

Welcome to Learn p5.js

A brief introduction to creative coding and the p5.js JavaScript library.

What is Creative Coding?



What if coding could be used to express ourselves? How would that make us rethink what coding is?

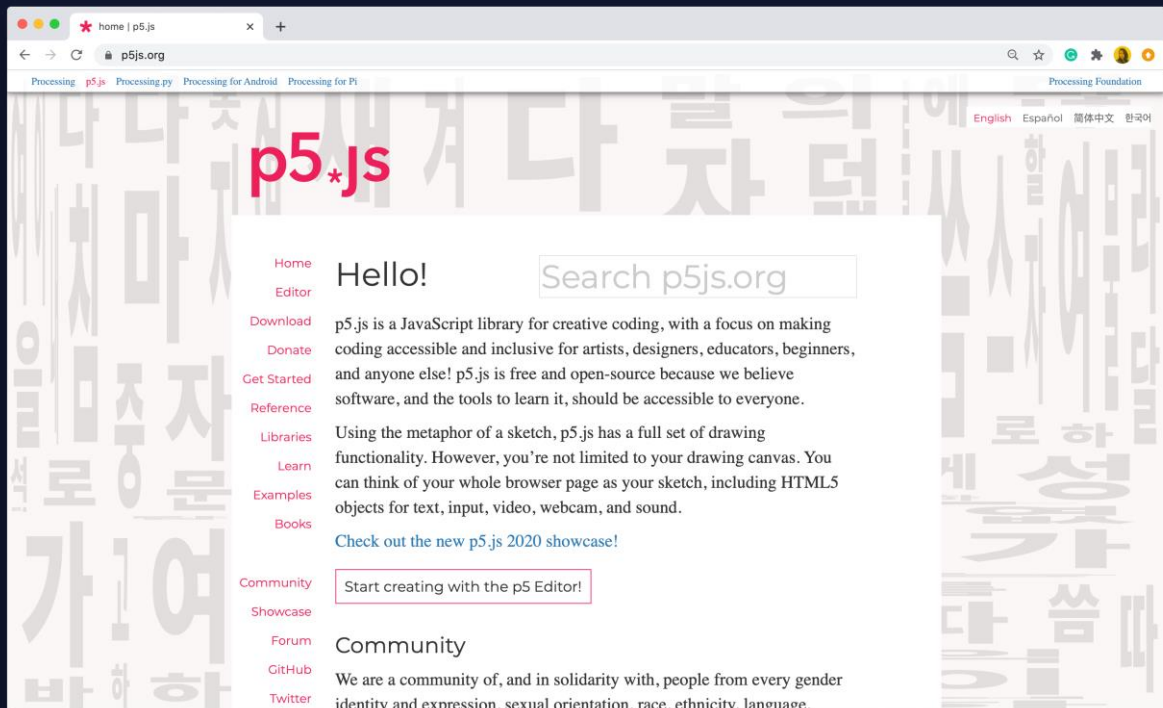
Coding, or [programming](#), is giving a set of instructions to a computer to execute. The set of instructions usually lead to accomplishing a task, such as ordering food on a mobile app, searching for information on a web database, and posting photos on a social media platform. In this sense, the goal of coding is to achieve something practical.

The goal of creative coding is different—it's to create something expressive! It's like drawing, but with code! The kinds of creative work you can create with code are limitless. You can make [generative visualizations](#) using [shapes](#) and [text](#), [data visualizations](#), [immersive experiences](#), and [interactive films](#).

Creative coding is not just for artists, just like how coding isn't exclusively for engineers! It's just a way of expressing an interest, a passion, or a message. There are a number of libraries and frameworks in various programming languages available to help you create visualizations with code. For this course, we'll be using the popular, introductory JavaScript library p5.js.

What is p5.js?

[p5.js](#) is an [open-source](#) JavaScript library for creative coding. A collection of pre-written code, it provides us with tools that simplify the process of creating interactive visuals with code in the web browser.



p5.js was developed by the artist and programmer [Lauren McCarthy](#) with support from the [Processing Foundation](#). It was inspired by [Processing](#), a flexible software sketchbook created by [Casey Reas](#) and [Ben Fry](#) that allows users to program visualizations using the Java programming language. p5.js was created as a version of Processing for the web. First released in 2014, it has since grown in popularity as a tool that makes programming accessible for artists, designers, educators, beginners, and anyone else!

What will you learn?

