

AI x Design

Professor Danne Woo

aixdesign.danne.design

DESN 370

Fall 2024

Monday 1:40 PM – 5:30 PM

Hybrid

Code Generation

Generate code using ChatGPT
and Claude

Creative Coding Course

creativcoding.danne.design

Creative Coding
Creating art and designed projects using code

Home

[Helpful Links](#)

[Inspiration](#)

[Student Work](#)

SYLLABUS

Week 01: Intro to Creative Coding and p5js

Week 02: Forms, Shapes and Variables

Week 03: Computational Color and Export

Week 04: Repetition, Decisions

Creative Coding

Queens College
ARTS 249
Creative Coding

Spring 2024
Thursday, 10:00 AM – 1:50 PM
[Slack Channel](#)
11:30 AM – 1:45 PM optional One-on-One Zoom: [Schedule a time here](#)

[Class Code Examples on GitHub](#)

[YouTube Channel](#)

No Class
February 22 (Follows a Monday Schedule)
April 25 (Spring Break)

p5.js

www.p5js.org

The image shows a browser window displaying the p5.js website. The browser's address bar shows 'p5js.org'. The website has a dark theme with a pink navigation bar. On the left, there is a sidebar with the p5.js logo and a list of links: Reference, Tutorials, Examples, Contribute, Community, and About. The main content area features a pink navigation bar with 'English', 'Accessibility', and a search bar. Below this, a large pink asterisk is overlaid on the text. The text reads: 'p5.js is a friendly tool for learning to code and make art. It is a free and open-source JavaScript library built by an inclusive, nurturing community. p5.js welcomes artists, designers, beginners, educators, and anyone else!'. Below the text, there is a photo of Qianqian Ye speaking at a microphone, with a large screen behind her displaying a grid of user avatars and a list of categories like 'eventOrganizing', 'example', 'financial', 'fundingFinding', 'ideas', 'infra', 'plugin', 'question', 'review', 'talk', 'test', 'tool', 'translation', 'tutorial', and 'video'. At the bottom left, there are two buttons: '</> Start Coding' and a heart icon 'Donate'. At the bottom right, there is a pink banner with the text 'Looking for the old p5.js site? Find it here!' and a close button.

English Accessibility Search

p5.js is a friendly tool for learning to code and make art. It is a free and open-source JavaScript library built by an inclusive, nurturing community. p5.js welcomes artists, designers, beginners, educators, and anyone else!

Qianqian Ye introducing 600+ p5.js contributors at p5.js Community Salon. Photo credit: Ziyuan Lin.

</> Start Coding Donate

Looking for the old p5.js site? Find it here!

“The possibilities of programming languages such as Processing will change the role of the designer. We are experiencing a paradigm shift in design that will lead to new realms of visual imagery. Knowledge of this change, however, has been somewhat inaccessible. Until now, designers have used the tools that programmers have developed for them, which has forced designers to adjust to their systems.”

