COSC 4370 Homework 4

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**Objective**

The goal of the assignment was to implement a given texture onto a cube. This was done with the use of texture mapping.

**Method**

Similar to the previous assignment, most of this assignment was pre-written. The assignment required the student to write vertex and fragment shaders in the texture.vs and texture.frag files, respectively, and project them in the main.cpp file.

**Implementation**

Projection Matrix

The projection matrix was set up similar to the previous assignment, using the glm::perspective command. The command was almost copied exactly over from Homework 3, with only the camera.Zoom variable being replaced with a constant value of 45.0f.

Fragment Shader

The fragment shader simply defined the color as a function of texture using the myTextureSampler variable and the UV coordinate variables.

Vertex Shader

The vertex shader was created by setting the gl\_Position variable equal to the projection multiplied by the view multiplied by the model multiplied by the function vec4 given the position variable and a constant value of 1.0. Then the UV coordinate was created by inverting the vertexUV variable.

**Results**

The result was a spinning cube with each side having a different number, corresponding to the texture.dds file given as part of the assignment. Unfortunately, 4 was not on the top, and 6 was on the top instead. I couldn’t figure out how to

Image:

