Professor Philip Enkema

Comp Graphic and Visualization

CS 330 – R4858

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make

**Module 7-1 Assignment: Design Decisions**

**Justify development choices for your 3D scene**.

Design is important to the look and layout of the 3D scene process, and it is important to choose design wisely. The considerations made throughout the development process with my design in mind allowed me to address many aspects of the #D scene development process, including aesthetic factors and functionality. The designs chosen allowed me to focus on the detailed use of the shapes, textures, and positioning of the objects used to mimic my design.

My design consisted of a scene with a house, a tree, and a cloud. I chose a very simple design for my project due to my wariness of a more complex scene, which I felt would cause me to struggle with the execution and all of the steps that came with building the 3D scene. In the execution of my scene, I utilized the shapes file in order to help me retrieve the shapes I needed to complete my design. To build the house, I chose the box shape along with the pyramid shape and flipped the pyramid on top of the box shape to make a roof shape. For the cloud that sat above the house, I utilized the sphere shape and placed it above the house. To recreate the tree, I used both the cylinder and the sphere shape, and I flipped the sphere on top of the cylinder to act as the leaves of the tree and the cylinder as the trunk.

**Explain how a user can navigate your 3D scene**.

A user looking to navigate the 3D scene that I created would be able to use their mouse and keyboard to do so. The mouse would allow the user to scroll and navigate the scene to get a different perspective in terms of camera movement and seeing the scene from different angles. The “W” key is for allowing the camera the ability to zoom in and out. The “S” key allows the camera to move backward. The “A” key allows the camera to move to the left, and the “D” key allows the camera to move to the right. The “Q” key allows the camera to pan up, and the “E” key allows for the camera to pan down.

**Explain the custom functions in your program that you are using to make your code more modular and organized.**

The functions in my program that allowed me to make my code more modular and organized were to keep the different iterations of the code separate; with each milestone, the code came together to form the completed project. Keeping all of the code separate in its functionality allowed for a smoother execution and allowed for the errors and bugs to be easily noticed and fixed due to where the code was placed in the project.