Still want to be able to use console.log for error checks

DO IT! console.log and breakpoints are great for debugging

is there a difference between single and double quotation marks in jquery?

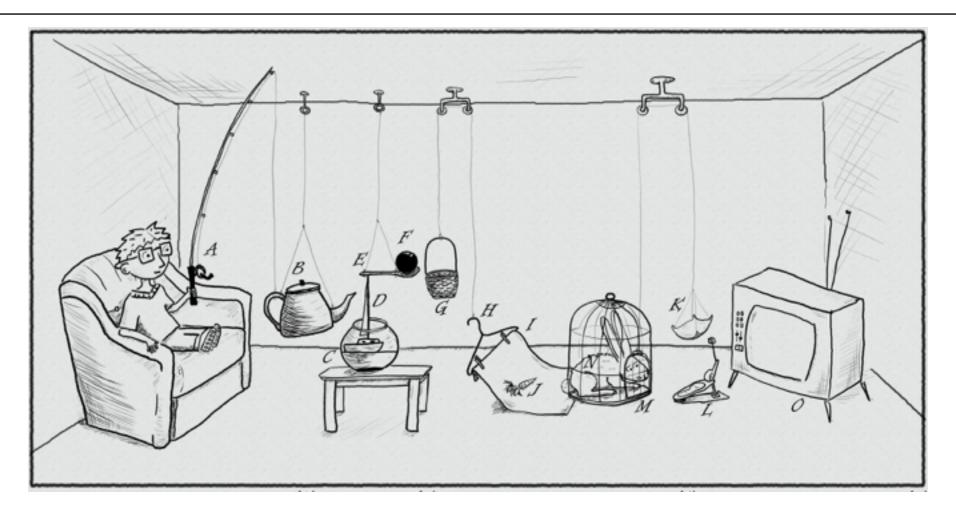
No, just be consistent

Why do this all in jQuery if most of this can be done in CSS?



jQuery is needed for user interactivity

I'm still having trouble adding multiple actions to the same line...But more practice will help I'm sure!



think about what each method does and what it needs to do next

jQuery effects. How?

```
$('selector').method(options);
$('p').fadeIn('slow');
```

AGENDA



- Variables
- Data Types
- Conditionals
- Lab Temperature Converter

FEWD

LEARNING OBJECTIVES

- Define variables and identify best cases to use them.
- Differentiate between strings, integers and floats.
- Apply conditionals to change the program's control flow

FINAL PROJECTS

I WILL MEET YOU 1:1 TO DISCUSS IDEA

FEWD

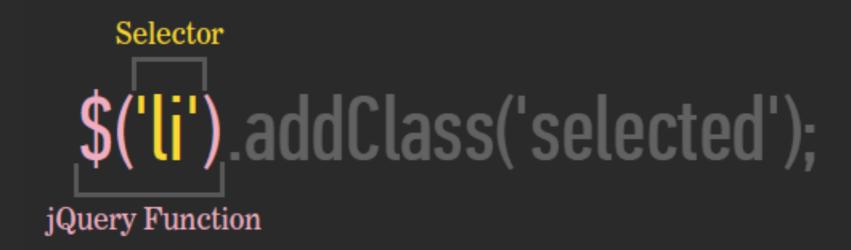
REVIEW

USING JQUERY TO MANIPULATE DOM

Select an element/elements

2 Work with those elements

JQUERY — SELECTING ELEMENTS



jQuery Function:

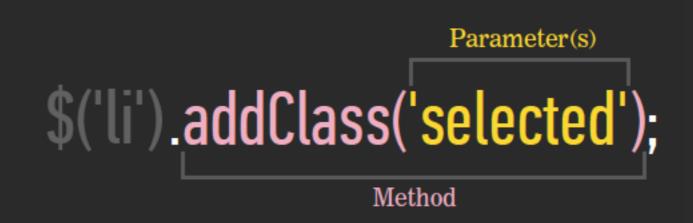
- Lets us find one or more elements in the page
- Creates a jQuery object which holds references to those elements
- ▶ We'll be using the shorthand in this class: \$()
- ▶ \$(selector) is the same as jQuery(selector)

