Why doesn't jQuery autofill in Sublime like css or html?

Because it is a library not a language.
Javascript is a language.

Where exactly do we need semi-colons?

At the end of each **statement**
When you want the computer to execute something

Is there a good animated gallery of JS/jquery effects along with the labels? It helps to be able to see the effect paired with the syntax and description.

Nope! The best thing to look at is http://api.jquery.com/

Is there a way to make text size responsive (holdover question from the previous week)

Yes! And we will learn more when we learn responsive design. In the meantime, use percents or google em

When do you use Javascript instead of jQuery?

Whenever you want

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

REVIEW

INTRO TO JQUERY — YOUR NEW BEST FRIEND!

WHAT IS JQUERY?

- jQuery is a JavaScript file you include in your pages.
- Makes it faster and easier to write cross-browser JavaScript
- *"Cross browser"* - works the same in all* browsers.
- Allows us to find elements using CSS-style selectors and then do something to them using jQuery methods
- Your new best friend!

JQUERY VS. JAVASCRIPT

- jQuery allows us to use the CSS-style selectors that we know and love! Yay!

JQUERY VS. JAVASCRIPT

JS:

```
document.getElementById('heading').innerHTML = "Your Name";
```

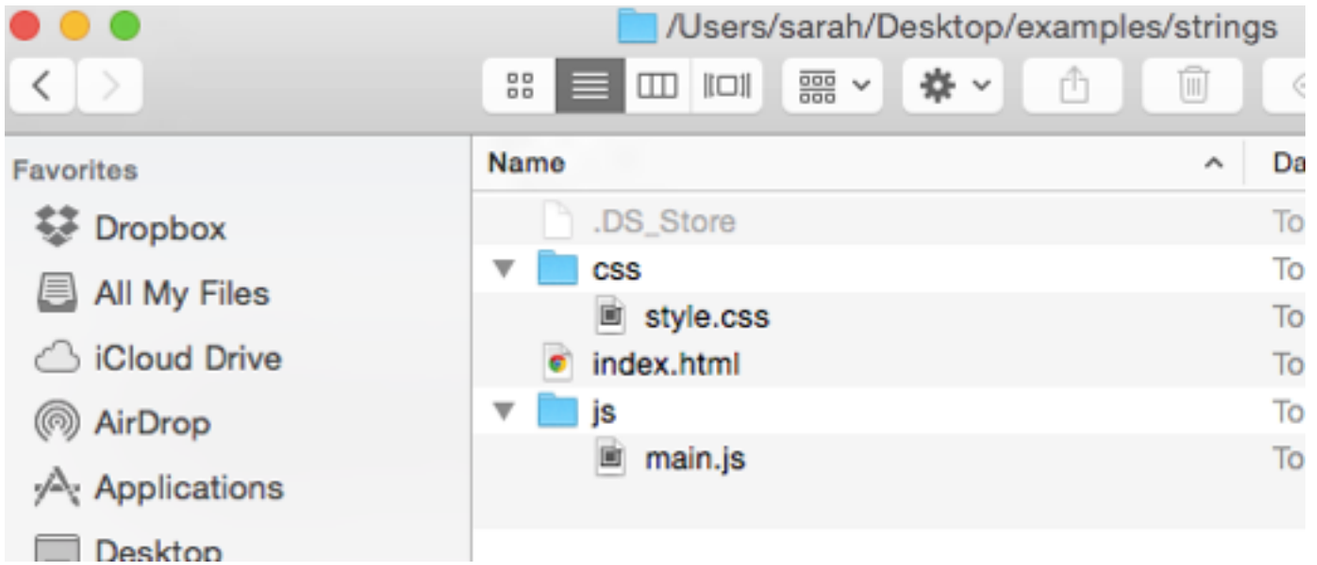
JQUERY:

```
$('#heading').html('Your Name');
```

You could do everything jQuery does with plain-old vanilla Javascript

KEEP IT ON THE UP AND UP!

- It is considered **best practice** to keep Javascript files organized in one folder.
- Usually people name this folder 'scripts', 'js', or 'javascript'.
- Use an underscore or dash between words in folder names instead of a space. And try to avoid characters/symbols in file names (*really_cool_page.html* or *really-cool-page.html*).



