Mouse Interaction

LO: IWBAT to use P5-JS to create a program that requires mouse input.

Notice and Wonder

```
1  function setup(){
2    createCanvas(400, 300)
3  }
4
5  function draw(){
6    background(0);
7
8    noStroke();
9    fill(255);
10   ellipse(mouseX, 150, 75, 75)
11 }
```

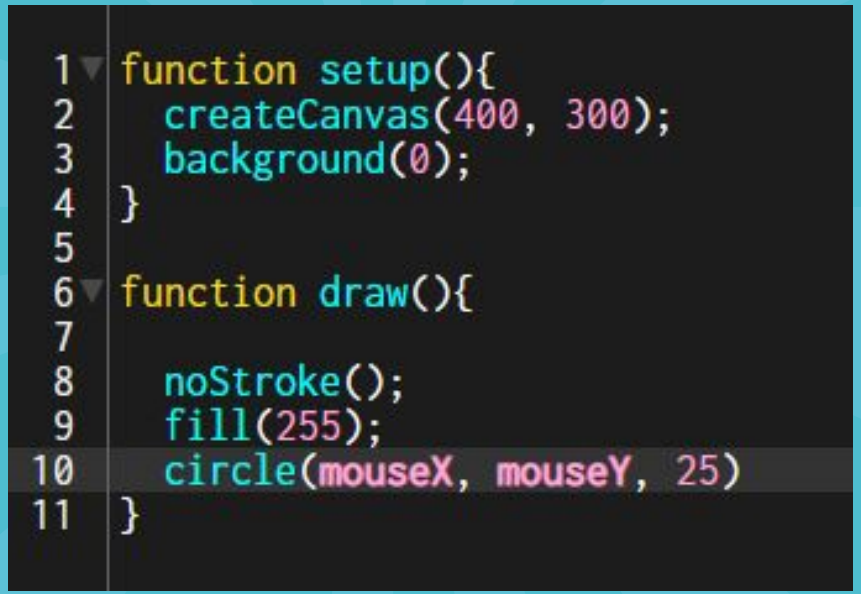
Enter the following code into P5-JS and save as "Mouse".

What do you notice and wonder about this program?

Best Guess

Take a look at the following code without putting it into your editor.

What do you think will happen?

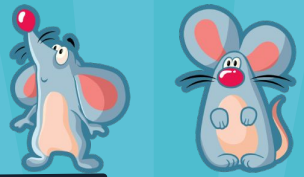


```
function setup(){
  createCanvas(400, 300);
  background(0);
}

function draw(){

  noStroke();
  fill(255);
  circle(mouseX, mouseY, 25)
}
```

mouseX and mouseY



mouseX

The system variable mouseX always contains the current horizontal position of the mouse, relative to (0, 0) of the canvas. The value at the top-left corner is (0, 0) for 2-D and (-width/2, -height/2) for WebGL. If touch is used instead of mouse input, mouseX will hold the x value of the most recent touch point.

mouseY

The system variable mouseY always contains the current vertical position of the mouse, relative to (0, 0) of the canvas. The value at the top-left corner is (0, 0) for 2-D and (-width/2, -height/2) for WebGL. If touch is used instead of mouse input, mouseY will hold the y value of the most recent touch point.

Try This

```
function setup() {
  createCanvas(400, 400);
  noStroke();
}
function draw() {
  background(126);
  ellipse(mouseX, 100, 100, 100);    // Top circle
  ellipse(mouseX+20, 200, 100, 100); // Middle circle
  ellipse(mouseX-20, 300, 100, 100); // Bottom circle
}
```

Run the following program and see what it does. When done, create a program where:

- Bottom circle is fastest
- Middle circle is slowest

Exit Ticket

Create a program where when you drag the mouse across horizontally, 2 circles will cross each other perpendicularly.