Emily Meagher, N00150263

BRIEF
CA 1 - Creative Coding

Introduction

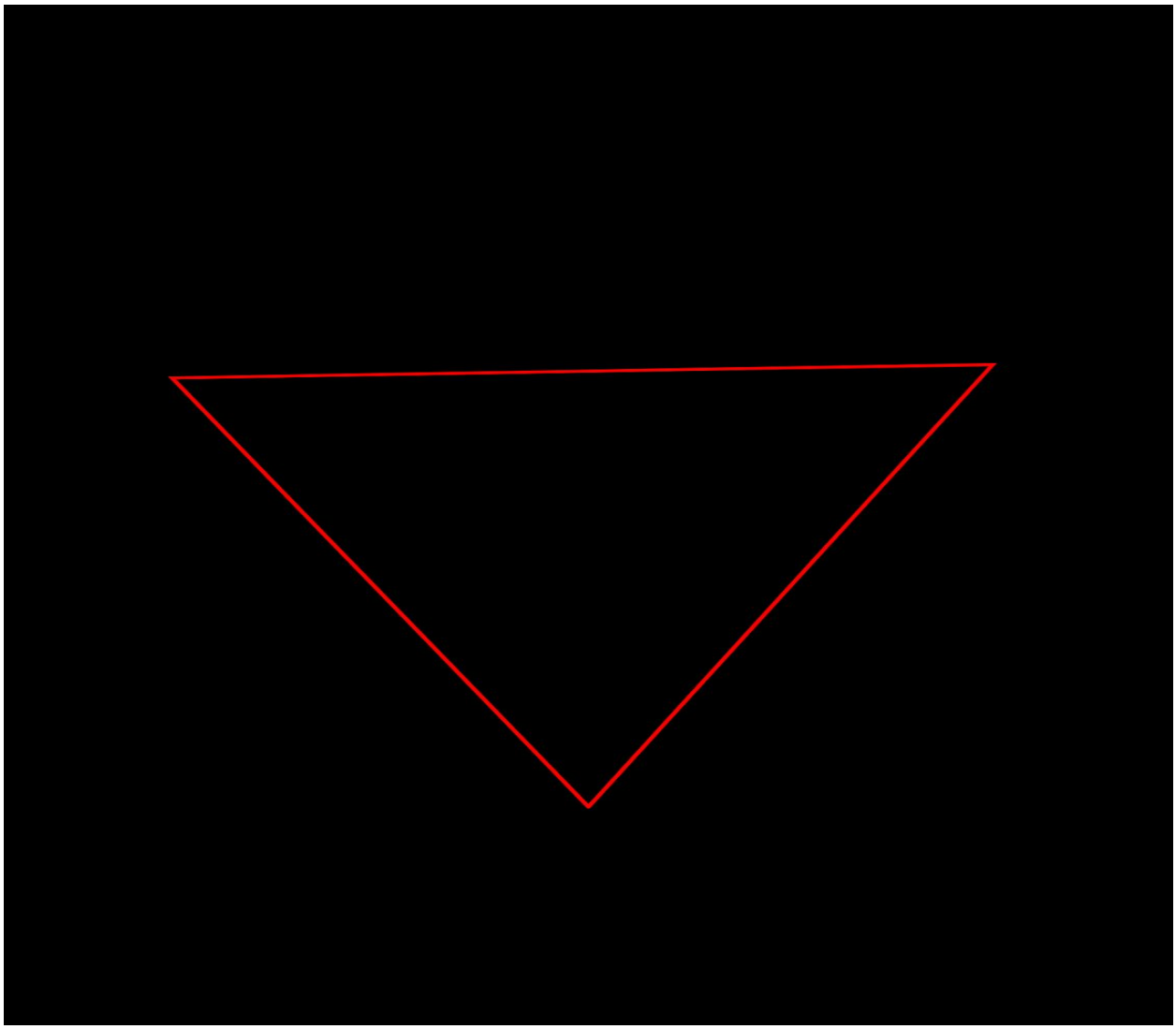
The idea for this project was to incorporate perlin noise to change the look of different random shapes. The perlin noise would interact with the points of the shape to manipulate its movements. All of the shapes would change color slowly overtime with each shape starting as a different color.

Test 1

Perlin Noise is a well documented method in p5.js with many tutorials and books that explain this topic in great detail. To help understand perlin noise and the difference between 2D and 3D perlin noise, I followed the Generative Design book, p5.js reference and Daniel Shiffman perlin noise tutorials. By following these references, I was able to create a perlin noise flow field that incrementally changed its hue value with each particle created.

Test 2

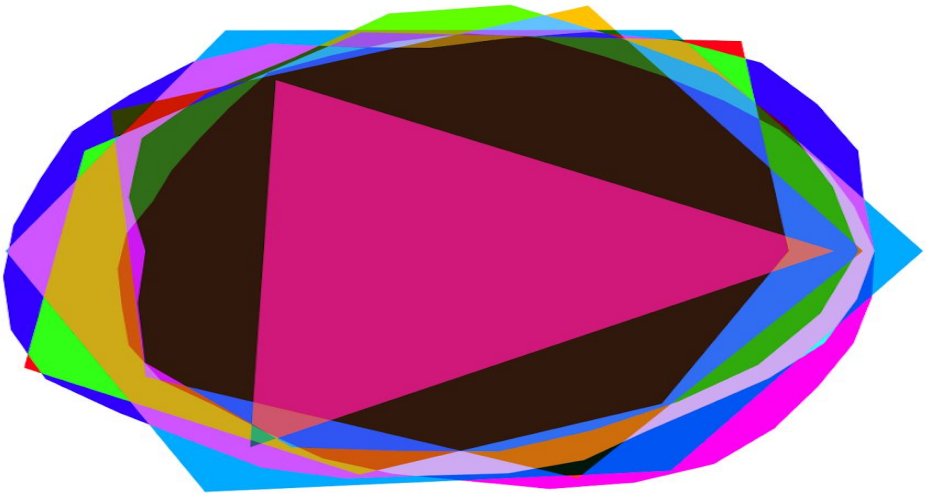
The next step was to create random shapes that would be changed randomly over time. This is where I looked into the beginShape() method which allows for complex shapes to be created. To create these complex shapes, angles would be needed to create the different shapes. By using the sin and cos of the angle you can create shapes with multiple angles such as triangles, polygons and circles. All angles would be equal so only equilateral triangles would be created. To finish the shape the endShape() method would be used. The constant CLOSE is used for the MODE parameter to close the shape (to connect the beginning and the end) so there would be no gap in the shape. At the time perlin noise was not implemented to manipulate the shape.



Final Test

The final folder contains the combination of test 1 and 2. The noise class is created similarly to the particle class created for test 1. In this example the noise level and the beginShape method are found in the noise class with the sketch file being used to display the shapes onto the canvas. The constructor class which I learned by reading The Nature of Code By Daniel Shiffman, helped me understand why to use classes to construct all the random shapes. In this example we can see that many different shapes are layered on top of each other with their points being manipulated by noise. The circle has many small angles with many points which when manipulated by noise the shape looks liquid or jelly like. Polygons

and triangles has less points which means the noise increases and decreases the size of the shape at its points.



User Controls

A user can save the image of the canvas to be saved as a png that time stamps when the image was saved.