- Generative Design

Programming Languages

Markup

HTML

CSS

XML

Programming Languages

Markup

HTML

```
<h1>This is a header</h1>
```

CSS

```
h1 {  
    color: red;  
}
```

Programming Languages

Object Oriented Programming Languages

Computer/Server

Java

C++

Python

PHP

Web/Browser

JavaScript

Mobile

C#

Programming Frameworks

Java

Processing

C++

openFrameworks

Cinder

JavaScript

Twitter Bootstrap

JQuery

Foundation

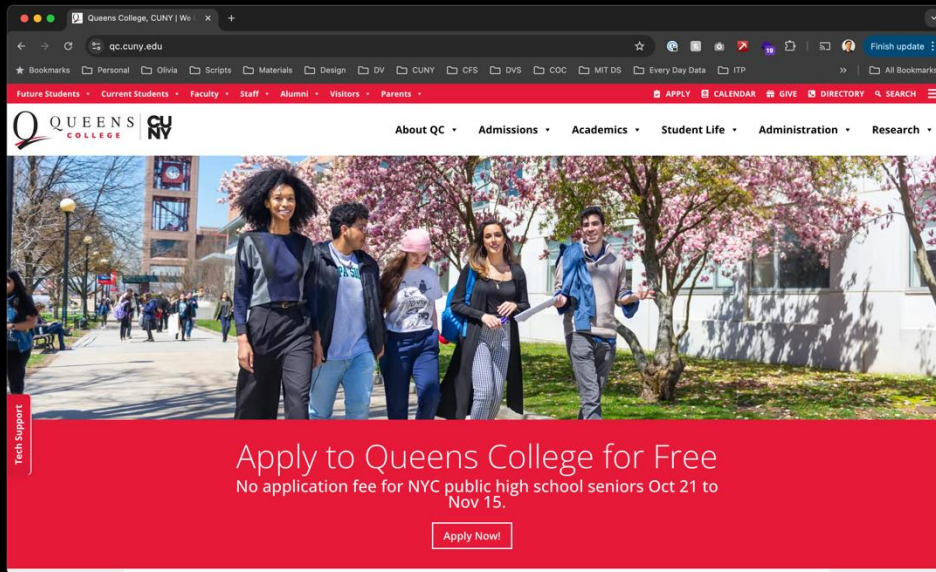
D3js

p5js

Programming Basics

- Functions
- Objects
- Variables
- Loops
- Conditional Statements (if statements)
- Data formats
- Events (Key press, mouse press, etc)

Why?



Why?



Limited to Tools

vs



Vector Based

Repetition

Patterns

Randomization

Data Driven Design

Custom Functions

Custom Algorithms

Custom GUI

FREE

Why?



Write Custom Scripts and Plugins for existing platforms

Programming = Googling

Doctors: Googling stuff online does not make you a doctor.

Programmers:



Programming = AI Prompts



AI Generated Code

ChatGPT 4o and o1

them.

Here's the updated code with linked placeholder images:

HTML (index.html)

```
html

<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Queens College - CUNY</title>
  <link rel="stylesheet" href="style.css">
</head>
<body>

  <!-- Header Section -->
  <header>
    <div class="navbar">
      
      <nav>
        <ul>
          <li><a href="#">About QC</a></li>
          <li><a href="#">Admissions</a></li>
          <li><a href="#">Academics</a></li>
          <li><a href="#">Student Life</a></li>
          <li><a href="#">Alumni</a></li>
          <li><a href="#">News</a></li>
        </ul>
      </nav>
    </div>
  </header>

  <!-- Main Banner -->
  <section class="main-banner">
    <h1>Apply to Queens College for Free</h1>
    <p>No application fee for NYC public high school seniors Oct 21 to Nov 15.</p>
    <button>Apply Now</button>
  </section>
```

Message ChatGPT

AI Generated Code

Claude 3.5


Build Responsive Website Matching Design

Queens College, CUNY | We L | Queens College - CUNY

claude.ai/chat/47c92674-ad18-4bec-ac13-03c5282aaca0

Bookmarks Personal Olivia Scripts Materials Design DV CUNY CFS DVS COC MIT DS Every Day Data ITP All Bookmarks

Claude Build Responsive Website Matching Design



DW Can you take this image of a website and write the HTML, CSS and JavaScript to build it? Please make the code look identical to the image.

I'll help you create a responsive website that matches the Queens College design.

