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Project 4: Render Your Scene with Primitives

CST – 310 MWF320A

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My technique for rendering my scene with OpenGL, was to open the original imagine in Microsoft Paint then use that to get the exact vertex points of each object. Doing this did not require any transformation. To create as much shading as I could I created more GL objects in different colors.

The mathematical characters of each object were somewhat complicated:

1. TV:
   1. The TV wasn’t incredibly complicated, it was just a lot of GL Quads layered on top of each other
2. TV Stand:
   1. The TV Stand was very complicated. This was because each shelf needed its own shading. Therefore, the TV stand has one of the largest pieces of code to go with it. Most of it was GL QUADS and GL POLYGON.
3. Box on top of TV Stand:
   1. The box on top of the TV Stand was very simple compared to everything. There were just a few shapes I created using GL QUADS and a couple GL POLYGON shapes.
4. Box on First Left Shelf:
   1. This was a cool object to create because it has lighter than the rest of the scene. I coded it with GL QUADS and GL POLYGON shapes.
5. Box on First Right Shelf:
   1. This object was slightly difficult because it required a really complex GL POLYGON shape, that I still haven’t quite perfectly implemented.
6. Box on Second Left Shelf:
   1. This object was relatively easy to code, I just created a bunch of GL QUADS and GL POLYGON shapes.
7. Lamp on Second Right Shelf:
   1. This object wasn’t too hard to code either. Just the same shapes with different colors.
8. Box on Last Left Shelf:
   1. I’m not exactly sure what this box is. But it is very simple to create, just the same shapes with different colors.
9. Boxes on the Last Right Shelf:
   1. These were a little more difficult to create because each box was a unique shape. But overall it was just GL QUADS and POLYGON shapes.’
10. Books/DVDS on Middle Left Shelf:
    1. This were a little more complex to code just because there were so many of them and they each were unique. But I still coded them with the same shapes.

Overall, I used OpenGL GL\_QUADS and GL\_POLYGON for every shape in the picture. And it made the assignment relatively easy to make, just a little tedious in the fact there was more work to add.

I did not use shaders or a camera.

Screen Shots of Executed Code:

A screenshot of a computer screen

Description automatically generated

This is a picture of the lines I entered to execute the code.

A screen shot of a computer

Description automatically generated

This is a picture of my picture I created in OpenGL (Left) next to the original picture (Right).