STEP 1: ADD JQUERY TO YOUR WEBSITE

1. Download the jQuery script (version 2.x) and include it in your project. Keep things organized by placing it within your js folder.

2. Include jQuery in your HTML page before the closing </body> tag by adding a <script> element with a src that points to the jQuery file

3. Make sure to include jQuery **before** any other js files that use it!!!

```
<body>
  <!-- HTML content here -->
  <script src="js/jquery-1.11.2.min.js"></script>
  <!-- Javascript file will go here -->
</body>
```

STEP 2: ADD A JAVASCRIPT FILE

1.Create a Javascript file. This process will be similar to creating an HTML or CSS file, but this time the file should have a .js extension (example: main.js)

2.Link to the Javascript file from your HTML page using the <script> element. We'll almost always want to add this script element **right before the closing body tag.**

```
<body>
  <!-- HTML content here -->
  <script src="js/jquery-1.11.2.min.js"></script>
  <script src="js/main.js"></script>
</body>
```

ORDER IS IMPORTANT!!!!

COMMENTS

```
// this is a single line comment
```

```
/*
this
is
a
multiline comment
*/
```

Sublime shortcut: 1) Highlight what you want to comment 2) command + /

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)

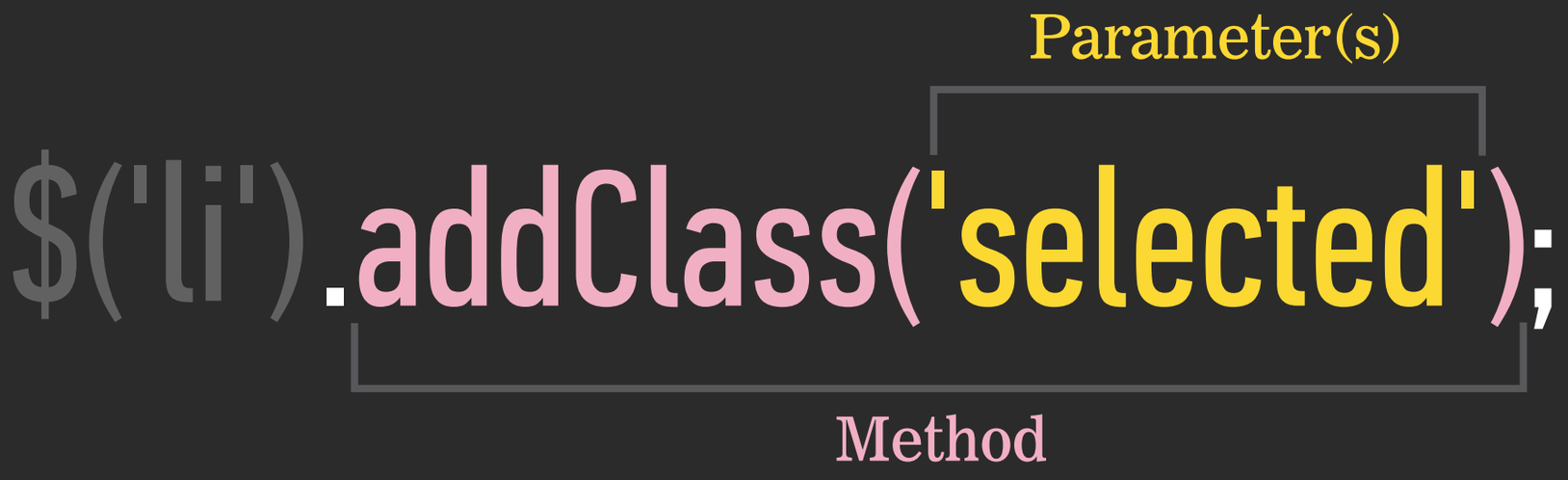
JQUERY OBJECTS — FINDING ELEMENTS: SOME EXAMPLES

- You can use your CSS-style selectors!!!

SELECTOR:	CSS:	JQUERY:
CLASS	.className	$('.className')
ID	#idName	$('#idName')
MULTIPLE SELECTORS	h1, h2, h3	$('h1, h2, h3')
DESCENDANT	li a	$('li a')

& tons more!!!