Queens College Homepage
Click to open website

Queens College Homepage

```
<!-- Hero Section -->
<section class="relative">
  
  <div class="absolute inset-0 bg-black bg-opacity-40 flex items-center justify-center">
    <div class="text-center text-white">
      <h1 class="text-4xl font-bold mb-4">Apply to Queens College for Fall 2024
      <p class="mb-4">No application fee for NYC residents. Offer expires 12/31/2023.
      <button class="bg-qc-red text-white px-6 py-2 rounded">Learn More
    </div>
  </div>
</section>

<!-- Press Section -->
<section class="container mx-auto px-4 py-8">
  <div class="grid grid-cols-1 md:grid-cols-3 gap-8">
    
    
    
  </div>
</section>

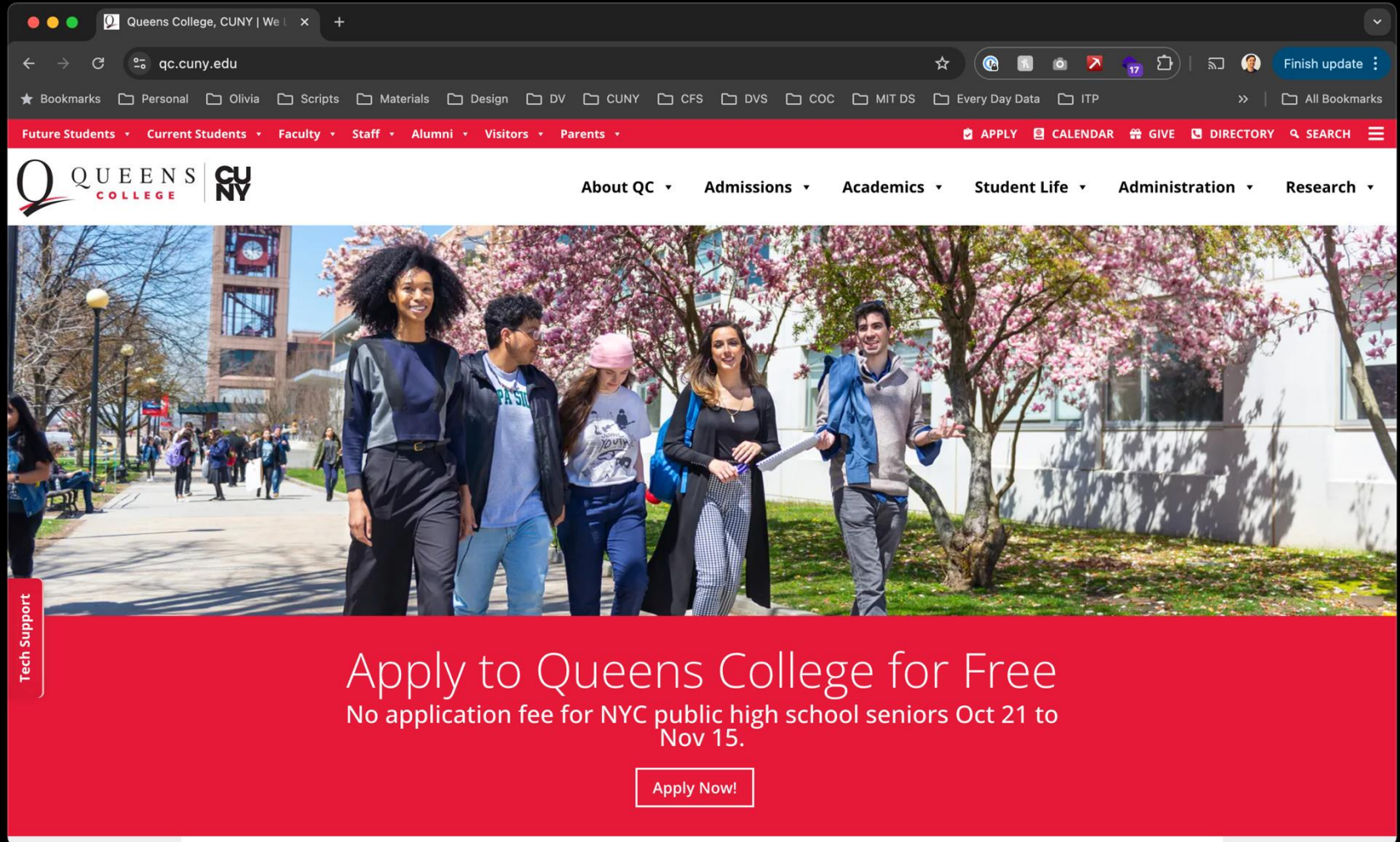
<!-- Quick Links -->
<section class="container mx-auto px-4 py-8">
  <div class="grid grid-cols-1 md:grid-