USING JQUERY TO MANIPULATE DOM

Select an element/elements

Work with those elements

JQUERY — SELECTING ELEMENTS



JQUERY METHODS — TRAVERSING THE DOM

TRAVERSE THE DOM

- ▶ These methods to find/select elements to work with & traverse the DOM
- ▶ Think of these as filters, or part of the selection process.
- ▶ They must come *directly after another selection*

METHODS	EXAMPLES
.find() finds all descendants	\$('h1').find('a');
.parent()	\$('#box1').parent();
.siblings()	<pre>\$('p').siblings('.important');</pre>
.children()	<pre>\$('ul').children('li');</pre>

What goes in the parentheses? A css-style selector

JQUERY METHODS — GETTING/SETTING CONTENT

Get/change content of elements, attributes, text nodes

METHODS	EXAMPLES
.html()	<pre>\$('h1').html('Content to insert goes here');</pre>
.attr()	<pre>\$('img').attr('src', 'images/bike.png');</pre>
.css()	\$('#box1').css('color', 'red');
.addClass()	<pre>\$('p').addClass('success');</pre>
.removeClass()	<pre>\$('p').removeClass('my-class-here');</pre>
.toggleClass()	<pre>\$('p').toggleClass('special');</pre>

What goes in the parentheses?

The html, styles, classes you want to change.

ADD CLASS

```
$('h1').addClass('\timesfun')

t

REMEMBER — NO PERIOD!!
```

\$('h1').addClass('fun')

JQUERY METHODS — GETTING/SETTING CONTENT



Add effects and animation to parts of the page

METHODS	EXAMPLES
.show()	\$('h1').show();
.hide()	\$ ('ul').hide();
.fadeIn()	\$('h1').fadeIn(300);
.fadeOut()	<pre>\$('.special').fadeOut('fast');</pre>
.slideUp()	<pre>\$('div').slideUp();</pre>
.slideDown()	<pre>\$('#box1').slideDown('slow');</pre>
.slideToggle()	<pre>\$('p').slideToggle(300);</pre>

What goes in the parenthesis? **An animation speed**

JQUERY METHODS — **EVENTS!**



The .on() method is used to handle all events.

```
Syntax: $('selector').on('event', code_that_should_run);
```

Example:

```
$('li').on('click', function() {
  // your code here
});
```

USING JQUERY TO MANIPULATE DOM



Some events that .on() deals with:

- ▶ UI: focus, blur, change
- ▶ **Keyboard:** keydown, keyup
- ▶ Mouse: click, mouseup, mousedown, mouseover
- **Form:** submit
- **▶ Browser:** resize, scroll

```
$('li').on('eventGoesHere', function() {
   // your code here
});
```

JQUERY — **REVIEW**



KEY OBJECTIVE

 Review jQuery selectors and events, get practice looking up new methods

TYPE OF EXERCISE

Individual/paired

SMALL GROUP PLANNING

8 min

Follow the instructions in starter_code_lesson_9 > jquery_review > js/main.js

SOME NEW METHODS!

USING JQUERY TO MANIPULATE DOM

Get/change content of elements, attributes, text nodes

METHODS	EXAMPLES
.append()	<pre>\$('ul').append('Last list item');</pre>
.prepend()	<pre>\$('ul').prepend('First list item');</pre>

What goes in the parentheses?

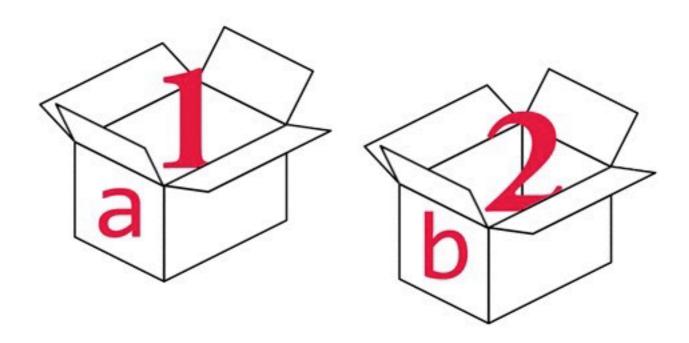
The html or content you want to add/change

