COMPUTER GRAPHICS ASSIGNMENT - 4

REPORT

Name: Akhil Jonnalagadda
Student Id: 02107382

About the code:

- This code consists of a 3D house rendered using WebGL, shaped and colored with vertex points.
- I made the camera move smoothly along a line, circle and Bezier curve, based on the user's selection.
- Users can enter their own coordinates and choose how the camera should move and how the scene is viewed.
- There are buttons to start, pause, and reset the animation, and a dropdown to switch between perspective and orthographic views.

Issues Faced:

- I had faced a problem where the house wasn't showing up properly, so I had to scale and adjust the coordinates to fix it.
- I had faced difficulty in handling camera movement during Pause, Resume, and Reset, so I used flags to control it properly.
- I had also faced issues when switching between perspective and orthographic views, as it caused display problems that I had to fix.

Lessons Learned:

- I learned how to create a 3D object using vertex points and display it properly in WebGL.
- I understood how to use model-view and projection matrices to control the camera and scene view.
- I learned how to make the camera move along a smooth curve using a Bezier path.
- I got better at using buttons and dropdowns to control animation and connect them to the WebGL code.

Remaining Bugs:

There are no remaining bugs in this program. All camera paths line, circle, and Bezier are working smoothly. The projection switch and animation buttons are also functioning correctly without any problems.

Additional Functionalities:

I have added extra features like camera movement along a circle and a smooth Bezier curve to make the animation look more natural. I have also included a projection switch that allows the user to switch from perspective to orthographic views while animating. To keep things simple, I have included Pause and Reset buttons for controlling the camera movement.