

Creative Coding Project Documentation

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Parametric Pattern

Assignment

I was tasked to use p5.js and JavaScript to develop a generative pattern system for this project. Designing a simple motif that repeats like wallpaper and making it parametric that are able to be altered by changing variables in the code.

I have to include at least one if-statement and rely on at least five customisable parameters such as size, colour, spacing, and thickness. After the system has been set up, I have to adjust the settings to produce nine separate images, then select my choice to download as an A3 high-resolution image.

As I progress through the project, I also have to keep track details of my design choices, drawings, coding modifications, and ideas.

To meet all my requirement, I have to

- Make a functional coding system with repetitive patterns.
- Use at least five changeable parameters
- Put at least one if statement in there.
- Create nine.png pattern pictures, each with a unique set of parameters.
- Select my preferred version, then export it as an A3 high-resolution picture.
- Organise all of my code and publish it using GitHub.

I'm learning how to use code to think like a designer, investigate generative art, and understand how slight adjustments to parameters may produce dramatically different visual results thanks to this project. The goal is to create something adaptable and repeatable by combining computer logic with visual design.

Response

With the use of code, I hope to demonstrate how basic shapes, and recurring patterns can be transformed into aesthetically stunning and intricate designs. Using elements like size, spacing, and colour, I aim to build a pattern that seems balanced and rhythmic, demonstrating how minor adjustments may provide whole distinct effects.

- My goals are to increase my comfort level with p5.js and JavaScript.
- To establish patterns that seem deliberate rather than accidental
- to create an approach that enables fast testing without requiring me to rewrite the code
- To get a deeper comprehension of how conditionals and parameters impact visual results

What excites me:

- The thought that a tiny piece of code may produce many variations similar to controlled randomness excites me. Even though it's digital, it's entertaining to see how design and technology can coexist in a way that seems tactile.

Personal Challenges:

- I may consider setting a restriction, for instance limiting my palette to two colours plus black and white, or just using geometric forms, to push myself a little farther. These restrictions, in my opinion, can result in more deliberate and targeted designs.
- I want to begin with the approach of planned experimentation and see where it takes me, even though I am aware that my project may change as I go along.

Precedent images

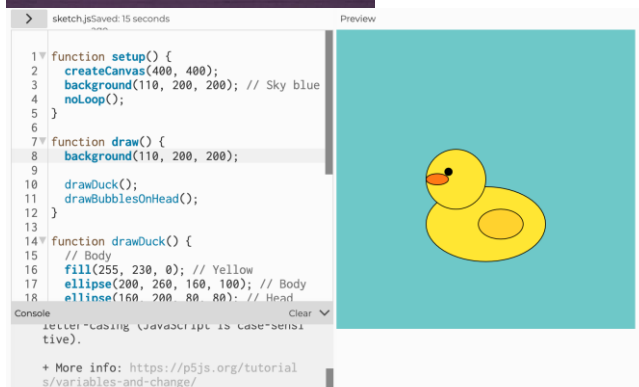
A picture of a rubber ducky was one image that motivated me throughout this project. Although it may appear straightforward or fun, I was captivated by its curved, balanced form, vivid hue, and how it embodies nostalgia and simplicity. I appreciated the concept of designing a motif with a similarly bold, inviting shape something that seems playful yet remains clean and graphic.

This prompted me to explore curved shapes, circular equilibrium, and a gentle colour scheme akin to the duck's yellow and orange hues. It shaped my approach to the pattern, striving for something bright, happy, and aesthetically inviting.

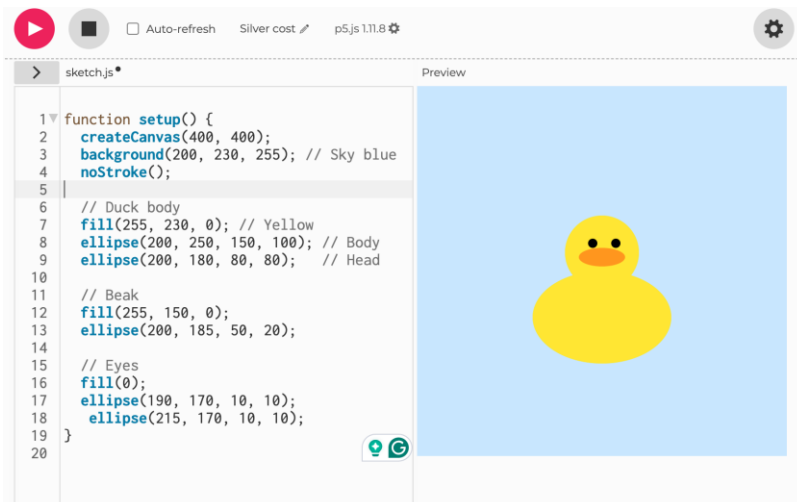
I appreciated that the rubber duck has a distinctive shape, which led me to consider the significance of shape identity in my design. Although my finished design might not actually feature a duck, the influence shaped the atmosphere and aesthetic I was pursuing



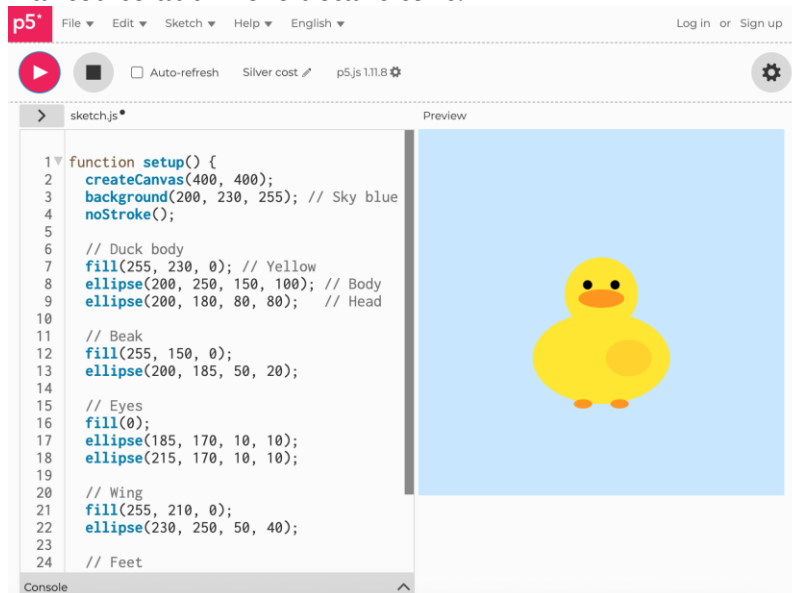
Design development



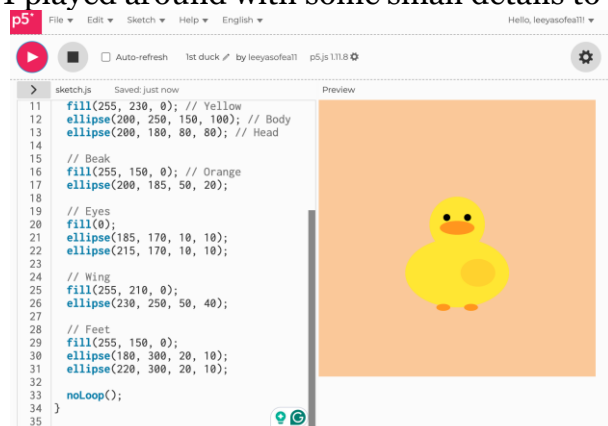
This is one of my first design of a duck on p5js and I'm just getting used to having colour and making shapes I decided that I didn't like that the duck is facing the left side



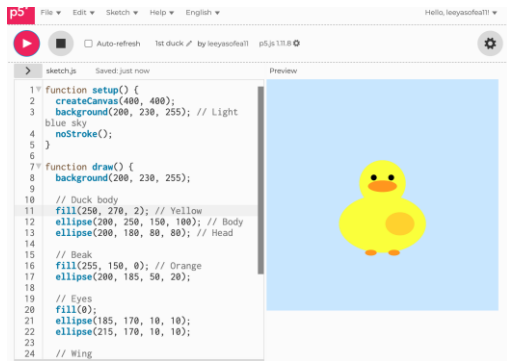
Then I tried this shape, and it worked out well I like that it is facing forwards, but I wanted to add more details to it.



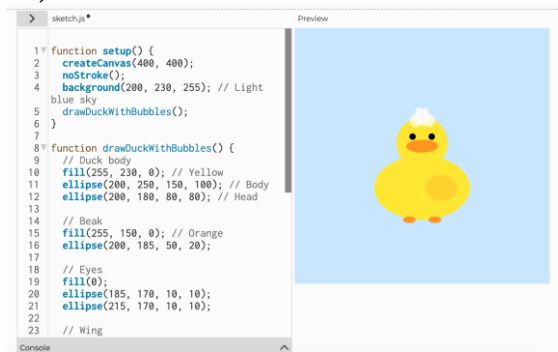
I played around with some small details to add on the duck



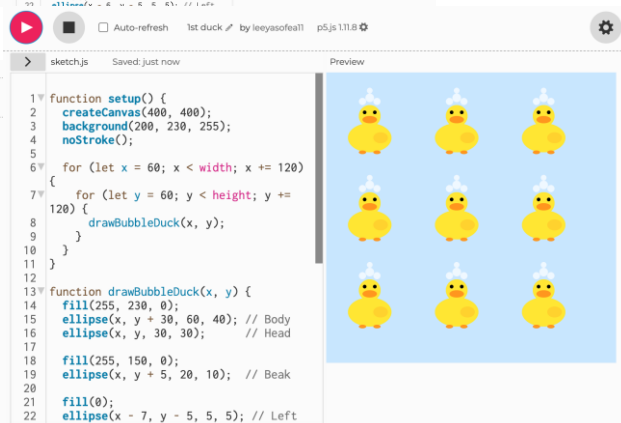
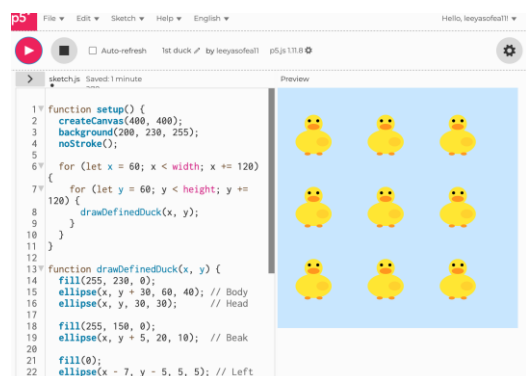
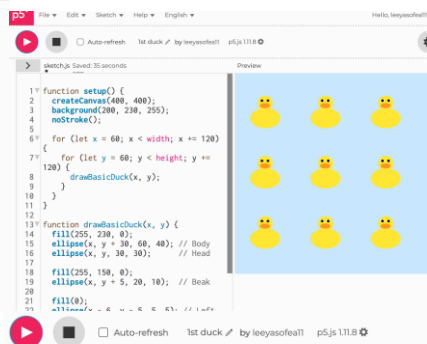
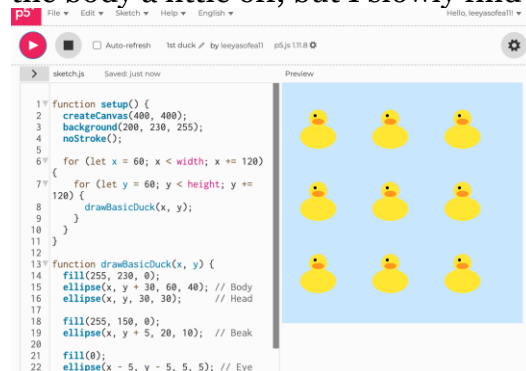
I also wanted to see if different colour would suit it but opted for the familiar blue and yellow colour



My initial plan was to create just a duck, but I developed and want it to be a rubber duck, so I added bubbles on its head



Then I started my pattern I encountered some issue like the eyes not showing up or the body a little off, but I slowly find the mistake and fix them. I added the details



To make the ducks seem cute and avoid overlapping in the pattern, I put a lot of effort into getting their shape and spacing just right. As I incorporated little enhancements like bubbles, rotation, and background decorations, the design developed spontaneously.

The duck's visual look when spun at a 45° angle was a happy accident. Bubble animation was one of my attempts, but it didn't work with the clean pattern style. I also experimented with various duck spacing and sizes.

Yes, I created multiple duck versions plain, detailed, and bubbled and selected the one that seemed to have the best pattern balance. Additionally, I experimented with adding colour effects, but they didn't fit the aesthetic I was aiming for.

Written Material

Initially, I aimed to sketch a basic duck, but as I progressed, I began incorporating small details such as bubbles and movement to enhance the design's playful aspect. Every step flowed seamlessly into the next after the duck had bubbles on its head, it was logical to include some near its feet, followed by random ones in the background to unify the scene.

There were instances when things didn't unfold as intended such as my attempts to animate the bubbles or make them burst, which clashed with the tranquil, steady design I was pursuing. I experimented with various spacing and duck sizes but selected the one that appeared most balanced.

I experimented with several variations of the duck, each featuring additional details, and selected the last one because it seemed enjoyable yet not overly busy. The project gradually shifted its focus from simply creating a shape to constructing a small world.

Reflection:

The project turned out positively, and I achieved my goal which is an adorable, whimsical duck design featuring tiny details such as bubbles and rotation that added character. The end product addresses the brief by employing parametric variation, repetition, and visual rhythm with subtle changes in duck design and arrangement.

Given more time, I would try out animation perhaps making the bubbles float or glimmer or allowing the ducks to wobble a bit for added vibrancy. I would further adjust the spacing and investigate different colour options. Overall, the project showed me how a basic concept can develop and transform into something more intricate and meaningful through a bit of creativity and determination.