UARIABLES

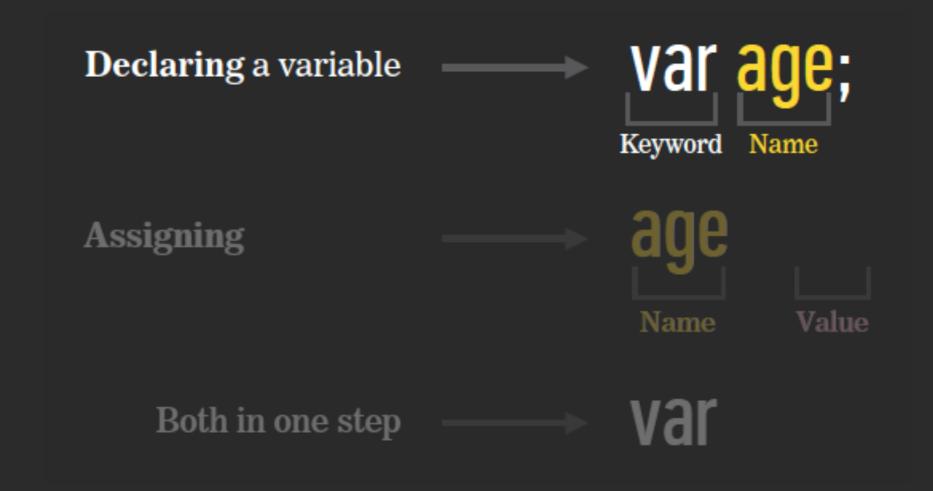
WHAT ARE VARIABLES

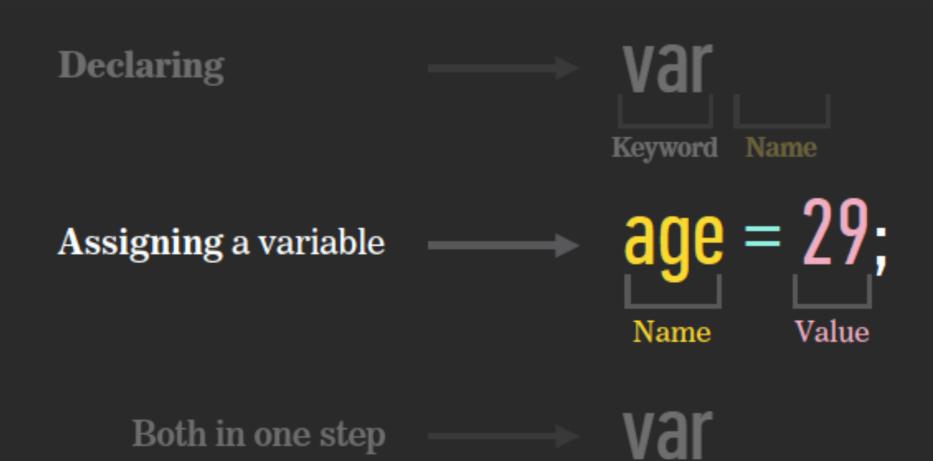
WHAT ARE VARIABLES?

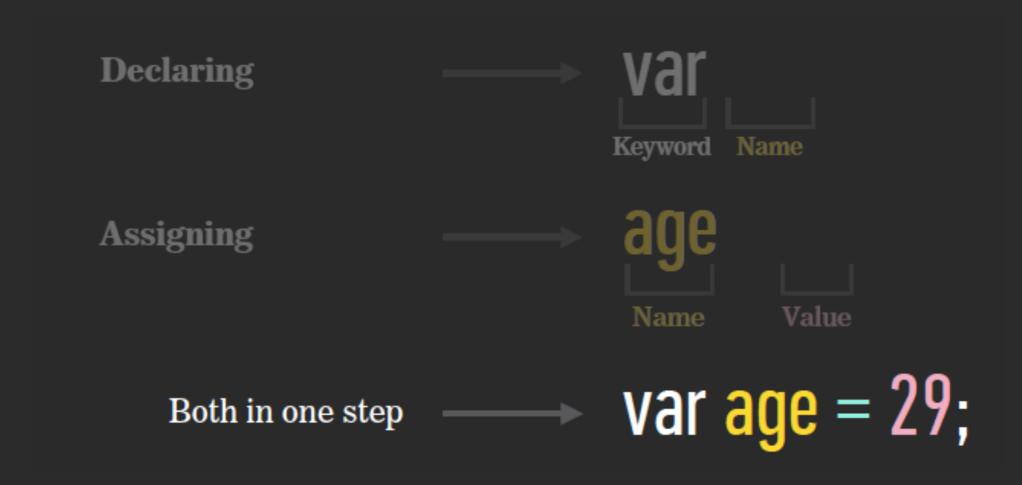
- We can tell our program to remember (store) values for us to use later on.
- The 'container' we use to store the value is called a **variable**



SYNTAX







Declaring a variable ——— Var age; ——— Semicolon!

