CS 330

Professor Wabara

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**Design Decisions**

When I first began to contemplate the scene that I was going to choose to replicate for the final project, I had several considerations in mind. The goal was to create a scene that would challenge me, but also wouldn’t be too complicated to recreate. With this goal in mind, I created a scene that included fairly simple objects arranged in a fashion that seemed liked it wouldn’t pose too much of a challenge. However, I quickly found that creating anything in OpenGL requires a hefty amount of patience and an eagerness to learn.

In order to recreate my scene, it was necessary to garner a comprehensive understanding of OpenGL and the code base provided for this class. In addition, the code base had several issues that I had to troubleshoot along the way, which added to the complexity of completing assignments and creating my scene. However, each time I overcame a hurdle, my confidence was bolstered, and I thoroughly enjoyed the process of bringing this scene to life in a simulated 3D environment.

Navigating the scene that I have recreated utilizes basic keyboard movements such as WASD for moving left, right, forward and backwards. Additionally, the user is able to move the camera view up and down with the Q and E keys. Mouse movements move the camera view around allowing the user to aim their view where they please. Scrolling the mouse wheel adjusts the speed of movement so the user is able to fine tune their movements. Finally, the O and P keys allow the user to choose between the default perspective view, or an orthographic view from whatever view the user is currently at.

The code base provided for this work contained many functions that allowed individual aspects of the code to function modularly. Some examples include “DefineObjectMaterials,” “SetShaderMaterial,” “SetUpSceneLights,” “LoadSceneTextures,” “SetShaderTexture,” and “SetShaderColor.” The code base included quite a few other modular functions, but these functions were functions that were heavily touched by me throughout the creation of my scene. Each of these functions not only made it much easier to understand what was happening behind the scenes, but also allowed me to avoid typing repetitive code again and again. Creating this scene was already challenging enough and having these modular functions at hand provided a lot of relief.

Overall, the experience of this class and recreating my scene has been overwhelmingly positive in regard to the topic at hand and the knowledge that I’ve gained along the way. Dealing with the shortcomings of the code base and delayed communications with issues was definitely frustrating, but I cherish my ability to persevere and to always find a solution when I hit a wall, and things seem hopeless. Hopefully future sessions of this class will be better arranged and more polished.