Assignment 2 was much easier to do than assignment 1. The first thing I did was add the buttons and range sliders to different variables for the Sierpinski triangle. Next, I reviewed the code I downloaded from the github page given in the first assignment to learn how to link the button and range sliders to the variables with mouse click and onchange events to be able to change the colors, number of points, position, and size of the Sierpinski triangle.

It took me awhile to figure out how to link the buttons to the values, but after I was able to change the color with. A button, range slider, and color picker, it became much easier to implement buttons to move the triangle up and down, left and right, shrink and grow it, reset the triangle, and change the scale in which it moves and shrinks/grows.

With the help of my tutor, I have also changed the structure of the gasket1.js file from:

**Assignment 1 structure:**

1. Functions to set up server and shaders
2. Window onload function
   1. Define canvas
   2. Define vertices
   3. Calculate triangle points
   4. Display viewport
   5. Clear color
   6. Get shaders function
3. Render function

To

**Assignment 2 structure:**

1. Variables for the buttons and range sliders
2. Functions to set up server and shaders
3. Render function
4. Load data into GPU function
5. Change geometry function
   1. Calculate triangle points
6. Sierpinski gasket function
   1. Define vertices
   2. Call **change geometry** function
   3. Call **get** shaders function
7. Hex to RGB function for color picker
8. Onload function
   1. Define viewpoint and clear the window (clearcolor)
   2. Define mouse onclick and onchange events for buttons and range sliders.

NOTE: To run the program, cd into the folder and do: **node server.js**, then in a web browser, type **localhost**.

SAMPLE OUTPUT:





