Love in Scoops

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Project Description

My idea for a generative art project was to create custom ice cream cones with the color of the scoops determined by user input. Since the theme of my projects has been love, I tried to think of something I really like, which is ice cream! Drawing shapes like circles and triangles was one of the first things the class learned to do in p5.js, so I knew I could incorporate a combination of basic shapes to create a realistic cartoon ice cream.

To build the ice cream scoops, users can type in a color as a single word into the input box and press submit. If the color name is recognized as a web color in p5.js, a new scoop of that color is drawn on the canvas. When the stack of scoops gets too tall, a new cone is added to the canvas next to the old one, and a new ice cream is started.

[Click here to try the project for yourself!]

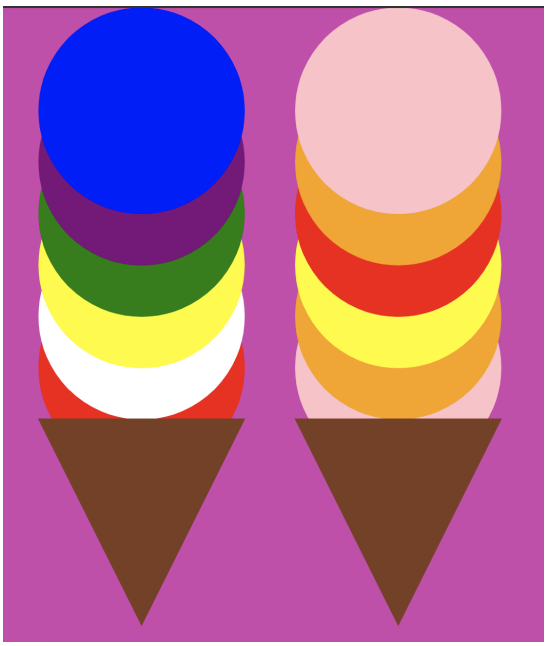
Process

Photo credit: Ralph's

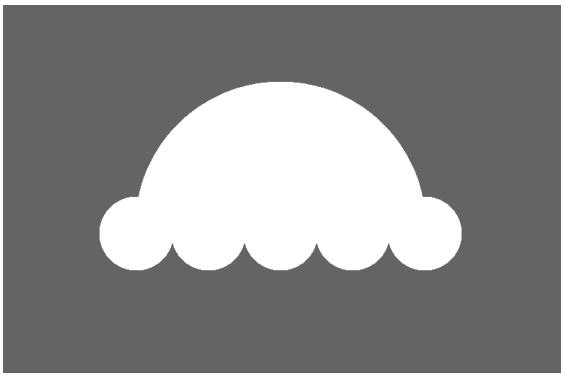
Photo credit: Vecteezy

Ideation/Design Process:
The ice cream generator was simply inspired by my love of ice cream. However, a design decision that I had to make was how I wanted the scoops to look. I originally figured I could just stack several circles on top of each other and call it ice cream (as is documented in the prototyping section below). However, I knew I could improve on this design. I was inspired by classic ice cream cartoons and imagery. In particular, I thought of the ice cream scoop on the packaging for my favorite ice cream cones growing up (left photo). The ice cream is a perfect semicircle with round scalloped edges on the bottom. I wanted to replicate this design to give my project a sense of nostalgia when viewers look at it.

I also knew I wanted my project to be interactive. I realized that I could use user input to decide what color the ice cream scoops are, almost like the user was ordering an ice cream themselves. It took a few prototypes to decide the best way to capture the user input, but I am excited that I was able to make the final iteration of the project interactive and user-friendly.



Here is a screenshot of the ice cream generated in an early prototype of the project. Notice that the “scoops” are just circles, and they overlap with each other awkwardly. In this prototype, I was satisfied that the bottom scoop was rendered behind the cone so it looked like the scoops were actually sitting in the cone. You can view the code for this prototype here.



Here was a separate basic prototype of how I wanted the ice cream scoops to look. Each scoop is made of a large semicircle and five smaller circles on the bottom to represent the “scalloped” edge of the scoop. You can view the code for this prototype here.

Here is one of the first ice cream cones I made with the new scoop design. In this final prototype, I added functionality to generate a random color for the background (green in this case).

Prototyping/Building Process:
I started by drawing a brown triangle for the cone and used keyboard input to have the user pick a color for the scoop. If a user typed "Enter," a scoop would be generated with the text the user had inputted. If they typed "Backspace," the entire user string was deleted (for example, in the case of a typo where the user wants to start over). Any other key would be added to the user string. This created a series of issues. First, the user string was only displayed to the console, so it was hard for the user to see what they had typed so far. In addition, special characters (which do not appear in any color) could technically be included in a user input based on the key logic I had implemented.

The early prototype in the images above had this input design and ice cream scoops that did not look very good. I decided to continue to iterate on my project in order to fix these problems. To fix the shape of the scoops, I developed a function **scoop(color)** which takes in a color argument and draws a scoop that resembles the cartoon ice cream from my inspiration. I wrote code in a separate file to make an ice cream scoop that looked like my inspiration photos (the result of this code is the white scoop above). I then added this scoop function to my existing code and called it in place of drawing a circle. To fix the user input issues, I decided to create an input box on the drawing that users could type colors into. This way, the text they type is always visible.

Conclusion / Reflection

I'm very proud of the final project that I came up with. The design of the ice cream scoops and the ability for a user to interact with my project make it feel whimsical and fun. I was able to use the techniques we covered in class for re-using code (i.e. creating a function that just draws scoops) and learned from example projects on the internet to figure out how to make my vision come to life.

During critiques, some fellow students had suggestions for how I could build off of my current project. One idea was to have the ice cream scoops melt over time. Another idea was to have the stacks of ice cream scoops fall over when they got too tall. I had not considered these ideas and others that were mentioned, and now I know there is definitely room to iterate on this project and incorporate new features.

Links

Code/Final Project	https://openprocessing.org/sketch/2191155

Sources

List of recognized web colors	https://editor.p5js.org/shfitz/sketches/smCWR0Ypk
Input text box and button example	https://p5js.org/examples/dom-input-and-button.html
Arc documentation (p5.js)	https://p5js.org/reference/#/p5/arc