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CS330 - Final Project

I selected these particular objects because they hold significant representation of my current life situation. At this time of year, I find myself juggling long work hours with the challenge of maintaining a full-time school schedule. The demands of my job often stretch my time and energy, making it crucial to stay organized. My son, who is now four years old, is also entering a new phase of his childhood. He has recently developed a keen interest in baseball, a sport that he seems to love with all his heart. Just the other day, he left a baseball on my desk, eagerly asking if we could throw it around in the house. This playful request brought a smile to my face and reminded me of the importance of balancing work and family time. Thus, the baseball serves as a symbol of my son's growing interests, as well as a representation of the joy that comes from spending time together.

In addition to the baseball, I decided to include a pen and a duster in my selected objects. The pen reflects my academic pursuits and the countless notes I take for my studies, while the duster signifies the household responsibilities I must manage alongside my work and schooling. The duster is particularly interesting, as it incorporates multiple shapes that are necessary for my 3D modeling work. Specifically, it includes four shapes that correspond to my son's age: two cylinders, a sphere, and a box. Each of these shapes plays a role in the way I approach my projects.

For navigating the virtual scene I’ve created, there are several options available to enhance user experience. You can easily navigate using the keys Q, W, E, A, S, and D for movement. Additionally, the numbers one through four allow you to switch between different camera angles, providing varied perspectives on the scene. Another option for camera control involves moving the mouse, which adds a layer of interactivity. The mouse wheel can be used to adjust the speed of camera movements, allowing for smooth transitions. Users can also combine inputs, such as moving the mouse while simultaneously using the navigation keys, to create a more dynamic exploration experience.

To improve efficiency in my development process, I created several methods aimed at enhancing code reuse. One particularly useful method allows me to mesh any shape I need for the 3D environment quickly. By implementing these strategies, I can pass in a mesh with the desired shape, apply transformations, and generate various forms repeatedly. This modular approach not only saves time but also ensures that I can easily attach multiple textures to each shape, resulting in the diverse items required for my project.

Furthermore, I have refined my techniques in constructing cubes and planes to produce objects with varying angles and heights. This flexibility is essential, especially when I need to create more complex shapes like wedges for different elements in my designs. By allowing the front and back of the cube to be set at two different heights, I can achieve the precise dimensions necessary for my work, making the modeling process more efficient and effective.