Assigning a variable \longrightarrow age = 29; \longleftarrow Semicolon!

Both in one step ─ Var age = 29; — Semicolon!

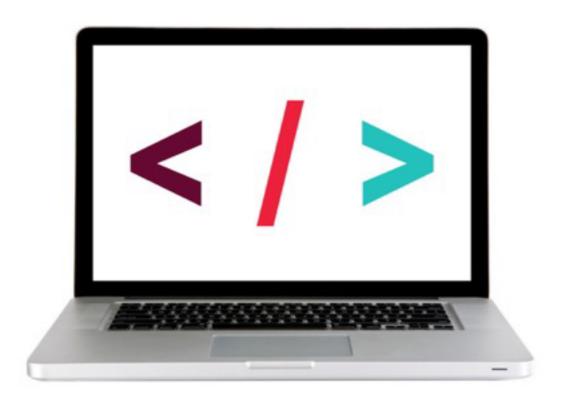
JAVASCRIPT — VARIABLES

```
var champion = "Sarah";
champion = "Christine";
```

ASSIGNMENT OPERATORS

	INITIAL VALUE:	OPERATOR:	EXAMPLE:	RESULT:
ASSIGN VALUE TO VARIABLE	var num = 8	=	num = 6	6
ADD VALUE TO VARIABLE	var num = 8	+=	num += 6	14
SUBTRACT VALUE FROM VARIABLE	var num = 8	-=	num -= 6	2

CODE ALONG — SCORE KEEPER

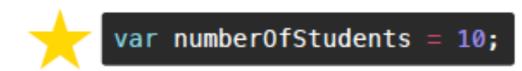


Score Keeper (Codepen)

RULES

VARIABLE CONVENTIONS

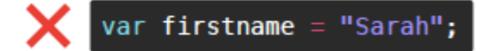
1. Variables start with a **lowercase** letter





2. If they contain multiple words, subsequent words start with an upper case letter.

```
var firstName = "Sarah";
```



```
var first name = "Sarah";
```

3. Names can only contain: letters, numbers, \$ and (no dashes - or periods .)



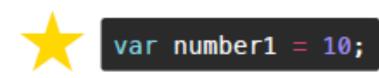


var number-1 = 10;



VARIABLE CONVENTIONS

3. Variables cannot start with a number



```
var 1number = 10;
```

- 4. Case sensitive number of students is not the same as number Of Students
- 5. Names should be descriptive

```
var lastName = "Holden";
```

```
var x = "Holden";
```

WHAT CAN BE STORED IN VARIABLES?

DATA TYPES:

STRINGS

"Today is Monday"

Letters and other characters enclosed in quotes

NUMBERS

22.75 10

- Positive numbers
- Negative numbersDecimals

BOOLEANS

true

false

Can have one of two values:

- True
- False

* Note: we'll meet some more data types later on down the road, too!

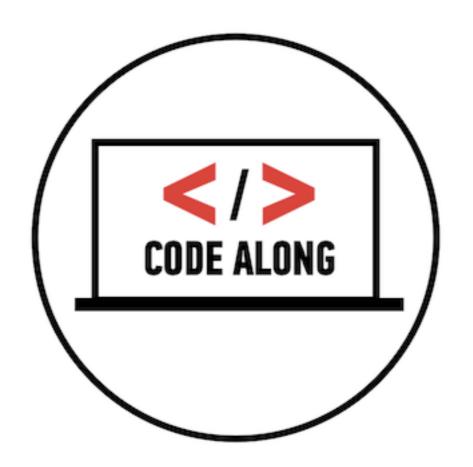
TO SUMMARIZE

- 1. A variable has both a "name" and a "value"
- 2. That value can change
- 3. A variable can be used multiple times throughout the code

ORDER IS IMPORTANT!!!



