

Assignment 3 Report

What my code does do:

- Reads the light source direction and all polygons from file.
- Marks all the polygons that are facing away from the viewer.
- Computes normal and reflected light intensity of every non-hidden polygon.
- Finds the edge lists of polygons.
- Renders the image to an array of colors using a Z-buffer.
- Displays the array of colors.
- Model is able to rotate, translate and zoom in/out by using keyboard or mouse.
- Make the model always in the center of the window.
- Move the model by dragging.
- Allows multiple light sources to be modified dynamically.

What my code doesn't do:

- Change the light position.

In my code, when I make the model rotated, it will only rotate itself, the light position won't change for some reasons. I have tried to resolve this problem by add more codes to change the position of light in the rotateScene method but it is still doesn't work.

Since there are some test code already, I used them to test my code one part by one part. After I done the whole work, I just use my code to try all the situation like rotation, translation or zoom.

The model is able to be moved or rotated by pressing mouse and about the zoom part, press L can make it larger and M can make it smaller, besides, I also add a mouseWheelListener so that it can be used to zoom as well.