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CS330

Project Design Decisions

I chose the selected objects mainly because they were familiar objects that were different shapes. During the construction of the objects I noticed that the objects, although different when finished, were constructed out of the same shapes. Mainly cylinders. The functionality was simple for setting the scene. I took the instructions taken from a previous module and changed what the shape was. From there it was a trial and error process of making sure the size, shape, and location of the various objects appeared where necessary. Using the position of previous shapes allowed me to estimate the location for the following shapes.

My camera is set up to be controlled easily. The WASD keys are used for moving forwards, back, left and right while the Q and E keys go down and up respectively. Scrolling the mouse wheel forward decreases your movement speed while scrolling backwards increases it and turning the mouse changes the facing of your camera. The ‘escape’ key would allow the user to close the use to close the program. The function glfwGetKey was used to read and contain the input that was used, and when said input was used the program would use one of the beforementioned actions to allow the user to move the camera around. A similar function for the mouse was used to read the mouse inputs.

My program is kept organized by the clean code and the even breaks in between lines. Stars were used to divide the various functions to ensure that the shapes that were used to create the program did not clutter up the readability of the program. Excess or vestigial code was eliminated to keep the lines clean and less confusing. The comments were changed even when parts of the code were copied for speed to make sure that there was no miscommunication with the information that is being presented. The code is very reusable, with each piece being able to be replicated with some minor details being changed. In particular, the code where the shapes are created and positioned is designed to be used over and over, only needing the XYZ scale, XYZ position,, colors, texture, and type of shape being able to be changed. It makes creating scenes very easy and intuitive.