JQUERY — WORKING WITH THOSE ELEMENTS



JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

See the jQuery docs for list!

JQUERY METHODS — TRAVERSING THE DOM

TRAVERSE THE DOM

jQuery provides us with methods to find/select elements to work with & traverse the DOM

Some methods available to us:

- .find( ) (finds all descendants)
- .children( )
- .parent( )
- .siblings( )

What goes in the parentheses?
A css-style **selector**

Examples:

```
$('h1').find('a');
$('#box1').parent();
$('p').siblings('.important');
```

**Think of this as part of the selection process, must come directly after another selection*

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

See the jQuery docs for list!

JQUERY METHODS — GETTING/SETTING CONTENT

GET/SET CONTENT

Get/change content of elements, attributes, text nodes

Some methods available to us:

- .html()
- .attr()
- .css()
- .addClass()
- .removeClass()
- .toggleClass()

What goes in the parentheses?
The **html, styles, classes you want to add/change**

Examples of **adding/changing** content:

```
$('h1').html('Content to insert goes here');
$('img').attr('src', 'images/bike.png');
$('#box1').css('color', 'red');
$('p').addClass('success');
$('p').removeClass('my-class-here');
```

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

See the jQuery docs for list!

JQUERY METHODS — EFFECTS/ANIMATION

ADD EFFECTS/ ANIMATION

Add effects and animation to parts of the page

Some methods available to us:

- .show( )
- .hide( )
- .fadeIn( )
- .fadeOut( )
- .slideUp( )
- .slideDown( )
- .slideToggle( )

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

Examples:

```
$('h1').fadeOut(200);
$('#box1').slideDown('slow');
$('h1').fadeIn();
```

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

After we've selected elements, we can use jQuery methods to:

See the jQuery docs for list!

JQUERY METHODS — EVENTS!

CREATE EVENT LISTENERS

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
});
```

JQUERY METHODS — EVENTS!

CREATE EVENT LISTENERS

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 METHODS — METHOD CHAINING

```
$('#main').children('p').fadeOut('slow'
```

DEBUGGING — WHERE TO START

Always start by defining the problem.

THE IMAGE IS NOT MOVING

NONE OF MY CODE WORKS

DEBUGGING — WHERE TO START

This will tell you where to start your hunt.

THE IMAGE IS NOT MOVING

Find the code that makes the image move

NONE OF MY CODE WORKS

** Syntax error, check console*

Check for errors in console

- The location may not be correct but is a good place to start.
- Ex: Unbalanced brackets or parentheses

DEBUGGING — LEVEL 2

- console.log() can be used to display variable values in the console. This is useful for debugging.