CODE ALONG — VARIABLES PT. 1



starter_code_lesson_9 > variables

EXERCISE — VARIABLES



KEY OBJECTIVE

Practice declaring and assigning variables

TYPE OF EXERCISE

Individual/paired

LOCATION

starter_code_lesson_9 > variables

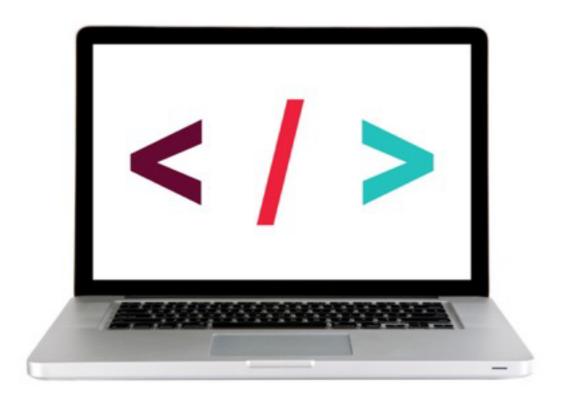
EXECUTION

6 min 1. Follow the instructions under Part 2

DATA TYPES

NUMBERS

CLOSER LOOK



Numbers (Codepen)

MORE ABOUT NUMBERS

INTEGERS:

Integers are whole numbers

10

FLOATS:

Number that uses a decimal to represent a fraction

22.75

*Can perform arithmetic on number data types

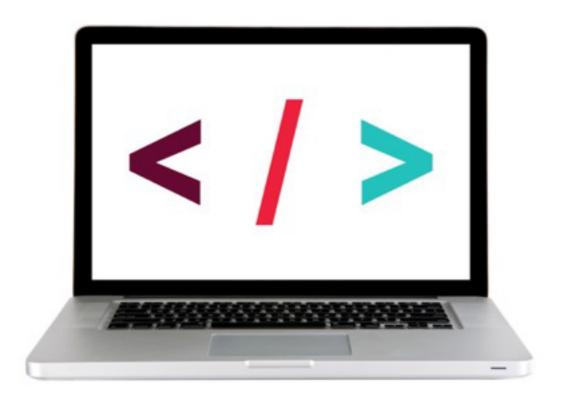
ARITHMETIC OPERATORS

		OPERATOR:	EXAMPLE:	RESULT:
NAME:	ADDITION	+	2 + 4	6
	SUBTRACTION	-	8 - 1	7
	MULTIPLICATION	*	2 * 3	6
	DIVISION	/	4/2	2

AME

STRINGS

CLOSER LOOK



<u>View here</u> (Codepen)

USING JQUERY TO MANIPULATE DOM

A STRING:

- Stores textual information
- Is surrounded by quotes

"How is the weather today?"

'Cold'

STRINGS

DOUBLE QUOTES VS. SINGLE QUOTES



ESCAPING

'It\'s a beautiful day' "They \"purchased\" it"

METHODS AND PROPERTIES OF STRINGS

MAKE STRING LOWERCASE:

```
var str = "Hello World";
var res = str.toLowerCase();
// the result of res will be:
// hello world!
```

LENGTH OF A STRING (PROPERTY):

```
var str = "Hello World";
var n = str.length;
// the result of n will be 11
```

MAKE STRING UPPERCASE:

```
var str = "Hello World";
var res = str.toUpperCase();
// the result of res will be:
// HELLO WORLD!
```

**Find a whole list of methods and properties for strings <u>here</u>

STRING CONCATENATION

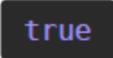
- ▶ To take two strings and stick them together, use the + operator.
- ▶ This is called string concatenation.

```
var book = "Happy";
var summary = "Best book ever.";
var review = book + ": " + summary;
// Result will be: Happy: Best book ever.
```

BOOLEANS

BOOLEANS

Can have one of two values:



false

EXERCISE — VARIABLES



KEY OBJECTIVE

Practice declaring and assigning variables

TYPE OF EXERCISE

Individual/paired

LOCATION

Score Keeper (Codepen)

EXECUTION

5 min

1. Hook up the +10 and -5 buttons

CONDITIONALS

WHAT ARE CONDITIONALS?

IF STATEMENTS

HTTPS://WWW.YOUTUBE.COM/WATCH?V=M2UX2PNJE6E

CONDITIONAL LOGIC

If something is true, do one thing. If it is not, do something else. This type of logic of statement is a condition.

