



BBM414 - Experiment 2

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1 Introduction

In this assignment we are responsible for 2 parts. First part we have been implemented to do some functional changes to project which is given us by TA. We changed the color of shape and form of the shape. In the given project, you expected us to change the color of the shape correctly according to given informations and rotate it properly. Second part we are expected to do swing animation to our shape within previous assignment. . There are some changes and features fort his project, and additionally an animation.

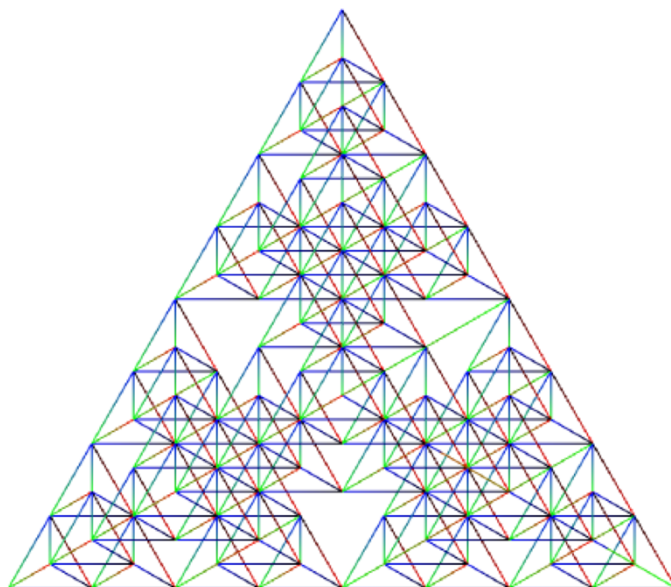
2 Experiment

2.1 Part 1

In this part we will implement some color functionality to change color of triangle. As you can see there are so many triangles which has diffrent color and all triangled placed nestedly. These triangles is filled with the same color of the vertices. We have to change triangles as a empty triangles and chnage the vertices color.

As you can see given below picture i changed to triangle's color and triangles modes for lines according to pdf.

RESULT



2.2 Part 2

In this part we will make a swing animation for our first assignment project . We draw masked emoji for previous assignment using bezier curve to give curve to a shape mask . Firstly i changed Shaders.js to change colors and position of shape. When i change Shader.js i scaled to all object with 0.45 you can see my emoji is smaller than previous assignment. The Last part we have to make an animation according to user input. The animation is easy we are expected to rotate emoji to left when user press “2” ,rotate emoji to right when user press “2” and pause animation if user press to “1”. The rotation must be 45 degree both side of emoji while user press “1” it will continue to its rotation left to right or right to left. .I changed the vertex shader add transformation matrix in the vertex shader and multiply shape positions with transformation matrix and solved to rotation problem. to start animation i create file named as Render.js and add constructor to give callback function and start animation to automatically when user press input keys which is “ **1-2-3** “.while rotating object color of emoji must be change. to give this functionality i added to some variable in fragment shader. While rotation angles is changing ,color of emoji will be change according to degree of rotation.

----- USAGE OF PROGRAM -----

Press 1 to Stop Animation

Press 2 to Start Left and Right rotation Animation

Press 3 to Start Left and Right rotation and color change Animation

3 Conclusion

In this assignment i learned a lot of things about WebGL2.I improve my javascript skills .Every Computer engineering students should learn this topics beacuse it is neccary for programmers in this centry.While coding this project i learnd how to change color of objects in the WebGL and woh to rotate objects indipendetly using WebGL2.