```
console.log($('h2'));
```

This should print the element to the console.
If it doesn't, there's probably something wrong with your selector.

**Shortcut to access console: cmd + opt + j*

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

VARIABLES & CONDITIONALS

AGENDA

- Variables
- Data Types
- Conditionals
- Lab — Temperature Converter

SOME NEW METHODS!

USING JQUERY TO MANIPULATE DOM

GET/SET CONTENT

Get/change content of elements, attributes, text nodes

METHODS	EXAMPLES
.append()	$('ul').append(' Last list item ');
.prepend()	$('ul').prepend(' First list item ');

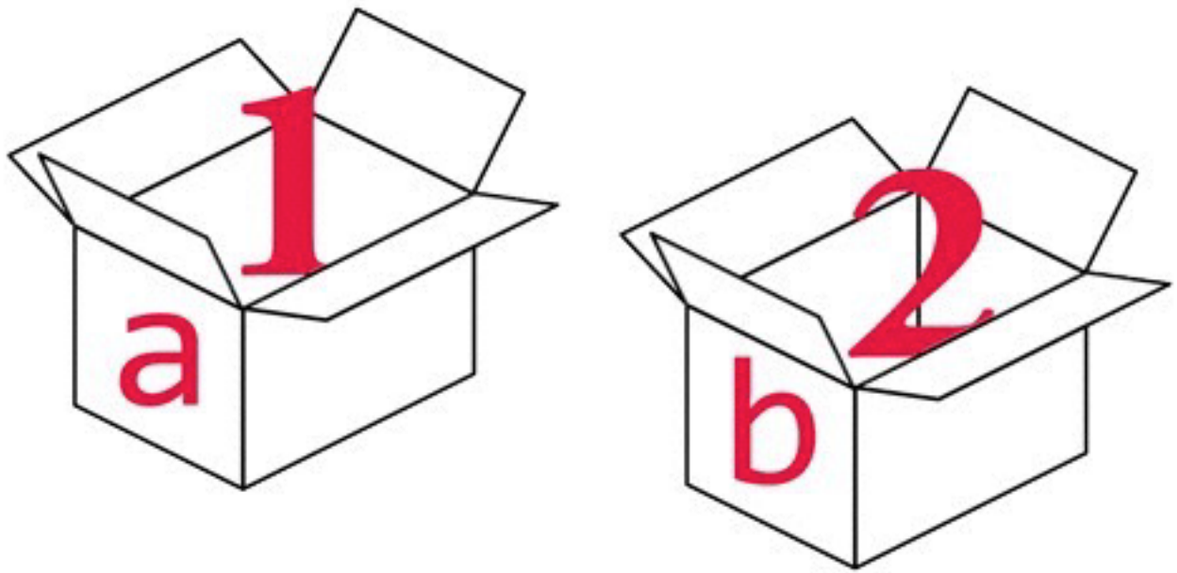
What goes in the parentheses?
The **html or content you want to add/change**

