the camera feature to ensure my program is optimized in all aspects in my control.

When I started creating the files over the course of this term I tried to keep everything well organized and labeled so I could stack tools I learned from the assignments and milestones into my project. This required that I was very thorough when creating notes into each file that clearly identifies what the purpose of each section of code. This made it easier to find errors that I may have found when running my program and noticing something like a shape being in the wrong place or wrong size. I was also able to keep track of more details through note like describing specific lines in the building of a shape to point out each point used and each line in the scene to point out how each line adjusts the size of the shape. Also with their amount of shapes being created and textures being used it was even more important to name everything properly to ensure nothing is duplicated. This helps when creating each part of the scene to act as a checklist and also helps to easily find errors and make corrections when needed. Overall my main goal was to continue to make detailed notes in every file to allow anyone who may need to read the files to easily locate and understand what is written.