**7-3 Project: 3D Scene Reflection**

CS 330

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The scene that I chose to develop into a 3D scene is a photograph of some of my daughter’s assorted toys. The first reason I chose to use my daughters’ toys as my objects was that they were convenient, and I had a lot of shapes to choose from. I was able to choose four to six different shapes so that I could fulfil the requirements of having at least 4 different primitive shapes with one of them being made up of two primitive shapes. The toys that I chose represented the shapes of cubes, spheres, pyramids, and cylinders. I did not realize how difficult the spheres and cylinders were to code and program, otherwise I would have chosen different shapes to work with. I did not have as much trouble with the pyramids and cubes as I did with the spheres and cylinders. This could be because there were more examples of cubes and pyramids in the modules and online than spheres and cylinders. I was not able to get the spheres or cylinders to render in a 3D image, but I have been working on that and have been making progress.

This is my first time working with OpenGL, so my controls and effects are very limited and do not seem to be working properly. The way I set up to control the virtual camera for my 3D scene using different input devices was to set letters on the keyboard to movement. The user can navigate my 3D scene by pressing different corresponding letters on the keyboard. They will press W to go forward and S to go backward. If they want to move right, they will press F and if they want to move left, they will press A. The mouse allows the user to control the vision movement of the camera. The user can zoom closer or further away from an object. They can also use the mouse to look around just like they would be turning their head around.

Making custom functions in my program that made the code more modular and organized was hard for me because I had such a difficult time with this project. One that I attempted was to rotate the cylinder to represent the toy being flat on the ground. I used a glm::translation and a glm::rotation to make this happen. I tried to set up my objects in the 3D scene, so they were placed the same way as the objects in my 3D scene, but I am not sure if I was successful because I was not able to see my 3D scene rendered. I have been working on it constantly and feel that I am close, but the term is ending soon, and I need to turn my project in. I had more difficulty in this course than any of my previous courses in the past 3 years. I am not sure why it was so much more difficult; I think it was the amount of code provided in each tutorial. It looks like the complete code and everything you need, but it has to altered in many different areas and added to.