Final Project Reflection

Justify development choices for your 3D scene.

So overall, I choose to implement a scene made of wooden blocks that were from my daughter. Often times she likes to watch me do my various assignments, and she also enjoys building stuff with her toys. While pondering what I was going to choose to do with my scene, that’s when the inspiration hit me. I choose to do create the scene based on my kitchen table and took into account the different lighting sources. It involved some complex and simple shapes. The complex shape was the wooden arch or bridge piece. It consists of a half torus shape to make the inner arch, which was given a wooden bark like look, and the sides and top was made from box shapes, that were given a reflective metal texture that reflects the lighting in the scene. To the left of my complex object is a golden cylinder that stands just a little taller than my bridge piece, to the right is a very tall and wide box, that has a very thin but long box leaned against it. The thin box was given a green/blue ice texture, and the box its leaned against is given a blue/white tiled look to it. We were given some creative freedom in order to change the way some of the blocks looked overall, as I believed that it would be a bit dull to apply a simple wood texture to all the objects in the scene.

A group of objects on a table

AI-generated content may be incorrect.A group of colorful blocks on a table

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

A computer screen shot of text

AI-generated content may be incorrect.Users are able to navigate the scene with both the keyboard and the mouse. The keyboard controls both the camera moving up and down, as well as left and right. While the mouse controls the direction that the camera is facing, allowing it to turn left and right as well as up and down. We can also use some keyboard buttons to change the views from orthographic (2d) to a perspective (3d). This allows the user to be able to fly freely around the scene, and look at all the objects around the scene and see the scene from different perspectives.

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

One of the functions that were created for this program was the SetTransformations function. It takes the scaleXYZ, Xrotation, Yrotation, Zrotation, and overall positionXYZ and applies it to the object before the mesh is drawn. All of those variable control different aspects of the objects and are required for each of them to be drawn, otherwise they will be all in the same spot. This is reusable for every single object being drawn in the scene.

A computer screen with text and numbers

AI-generated content may be incorrect.