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CS-330

For my 3d scenes, I have chosen my shapes because they are each made of simple shapes. Each shape is easily broken into various basic shapes such as cubes, cylinders, and planes. This allows me to break the complex shapes into basic shapes and model them. I have also chosen these shapes because they are made of different materials. For example, the mug is made out of ceramic, the paper is made of paper, the wallet is made of fabric, and the pen is made out of plastic because they are made of different materials, I had to change each of the shapes properties such as the texture, lighting, and shaders. I had to make the mug look like ceramic, with being slight reflection, while the paper has to look matte because it is made of paper. I was able to add in the required functionality by adding different functions, such as adding textures, adding shapes, and adding different controls.  
 For the user to control the camera, they have several keys they can press to control the camera. The w key moves the camera forward, while the s key moves the camera backward. The a key moves the camera to the left, and the d key moves it to the right. The q key moves the camera vertically up, and the e key moves the camera vertically down. By scrolling the wheel, the user can change the movement speed to move faster or slower.  
 To make my code more modular and organized I made sure to split each function of the scene into one function. For example, one of my functions, which is called loadTextureScenes() is used to load the textures from the files. Another function I have is called setupLightScene(), which is used to create a light with custom values to illuminate the objects in the scene. By using one function per function of the scene, I am able to have modularity because I am able to change an individual function without changing any other function.