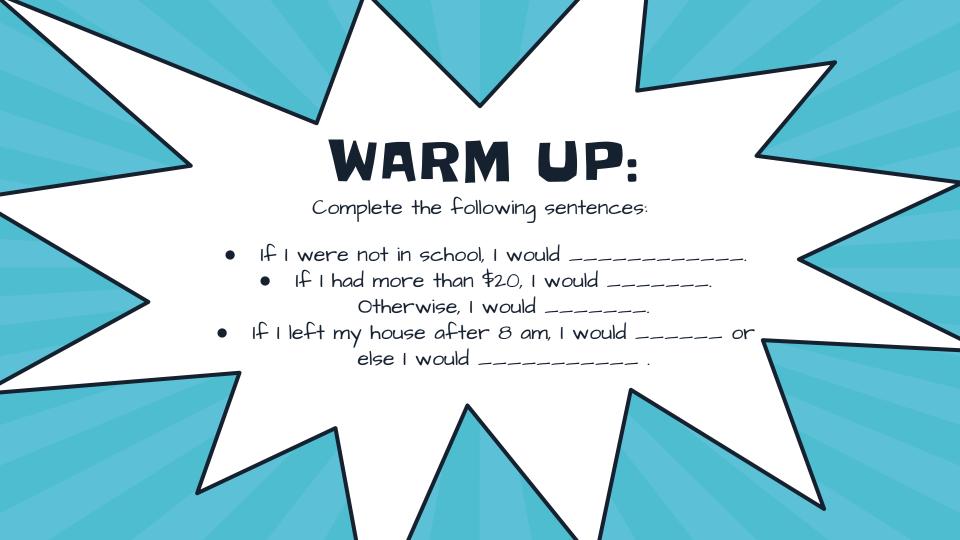
### Conditionals

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



### Conditionals

Conditional statements are used to perform different actions based on different conditions.

Very often when you write code, you want to perform different actions for different decisions. You can use conditional statements in your code to do this.

In JavaScript we have the following conditional statements:

Use if to specify a block of code to be executed, if a specified condition is true

Use **else** to specify a block of code to be executed, if the same condition is false

Use else if to specify a new condition to test, if the first condition is false Use switch to specify many alternative blocks of code to be executed

# JavaScript if Statement

#### Condition is true

```
let number = 2;
if (number > 0) {
    // code
}

//code after if
```

### Condition is false

```
let number = -2;
if (number > 0) {
    // code
}

//code after if
```

The syntax of the if statement is:

```
if (condition) {
    // the body of if
}
```

The if statement evaluates the condition inside the parenthesis ().

- 1. If the condition is evaluated to true, the code inside the body of if is executed.
- 2. If the condition is evaluated to false, the code inside the body of if is skipped.

# JavaScript if...else statement

# Condition is true let number = 2; if (number > 0) { // code } else { // code } // code } // code after if Condition is false let number = -2; if (number > 0) { // code // code } // code // code // code // code

An if statement can have an optional else clause. The syntax of the if...else statement is:

```
if (condition) {
    // block of code if condition is true
} else {
    // block of code if condition is false
}
```

The if..else statement evaluates the condition inside the parenthesis.

If the condition is evaluated to true,

- 1. the code inside the body of if is executed
- the code inside the body of else is skipped from execution

If the condition is evaluated to false,

- 1. the code inside the body of else is executed
- 2. the code inside the body of if is skipped from execution

### **Best Guess**

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

What do you think will happen?

```
function setup() {
      createCanvas(600, 400);
    function draw() {
 6
      background(0);
      stroke(255);
      strokeWeight(4);
10
      noFill();
11
12
      if (mouseX > 300) {
13
        fill(255, 0, 200);
14
15
16
      ellipse(300, 200, 100, 100);
17
```

```
function setup() {
     createCanvas(400, 400);
     noStroke();
     fill(0);
4
5
   function draw() {
     background(204);
     if (mouseX ) {
8
        rect():
10
     else {
12
        rect( );
13
```

### Activity

This is a code skeleton. Please fill out code to make:

- A black rectangle on left when mouse is on the left
- A black rectangle on right when mouse is on the right

Name this file "Conditionals"

## Check This out

```
function setup() {
     createCanvas(400, 400);
     noStroke();
     fill(0);
   function draw() {
     background(204);
     if (mouseX < 200) {
        rect(0, 0, 200, 400);
     else {
12
        rect(200, 0, 200, 400);
13
14
```



```
function setup() {
      createCanvas(400, 400);
      noStroke();
      fill(0);
    function draw() {
      background(204);
      if (mouseIsPressed == true) {
        if (mouseButton == LEFT) {
          fill(0); // Black
        else if (mouseButton == RIGHT) {
          fill(255); // White
16
      else {
        fill(126);
                    // Gray
18
     rect(160, 80, 160, 240);
```

### Exit Ticket

Create a program where:

- You split your square into 4 quadrants.
   When a quadrant of the square is clicked with the left button it turns black.
  - 3. When the quadrant is clicked with the right button, it turns white.