```

Last edited just now Publish

AI Generated Code

Build a Website from an Image / ChatGPT 4o and Claude 3.5



The image shows a browser window displaying the website for Queens College, CUNY. The browser's address bar shows the URL `qc.cuny.edu`. The website's navigation menu includes links for Future Students, Current Students, Faculty, Staff, Alumni, Visitors, and Parents. A secondary navigation bar contains links for APPLY, CALENDAR, GIVE, DIRECTORY, and SEARCH. The main header features the Queens College logo and navigation links for About QC, Admissions, Academics, Student Life, Administration, and Research. Below the header is a large banner image of five diverse students walking on a campus path with pink cherry blossom trees. A red banner at the bottom of the page contains the text: "Apply to Queens College for Free" and "No application fee for NYC public high school seniors Oct 21 to Nov 15." Below this text is a white button with the text "Apply Now!". A vertical "Tech Support" label is visible on the left side of the red banner.

Queens College, CUNY | We | x +

qc.cuny.edu

Bookmarks Personal Olivia Scripts Materials Design DV CUNY CFS DVS COC MIT DS Every Day Data ITP All Bookmarks

Future Students Current Students Faculty Staff Alumni Visitors Parents APPLY CALENDAR GIVE DIRECTORY SEARCH

QUEENS COLLEGE CUNY

About QC Admissions Academics Student Life Administration Research

Tech Support

Apply to Queens College for Free
No application fee for NYC public high school seniors Oct 21 to Nov 15.

Apply Now!

AI Generated Code

Cribbage Calculator / Claude 3.5



AI Generated Code

p5js drawing tool / ChatGPT o1

The screenshot shows a web browser window with the p5.js Web Editor. The address bar shows the URL `editor.p5js.org/dannewoo/sketches/NGX112Fnx`. The browser's bookmark bar contains various folders like 'Personal', 'Olivia', 'Scripts', 'Materials', 'Design', 'DV', 'CUNY', 'CFS', 'DVS', 'COC', 'MIT DS', 'Every Day Data', and 'ITP'. The p5.js logo is in the top left, and navigation menus for 'File', 'Edit', 'Sketch', and 'Help' are visible. The main workspace is titled 'Week 09 - GUI with Buttons by dannewoo'. The code editor on the left shows the following JavaScript code:

```
1 var brush = 0;
2 var bx = 20;
3 var by = 20;
4 var bw = 50;
5 var bh = 20;
6 var by2 = by + bh + 10;
7
8 function setup() {
9   createCanvas(600, 400);
10  background(0);
11  noStroke();
12  // Create a new interface class for each button and brush.
13  b1 = new Interface(bx, by, bw, bh, color(100, 0, 0), color(255, 0, 0), 0, 20);
14  b2 = new Interface(bx, by2, bw, bh, color(255), color(100), 1, 40);
15 }
16
17 function draw() {
18   // Draw the button and brush to the canvas.
19   b1.button();
20   b1.brush();
21   b2.button();
22   b2.brush();
23 }
24
25 // Create a interface class with the button and the brush functions inside.
26 // Passing in a x, y, width, height, button color, button hover color, brush
27 // value and brush size.
28 function Interface(x, y, w, h, c1, c2, b, bSize) {
```

The preview window on the right shows a black canvas with a white button and a red brush. The brush is drawn as a series of overlapping circles, forming a curved line. A legend in the top left of the preview shows a red square and a grey square.

AI x Design

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