VARIABLES

WHAT ARE VARIABLES

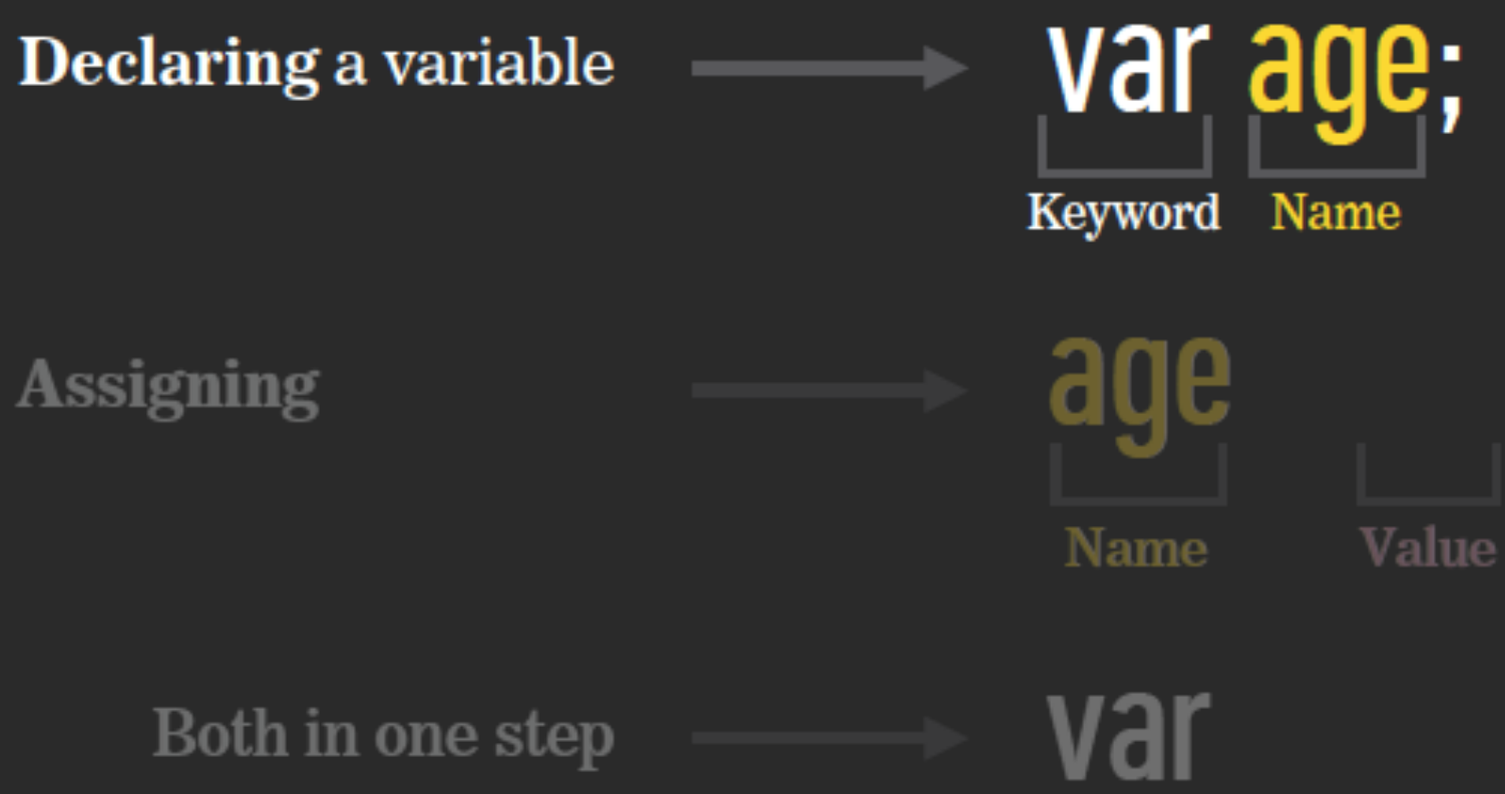
WHAT ARE VARIABLES?

- 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

JAVASCRIPT — VARIABLES



JAVASCRIPT — VARIABLES

Declaring → `var`

Keyword: `var` Name:

Assigning a variable → `age = 29;`

Name: `age` Value: `29`

Both in one step → `var`

JAVASCRIPT — VARIABLES

Declaring → `var`

Keyword: `var` Name:

Assigning → `age`

Name: `age` Value:

Both in one step → `var age = 29;`

JAVASCRIPT — VARIABLES

Declaring a variable → `var age;` ← Semicolon!

Assigning a variable → `age = 29;` ← Semicolon!

Both in one step → `var age = 29;` ← Semicolon!

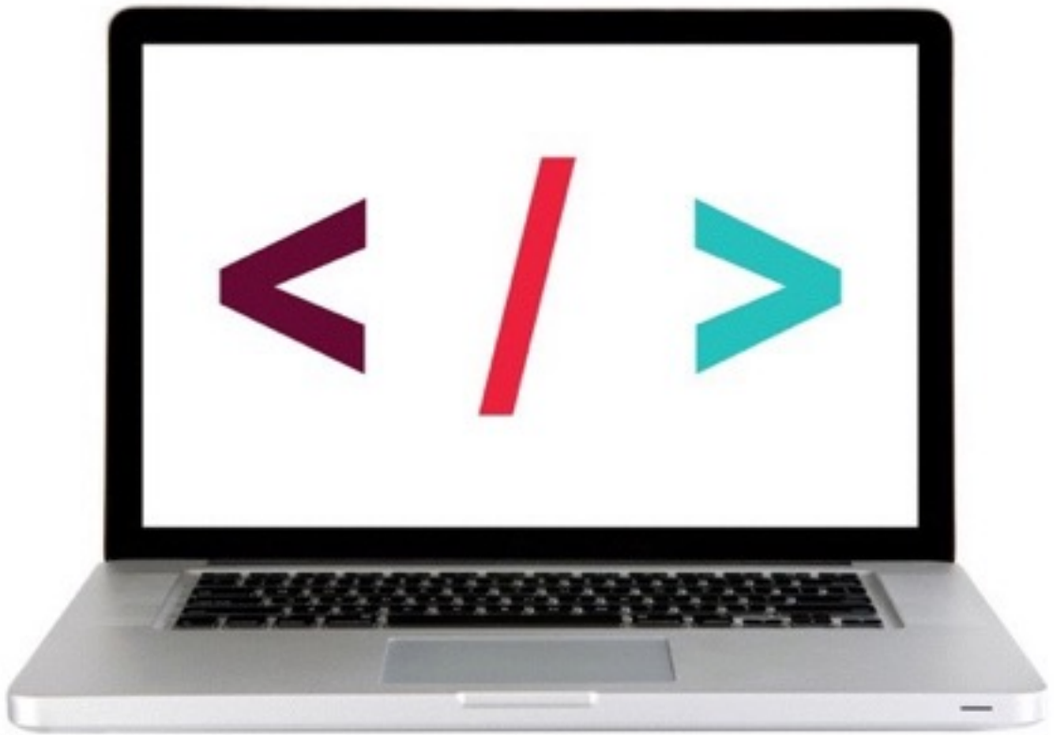
JAVASCRIPT — VARIABLES