In JavaScript (and coding in general) you'll need to make comparisons all the time:

- Is a user logged in?
- Has the user chosen three or more colors?
- Is the password correct?
- Does a user have enough money in their bank account?
- etc.

COMPARISON OPERATORS

JAVASCRIPT — COMPARISON OPERATORS

Greater than or equal to

Equal to ====

Less than or equal to

Not equal to ===

Greater than

Less than

ASSIGNMENT VS. COMPARISON — DON'T GET THEM CONFUSED!

ASSIGNMENT



var number = 7;

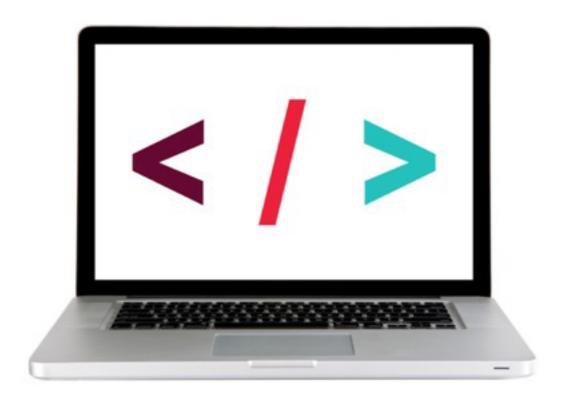
COMPARISON



 \mathbf{or}

```
if (number === 8) {
  // Do something
}
```

CLOSER LOOK — EQUALITY



Comparison Operators on Codepen

IF STATEMENTS

JAVASCRIPT — IF STATEMENT

```
if (answer === 38) {
    // Do something if true
}
```

IF STATEMENTS

```
if (age > 65) {
    $('h1').html("Senior Discount Applied");
}
```

JAVASCRIPT — IF/ELSE STATEMENT

```
if (answer === 38)
  // Do something if true
} else {
  // Do something if false
```

IF STATEMENTS

```
if (age > 65) {
    $('h1').html("Senior Discount Applied");
} else {
    $('h1').html("Sorry, you do not qualify for a discount.");
}
```

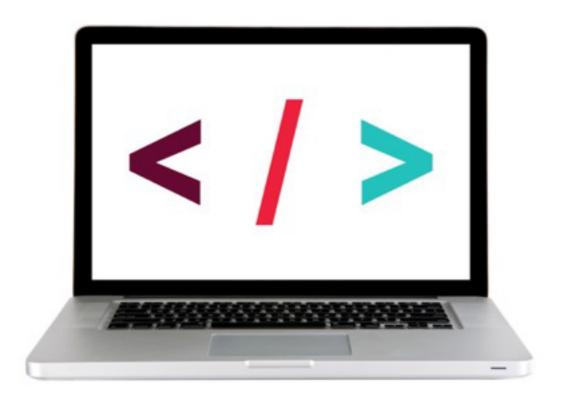
JAVASCRIPT — IF/ELSE IF/ELSE

```
if (answer === 38) {
  // Do something if first condition is true
} else if (answer === 30) {
  // Do something second condition is true
} else {
  // Do something if all above conditions are false
```

IF STATEMENTS

```
if (age > 65) {
    $('h1').html("Senior Discount Applied");
} else if (age < 18) {
    $('h1').html("Student Discount Applied");
 else {
    $('h1').html("Sorry, you don't qualify for a discount");
```

CLOSER LOOK



<u>View here</u> (Codepen)

