**Final Project: Design Decisions**

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CS 330: Computational Graphics and Visualization

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For my project, I decided to simplify the design quite a bit. My photograph had a skull plantar, and I changed that to more of a cube shape for simplicity and to get the required shapes into the design. My complex object was the bowl which I utilized several circles and connected the vertices to make the triangles. I made the grinder for the bowl out of a cylinder and the table is a plane. I had the most difficulty in mapping the texture to the cylinder and calculating the norm for the bowl. I decided to use a spotlight connected to the camera for my second light and I was very pleased with the way it turned out. I decided on using the blue color with the spotlight and I feel that it gives the scene a CSI look. I could envision using something like that for a game and having blood splatter or other dna that is only seen while using the light.

The scene can be navigated with the q and e keys for up and down, w and s keys for forward and back, and the a and d keys for left and right. The mouse can be used to rotate around the scene. Pushing the p button toggles the perspective/orthogonal views. I initially had trouble with switching the views as pressing the p button would change the state multiple times. I was able to resolve that issue by using a function that recognizes single key presses.

I developed a function that would create the vertices of a circle and connect them to the vertices of another circle. This function was very helpful in making the complex object and I was able to reuse it for the cylinder grinder.

I’ve enjoyed this class quite a bit and I’m excited to continue learning openGL. I would have liked to add shadows to my scene but it is beyond the scope of this class and probably will be one of my next educational projects.