Marcus Smith

CS 330

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Reflection

When it comes to my 3D scene, which consisted of a cologne bottle, a toothbrush, a earphones case, and a hand soap bottle, the shapes that I chose to use were the cylinder for the toothbrush, cube for the earphones case, and changing the cube into a rectangle to create the cologne bottle and soap bottle. With these objects and shapes, using the chosen shapes in different ways would be the way to create these objects, by combining the different shapes to create them. These shapes also are simpler to use than say the rhombus, which would need a hollow in the middle of the circle. I also felt like the need for a pyramid was not needed for the objects that I chose for my scene.

With the scene the user will be able to move around the scene by pressing the corresponding buttons to move forward, backward, left, or right, with the buttons that need to be pressed being W, A, S, and D in that order. By using the glfwGetKey I can make sure that the buttons that I have chosen are the ones that must be pressed to move the camera. By also creating a camera speed float, I can allow for the speed of the camera to be changed. I also coded the camera to be able to move with the mouse, and by using the mouse as the center point the camera can then move according to the user’s mouse movement as long as it is within the window of the program. The mouse’s scroll can also be used by the user to adjust the yOffset and allow for the user to adjust the y axis with the scroll wheel.

By using functions such as UCreateCubeMesh, and many of the other functions, I can allow for the function to be called into main, which can save on the redundancy of the code, as it allows for just the function’s need to be called. By also creating texture functions, I can then allow for the inclusion of texture’s to apply to the shapes and plane. With the UIntialize, I can make sure that the creation of the window works correctly as well as call the needed functions, for the mouse, as well as the size of the window, to be called as long as the window does not come back null. This can then allow for the use of the mouse in the window to be sure to happen. By also using the UCreateShaderProgram I can make sure that the shaders are created and used, and that if there is an issue, a return message will be given to notify of the issue. This also will attach the shaders to the shader programs. Then the use of URender can allow for the camera to be used for the creation of the camera and the shaders and shapes. The UCreateTexture will allow for the texture’s to be used, based on the image given in the folder of the program.