```
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


```
var numberOfStudents = 10;
```

```
var NumberOfStudents = 10;
```

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


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

```
var firstname = "Sarah";
```

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

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


```
var number1 = 5.5;
```

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

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

VARIABLE CONVENTIONS

3. Variables cannot start with a number


```
var number1 = 10;
```

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

4. Case sensitive - numberofstudents is not the same as numberOfStudents

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

```
10
22.75
```

- Positive numbers
- Negative numbers
- Decimals

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!!!

```
var name = "Matt";
```


~~"Matt" = var name;~~

WRONG!!!!!

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

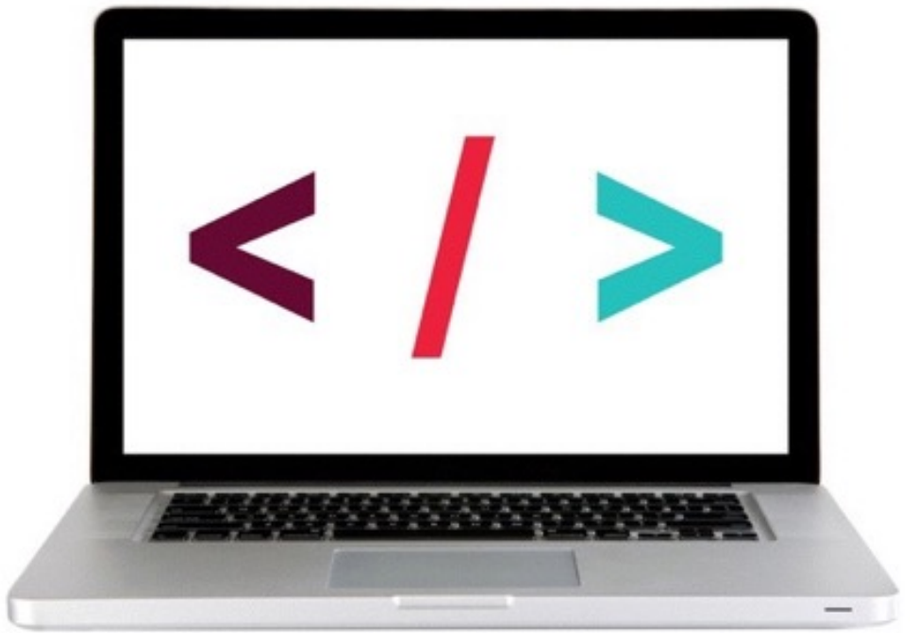
EXECUTION

6 min 1. Follow the instructions under Part 2

DATA TYPES

NUMBERS

LET'S TAKE A 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

MORE ABOUT NUMBERS

INTEGERS:

