Starting off with the salt and pepper shakers, I chose to use a cylinder and a half-sphere to model these objects. The cylinder is used to represent the body for the shakers, this part of the object will get a specially made texture. The half-sphere was used to represent the top part of the shakers. This section also used a custom texture to try and replicate the sparkles you see in the original images. Next, the butter tray was modeled using a half-sphere and a torus. The half-sphere is used to model the cover for the butter while the torus is used to model the tray where the butter would sit. My reasoning for using the half-sphere is so I can achieve the round dome shape of the cover. The alternative to this method would be to construct my own complex shape or use a box. This method seemed to suit my purposes best. My reasoning for using the torus is to help display the lip we see on the tray. You don’t necessarily see the bottom side of the tray unless you take the cover off. In this scenario you won't be able to do such a thing. Moving on to the table tray, I used a cylinder and a torus. The cylinder is used to display the circular flat surface we see on the tray. The torus is used to illustrate the lips we see on the tray. I accomplished this shape with the torus by changing the thickness while stretching the shape. Finally, when modeling the napkin holder, I used an assortment of cubes mixed with planes. The cubes are used to model the holder itself; I used 3 different cubes. 2 for both vertical walls and one for the base. I also used planes to model the napkins within the holder. For this I used an array to model out 10 separate napkins in the holder. I used the tangent of the angle the napkin holder was at to draw them within a straight line.

Users will be able to navigate around the screen by zooming, panning, rotating, increasing movement speeds, and changing from orthogonal and perspective viewing modes. To zoom in and out of the screen the user can use W to move forward and S to move backwards. For the user to pan across the screen they can use A to pan left a D to pan right. Then the user can use their mouse input to rotate the camera around the screen. All these inputs let the user navigate the scene as if it were a video game. For the user to increase the movement speed, the user can scroll up/away to increase the speed and down/towards themselves to decrease the speed. When the user does this, it will both increase the speed at which the user zooms and pans across the scene but also how fast the camera rotates around the scene. Lastly, the user can change to orthogonal by pressing the O key and can change back to perspective by pressing the P key.

I used 4 different functions to aid in developing the scene, DefineObjectMaterials, SetupSceneLights, LoadTextures. The first function used was Define Object Materials, which is used to create the materials of the textures. In this function I create the material for the objects, table, and napkins. Through this function I can easily call the setup in the prepare scene function that runs during initialization. The Setup Scene Lights are used to create the lighting within the scene. For instance, the position, ambient color, diffuse color, specular color and intensity, and finally the focal strength. Like the define object materials function, this is also loaded using the prepare scene function. Lastly the load scene textures are used to load textures into the scene. The function creates all the textures in OpenGL by fetching their file's location and assigning a tag. This function also runs in the prepare scene function.