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CS 330 Computer Graphics and Visualization

**Final Project Design Decisions**

My scene is based off of my current desk setup, which features a laptop, vase with flowers, stress ball, and photo cube. The majority of these items consist of primitive shapes, however my vase with flowers is a complex shape.

The decision to choose this scene came from the desire of wanting to do something simple. Typically, simple means easy. However, that was not the case when designing this scene, as I struggled to even get multiple objects to appear for the majority of the course.

Following the tutorials helped me to overcome this challenge, however I still could not find the best way to bring my scene to life. Luckily, our Professor gave us many resources to use in order to make our process smoother. With a combination of these resources, as well as learning material from Youtube, LearnOpenGL and Announcements, I was able to build my scene.

The laptop consists of a flattened cube shape. This was the simplest way to make the laptop, as most computers are nothing but two rectangles stacked on top of one another. My desk usually has my laptop closed, so I did not design the laptop with an open face. Rather, it has the texture of a MacBook on it.

The stress ball is simply a sphere. My stress ball in reality is an orange color with a peach on it, however I could not figure out a way to implement those details, so the orange texture sufficed for the scene.

The photo cube is simply a cube shape with a photo of myself and my partner from a wedding that we attended together. My photo cube in reality has a variety of photos of us together, however this particular photo used in the texture is my favorite of them all.

The vase with flowers is two fold. For one, the vase is made of a cylinder with a glass texture layered on top. Finding the best way to create a cylinder was very difficult for me, as I chose the cylinder to be the first thing I attempted in the scene. Luckily, there was a cylinder mesh that was linked earlier to help me along with creating it. The vase in reality is see-through, but in my scene I could not find a way to make it translucent, so the glass texture was enough to tell the story.

The second part comes in the flowers. I tried to find a way to build multiple flowers, but I figured that would be a difficult undertaking as my flowers in reality are very detailed with many little petals. Instead, there was a flower texture sourced from Google that mimicked the way my flowers look. That texture was layered onto a sphere, and the sphere was translated a little above the vase to give the look of a bouquet of flowers.

Lastly, the vase is made up of a plane with a wood grain texture bound to it. My desk looks exactly like the wooden texture used.

For lighting, I initially only wanted to use ambient lighting. However, it left my scene looking flat and gray. Instead, using a combination of different lighting techniques like the tutorial helped to create more depth and dimension to my scene. Furthermore, in our discussion post from Week 6, my classmates gave feedback around using only one sort of light in a scene. I took their words into consideration as their points were valid in this context.

