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Project One Reflections

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For the project I wanted to choose shapes that were easy to create and also reflect the objects they were going to represent in the project. The first object was a dice. The dice could be created using the cube shape with the dice texturing. I figured that the dice wasn’t too complicated to create and make look realistic. With this being my first time really working with opengl my strategy was to find simple objects to recreate so I can better understand how to properly arrange the different components that are used to create a successful program. The next shape was the sphere that was going to represent the soccer ball in the project. My thought was to create the sphere by following the opengl textbook instructions provided by SongHo but I found their implementation of the sphere too complicated for my skillset so I had to pivot to the sphere header provided with the zip file. I found that to render the sphere using this implementation was also difficult because you have to adjust other functions around the sphere to successfully render it. I prevail in rendering the sphere but I was unsuccessful in texturing the sphere with the soccer ball. I reviewed the program with the cylinder to investigate how the sphere was textured with the smiley face. Upon my review I detected that our shader programs were set up differently. I was unable to alter my shader program to texture the sphere. I didn’t want the program to throw any errors so I decided to keep the sphere without texturing to be able to showcase the other objects. The next object was the tree. My plan was to render the tree using a pyramid and a cylinder. The cylinder header that was provided would not function without throwing errors. My first thought was to comment out the glad header because that also gave me trouble with the sphere header but it didn’t work it just created a bigger mess so I scraped the use of the cylinder although. Without the cylinder I would have to rethink how I was going to create my tree. I came up with creating two pyramids but have one come out only a little to portray a bush like feature. I was fortunate to render the leaves texture but in my opinion I felt like it could have been better but it not to bad. The plain was the last object in my photo in which would represent the table. The plain was pretty simple to recreate and the plane’s texture was the best recreation among all the objects. The plane was was the objects that gave the project the most realistic effect. The texture looks great and the way the light reflects off the plane meets all the project’s requirements.

I provided the user with controlling the camera utilizing multiple keys. My plan was to feature the GLFW\_KEYS and the mouse controls to navigate around the 3D scene. The GLFW\_KEYS feature movement provided by the keys W to move forward, Q to move quickly at an angle, A is to move to the left, S is to move backwards, D is to move to the right. E is to move up at an angle and P is to switch from prespective to ortho.

I reall didn’t provide many custom functions because my goal was to be able to successfully render objects in my project so I tried to keep it basic as possible but I did put a few custom features such as switching between ortho and perspective. I created a bool so if it’s true the world is displayed in perspective view or if it’s false the view is displayed in ortho. I also have a bool function for is orbiting. If the bool is set to true the light source will orbit around the scene.