In this course, you will get an introduction to creative coding and the p5.js library. After this course, you will be able to:

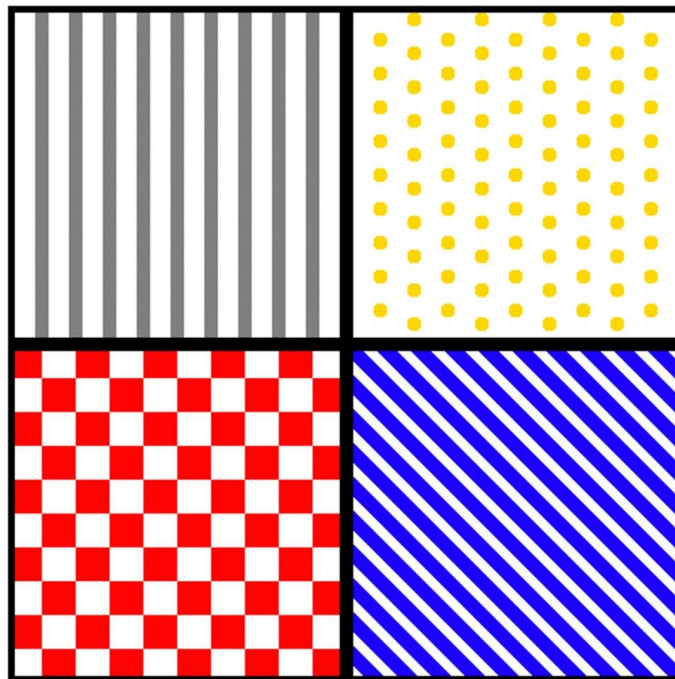
- Understand the fundamental concepts of visual programming
- Draw and color 2D primitive shapes
- Create animations using conditionals and loops
- Create interactive visualizations with mouse and keyboard events
- Use and manipulate images and videos

Learning is social. Whatever you're working on, be sure to connect with the Codecademy community in the [forums](#). Remember to check in with the community regularly, including for things like asking for code reviews on your project work and providing code reviews to others in the [projects](#) category, which can help to reinforce what you've learned.

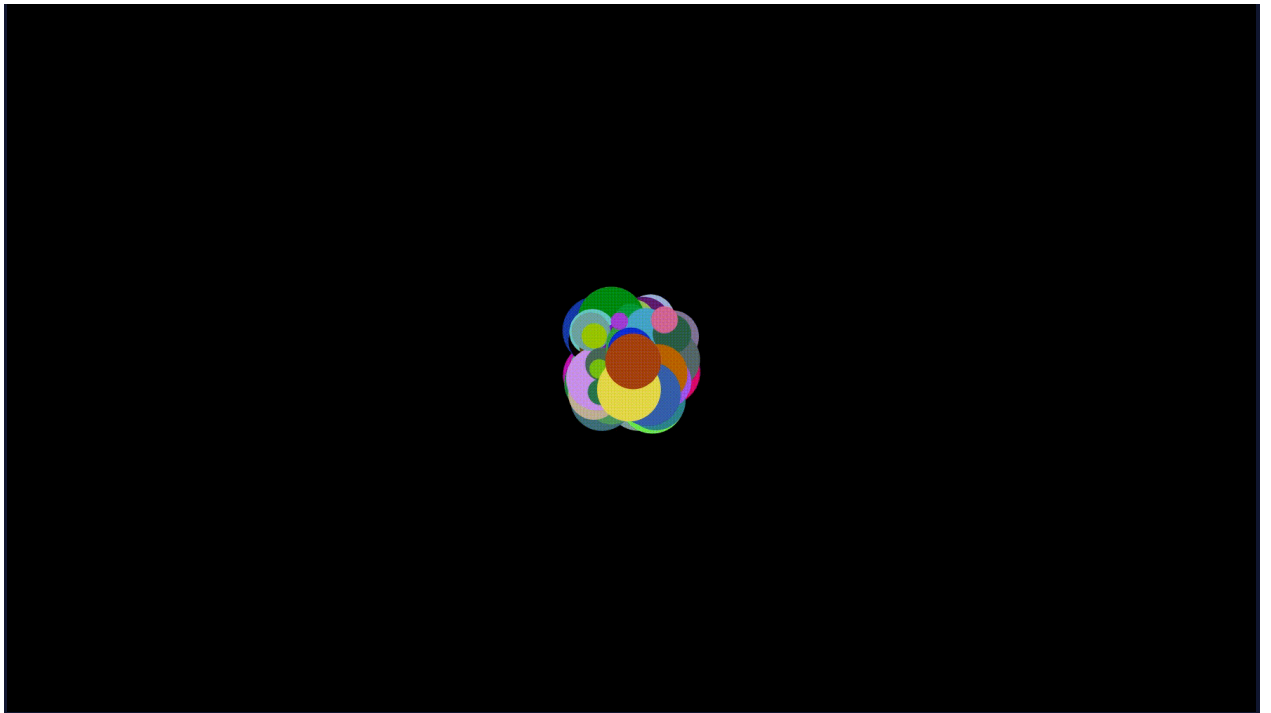
What will you create?

