Week 4

> Housekeeping: Print lab operation. Lab is now open 6 days per week.
> Rune Madsen lecture next Tuesday @ 11am
> Riso festival on in Brooklyn this weekend:
-https://www.eventbrite.com/e/sounds-about-riso-40-opening-party-tickets-418306705617
-https://www.eventbrite.com/cc/sounds-about-riso-programming-1179089

Today's Agenda

1. Review animation work. Project share.
2. Color, dynamic shape and layouts.
3. Design system to print walkthough.
4. Group feedback on concepts for assignment 2 in groups.

Incredible generative drawing example by artist Ling Dong:
https://github.com/LingDong-/fishdraw

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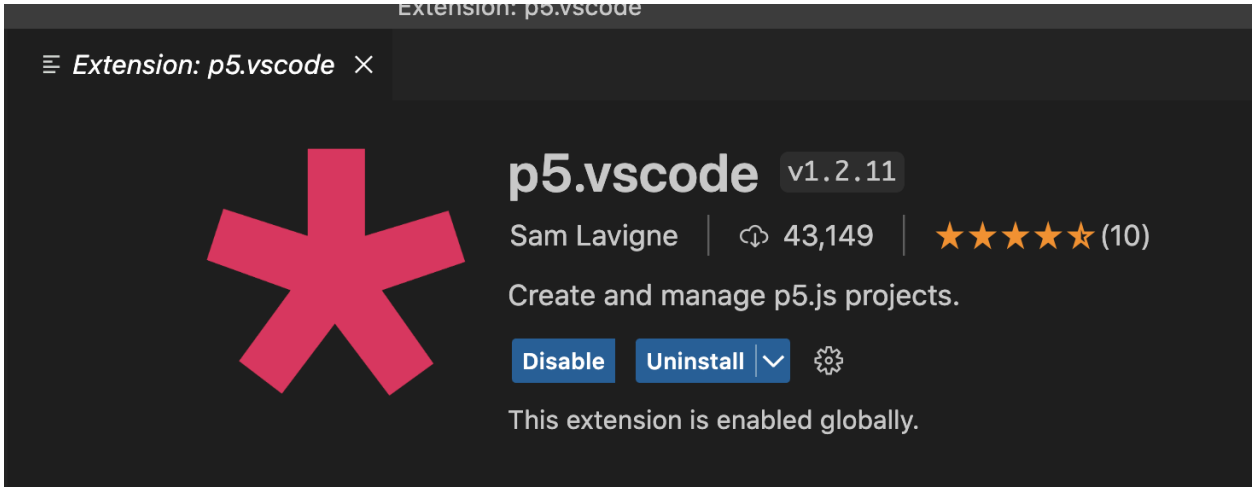
Working with p5 locally.

- https://code.visualstudio.com/
- Install this extension
- 

- Keep your files organized

2: Color, Dynamic Shapes and Layouts

Color Basics

Color in p5.riso:

- Prep an image for a single color riso print:
  - https://editor.p5js.org/brain/sketches/5glxi9ZNL
- Color separation in p5.riso:
  - CMYK: https://editor.p5js.org/brain/sketches/zjyJ4qN7u
  - RGB: https://editor.p5js.org/brain/sketches/fXlAvAHpXr
- Dithering:
  - https://editor.p5js.org/brain/sketches/hU0ANATF-
  - More resources on dithering:
  - Akinson: https://beyondloom.com/blog/dither.html
  - Floyd Steinberg: https://en.wikipedia.org/wiki/Floyd%E2%80%93Steinberg_dithering
  - Good reading on “dither punk”: https://surma.dev/things/ditherpunk/

Dynamic Shapes:

- Using trigonometry to generate different shapes:
  - https://programmingdesignsystems.com/shape/procedural-shapes/index.html

Dynamic Layouts:

- Review of using for loops to generate random quantities of things.
  - Simple flower example: https://editor.p5js.org/brain/sketches/AIxScxZla

- **EasyGrid** is a utility by Rune Madsen for building dynamic grid based layouts. https://github.com/runemadsen/easygrid

- How to use:
  1. Add the easygrid.min.js file to your sketch (see it in the examples below)
  2. Add a path to it in your index.html:

```
<script type="text/javascript" src="easygrid.min.js"></script>
```

  3. In your code, create a grid by defining some of the parameters below.

EASY GRID PARAMETERS

- When implementing an easy grid, you can define the following parameters:

    - x - Number. The x position of the grid
    - y - Number. The y position of the grid
    - columns - Number. Defines the number of columns in the grid. Defaults to 10.
    - rows - Number. Defines the number of rows in the grid. Defaults to 1
    - gutterWidth - Number. Defines the width of the space between modules
    - gutterHeight - Number. Defines the height of the space between modules
    - gutter - Number. Shorthand way to define the same gutter width and height
    - moduleWidth - Number. Defines the width of each module in the grid
    - moduleHeight - Number. Defines the height of each module in the grid
    - width - Number. Defines the full width of the grid, including the gutter and module widths. Do not use with moduleWidth.
    - height - Number. Defines the full height of the grid, including the gutter and module heights. Do not use with moduleheight.

- `grid.state.rows`
  Returns amounts of rows
- `grid.state.columns`
  Returns the amount of columns
- `getModule(col, row)` is a return function that returns data for the cell specified. Data returned is an object containing coords, width and height. *{x: 132.5, y: 470, width: 112.5, height: 220}*.

```
let cell = grid.getModule(col, row);
print(cell.x); //prints cell coordinate
```

  Basic example: Grid 1: https://editor.p5js.org/ProfBrain/sketches/xOufWqY9k

- Random cell: https://editor.p5js.org/ProfBrain/sketches/Y1mzNfut9
- Randomized words: https://editor.p5js.org/brain/sketches/nPibFCJnS

Unpredictability and Chance:

- 50% chance something will show up:
    - https://editor.p5js.org/brain/sketches/nkw6x6kZ2
- Using random to reposition curves:
    - https://editor.p5js.org/brain/sketches/s2k1IuiDj

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3: Design System to Print Walkthrough

Let's walk through taking a sketch and implementing the p5.riso library.

- Here is a sketch that uses the easygrid utility to display a grid of image pulled randomly from an array of images. Let's p5.riso it for printing.
- https://editor.p5js.org/brain/sketches/Ok9ZseaRL

Putting it all together with Riso layers. More complex examples:
https://editor.p5js.org/brain/sketches/akl6F_VdS
https://editor.p5js.org/brain/sketches/kPz-fRTO5

Exercise:
Take your ice cream sketch and now use the p5.riso library to prepare it for printing as a two color print.

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4: Group feedback on concepts for assignment 2 in groups of 3.

Homework

- Assignment 2 design and printing (if you are ready).
- Reading by designer Paul Soulellis. This text looks longer than it is, as it has a lot of images and inspirations in it. Soulellis considers gestures of publishing here such as posting, stacking, dropping, feeds. What gesture is relevant for your political poster? Is it meant to be posted, dropped, pasted, streamed etc?
  https://soulellis.com/writing/post-documenta/index.html
- Here is a pdf version (easier to read):
  https://www.dropbox.com/s/c4elrndl0514jqo/urgentcraft_post-documenta.pdf?dl=0