



Conditionals

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

WARM UP:

Complete the following sentences:

- If I were not in school, I would _____.
- If I had more than \$20, I would _____.
- Otherwise, I would _____.
- If I left my house after 8 am, I would _____ or
else I would _____.

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 after if
```

Condition is false

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

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
2. 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?

```
1 ▼ function setup() {  
2   createCanvas(600, 400);  
3 }  
4  
5 ▼ function draw() {  
6   background(0);  
7  
8   stroke(255);  
9   strokeWeight(4);  
10  noFill();  
11  
12 ▼ if (mouseX > 300) {  
13   fill(255, 0, 200);  
14 }  
15  
16   ellipse(300, 200, 100, 100);  
17 }
```

Activity

```
1 function setup() {  
2   createCanvas(400, 400);  
3   noStroke();  
4   fill(0);  
5 }  
6 function draw() {  
7   background(204);  
8   if (mouseX ) {  
9     rect(  );  
10  }  
11  else {  
12    rect(  );  
13  }  
14 }
```

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**

```
1 ▼ function setup() {  
2   createCanvas(400, 400);  
3   noStroke();  
4   fill(0);  
5 }  
6 ▼ function draw() {  
7   background(204);  
8 ▼   if (mouseX < 200) {  
9     rect(0, 0, 200, 400);  
10  }  
11 ▼   else {  
12     rect(200, 0, 200, 400);  
13   }  
14 }]
```


**Look At
This**

```
1 function setup() {  
2   createCanvas(400, 400);  
3   noStroke();  
4   fill(0);  
5 }  
6 function draw() {  
7   background(204);  
8   if (mouseIsPressed == true) {  
9     if (mouseButton == LEFT) {  
10      fill(0); // Black  
11    }  
12    else if (mouseButton == RIGHT) {  
13      fill(255); // White  
14    }  
15  }  
16  else {  
17    fill(126); // Gray  
18  }  
19  rect(160, 80, 160, 240);  
20 }
```

Exit Ticket

Create a program where:

1. You split your square into 4 quadrants.
2. 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.