At the end of each module, you will be tasked with applying the concepts learned in a project. Here is a preview of the projects featured in this course:

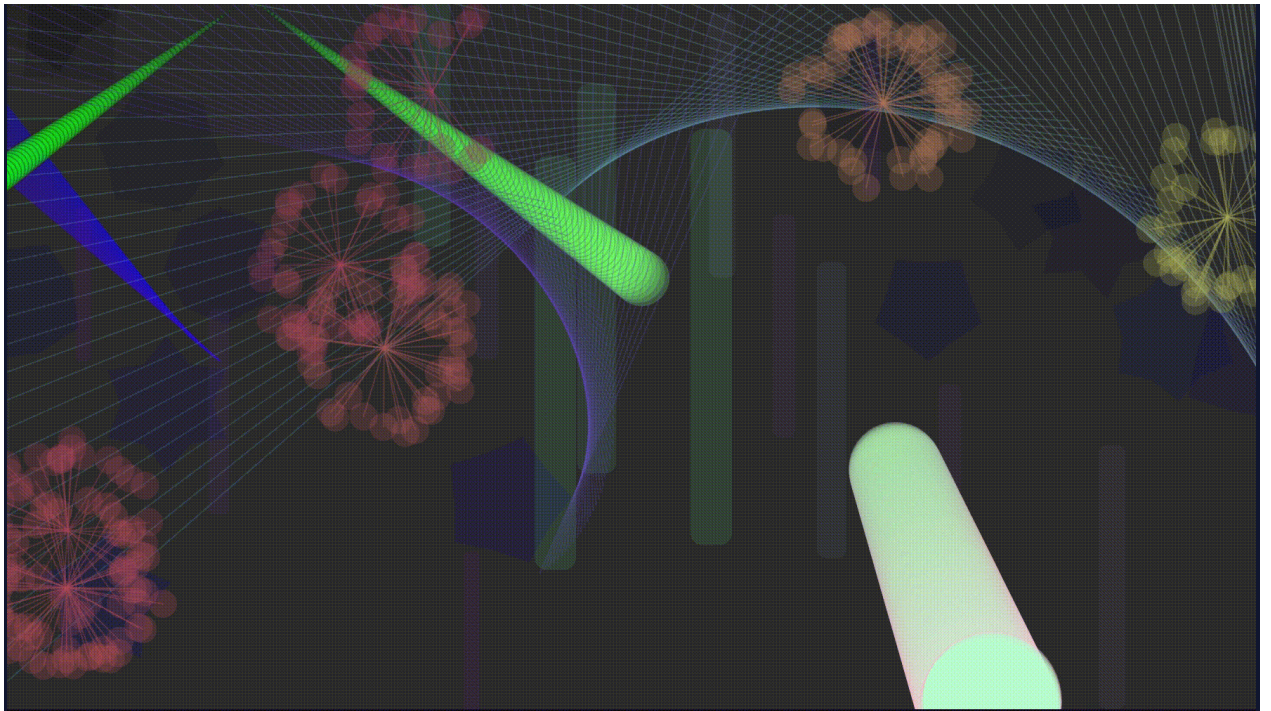
- Wall Drawing



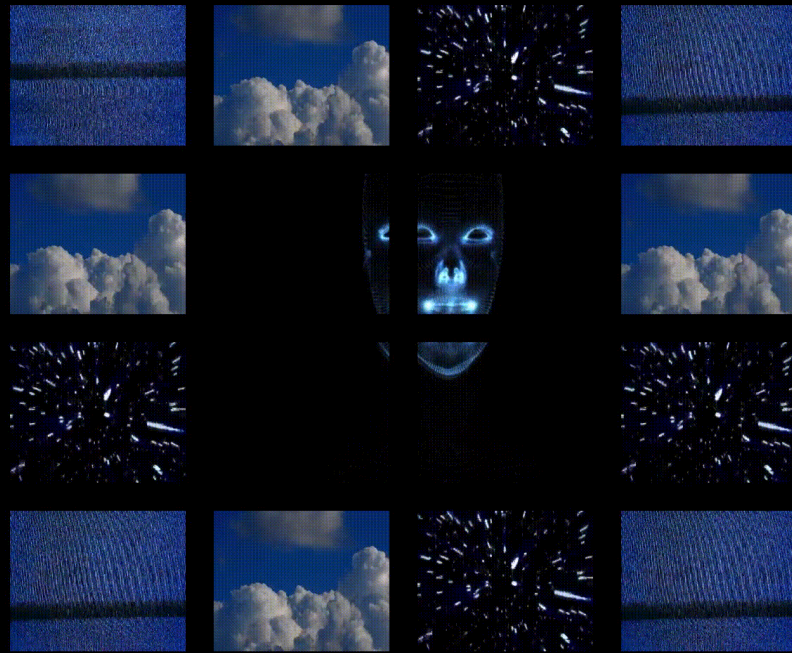
- Bouncing Balls



- Generative Art Creator



- Interactive Video Sculpture



These projects will provide you with a step-by-step guide towards building a working template. It is up to you to bring out your creative soul and experiment!

If you are looking for some inspiration, here are some recommended resources:

- [p5.js 2020 Showcase](#)
- [OpenProcessing](#)
- [Make: Getting Started with p5.js](#) by Lauren McCarthy, Casey Reas, and Ben Fry
- [Generative Design](#) by Benedikt Gross, Hartmut Bohnacker, Julia Laub, Claudius Lazzaroni
- [Programming Design Systems](#) by Rune Madsen

We're excited for you to start your journey into creating coding!