CART 263

Creative Computation 2

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What we'll be doing today

- Some tips and tricks
- Work Session

dist();

```
dist(firstX, firstY, otherX, otherY, distance);

Returns true/false  if the first X and Y are within the distance of the
second X and Y
```

Fear the mouse!

```
If this x and this y is less than the threshold, return true and move the particle
  fearMouse(){
      if (dist(this.x, this.y, mouseX, mouseY) <= this.thresh) {
        this.move();
    }
  }
```

Check all particles against each other

By doing this, we can pass a list of all particles through a method and compare it with the properties of that particular particle.

Here, we cycle through all particles, and check if their X is greater than the current object’s X

```
  connect(particles){
    for(let i = 0; i < particles.length; i++){
      if(particles[i].x > this.x){
        // Do something
      }
    }
  }
```

dist();

Create a method that passes through all the particles. The following method loops through particles and checks their distance from every other particle, if it is less than the threshold, it creates a line between them.

```
  connect(particles){
    for(let i = 0; i < particles.length; i++){
    if (dist(particles[i].x, particles[i].y, this.x, this.y) <= this.thresh) {
        stroke(255);
        line(particles[i].x, particles[i].y, this.x, this.y);
      }
    }
  }
```

P5JS Hacks w/ Kazuki Umeda

https://www.youtube.com/channel/UCACzb9JwH0ppt9Xwcpz9Bmw
YouTube
https://github.com/Creativeguru97/YouTube_tutorial
Github Repo

Recommendations:
p5 Hacks > Blur

Play With Nose > Water

Play With Geometry

Perlin Noise

https://genekogan.com/code/p5js-perlin-noise/

Using Blur

P5 comes with an standard blur effect that covers the whole canvas and is very slow:

```
filter(blur);
```

Using the canvas filter you can apply blur (and other effects) with much finer control

```
drawingContext.filter = ‘blur(5px)’;
```

You can make your blur dynamic as well by injecting a random number or variable into the string

```
drawingContext.filter = 'blur('+String(random(10))+'px)';
```

Using Blur

```
  display() {
    noStroke();
    drawingContext.filter = 'blur('+String(random(20))+'px)';
    fill(this.x, this.y, this.diameter);
    ellipse(this.x, this.y, this.diameter);
  }
```