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Project 1 Writeup

I think I made some solid choices as far as my 3D representation went. There are some extremely complex shapes involved (think of the hook shaped faucet, or the bowl-shaped semi-circle of a sink). My choice of multiple different-sized cylinders on top of each other for the sink was the best way to handle this. It still gives the effect of a faucet head, but without the headaches of creating custom functions for a hooked cylinder for instance. I think cutting a sphere through the plane to create the illusion of a bowl was an ideal choice as well. It still gives a rounded sink bowl-look without the difficulty of creating a concave semicircle function.

There are multiple options for scene navigation included in the program. The WASD keys will move in, out, left, and right accordingly. The QE keys will move the scene up and down. The mouse scroll wheel slows and hastens the speed at which your camera will move around. The P key will offer you a different ortho view.

This program had been made so much easier using the custom 3D Static Mesh cylinder functions. I searched long and hard for a way to handle these that wasn’t a set of custom .cpp, and header files, and it seemed almost impossible. After getting these files set up within my project, and gaining a solid understanding of what they’re doing, I was able to implement an extremely modular and quick way of creating and placing cylinders within my scene. It was a very similar situation with creating a sphere. There didn’t seem to be an intuitive way to implement a sphere without creating a framework within the project to quickly and modularly handle the backend creation of the shape through the ShapeGenerator.

Overall, I think I handled the 3D scene creation in a very intuitive way. When we first started this course, I had grand aspirations of creating a lifelike 3D scene, and wondered why we were only limited to a small subset of primitive shapes to do so. Now that I fully understand the complexity of OpenGL (even something as simple as a 3D pyramid!), I can totally understand why we were limited to such a small subset of shapes. I like to think I chose a scene that was fairly easy to represent his way. I can only imagine how difficult some of the scene selections were.

Thank you for reading! I had a lot of fun on this course.