EXERCISE — VARIABLES



KEY OBJECTIVE

Practice writing conditionals

TYPE OF EXERCISE

Individual/paired

LOCATION

starter_code_lesson_9 > conditionals

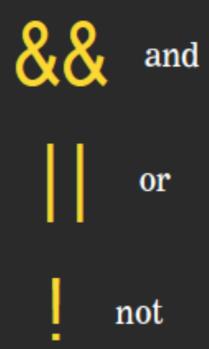
EXECUTION

6 min

1. Follow the instructions under Part 2

LOGICAL OPERATORS

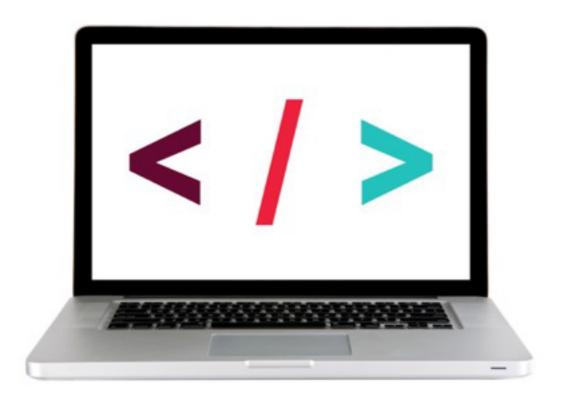
JAVASCRIPT — LOGICAL OPERATORS



MULTIPLE CONDITIONS

```
if (name === "GA" && password === "YellowPencil"){
   //Allow access to internet
}
```

CLOSER LOOK



<u>View here</u> (Codepen)

WORKING WITH USER INPUT

INPUT AND BUTTON ELEMENTS

TEXT INPUT ELEMENT

```
<input type="text" placeholder="Enter your name">
```

Enter your name

BUTTON ELEMENT

<button type="button">Sign me up!

Sign me up!

BOOLEANS

Get/change content of elements, attributes, text nodes (part 2!)

METHODS	GOAL	EXAMPLES
.val()	Get value from input	<pre>\$('input').val();</pre>
	Change value in input	<pre>\$('input').val('New Value');</pre>
		†

What goes in the parentheses?
The html or content you want to add/change

CONVERTING DATA TYPES

DATA TYPE CONVERSION

- ▶ When we use jQuery's .val() method, a **string** is returned.
- ▶ If we want to do any sort of math or calculations with the values we grab from inputs, we'll need to first convert those values to numbers.

DATA TYPE CONVERSION

STRING TO INTEGER:

```
var intString = "4";
var intNumber = parseInt(intString, 10);
```

STRING TO FLOAT:

```
var floatString = "3.14159";
var floatNumber = parseFloat(floatString);
```

NUMBER TO STRING

```
var number = 4;
number.toString(); => "4";
```

EXERCISE — VARIABLES



KEY OBJECTIVE

· Practice working with user input

TYPE OF EXERCISE

Individual/paired

LOCATION

starter_code_lesson_9 > user_input

EXECUTION

6 min

1. Follow the instructions in main.js

CODE ALONG — COMPARE TWO NUMBERS

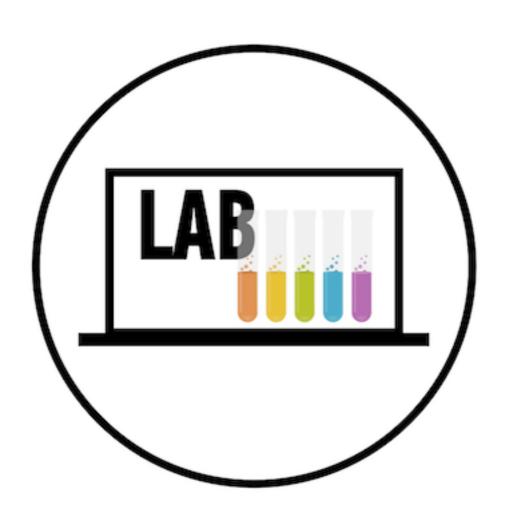


Let's code! Compare Two Numbers (Codepen)

FEWD

LAB

LAB — TEMP CONVERTER



INPUT AND BUTTON ELEMENTS



KEY OBJECTIVE

 Build an application using HTML/CSS and JS that converts a temperature from Fahrenheit to Celsius

TYPE OF EXERCISE

Groups of 3-4

SMALL GROUP PLANNING

Until 9:00

1. In groups of 3-4 test out the functional temperature converter and write pseudo code to convert a temperature from Fahrenheit to Celsius

Live Version



HOMEWORK

FINAL PROJECT IDEA AND WIREFRAMES

FEWD

EXIT TICKETS

ADRIANA

Blanca

Eva

Chris

James

Amanda

Federico

Teri

Jiha

JAMIE

Daniel

Ben

Nancy

Connor

Florencia

Lee

Madison

Jermaine

ADRIANA.LCS316@GMAIL.COM

JAMIELEEPILGRIM@GMAIL.COM