Integers are whole numbers `10`

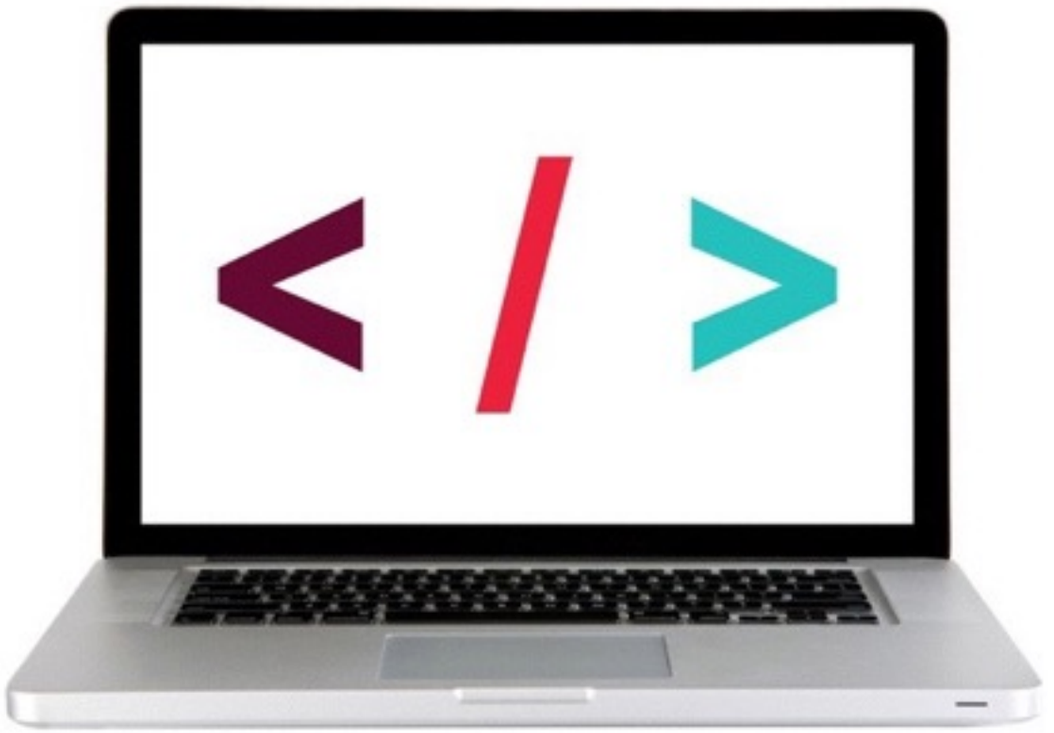
FLOATS:

Number that uses a decimal to represent a fraction `22.75`

*Can perform arithmetic on number data types

STRINGS

LET'S TAKE A CLOSER LOOK



View here (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 here

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: `true` `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 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

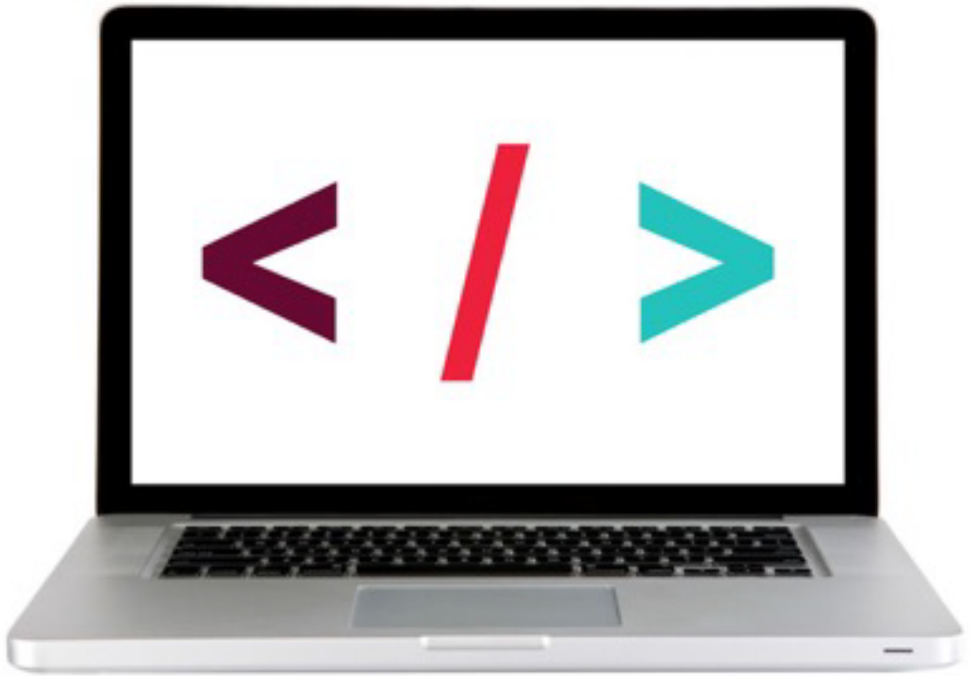
```
var number = 7;
```

COMPARISON

or


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

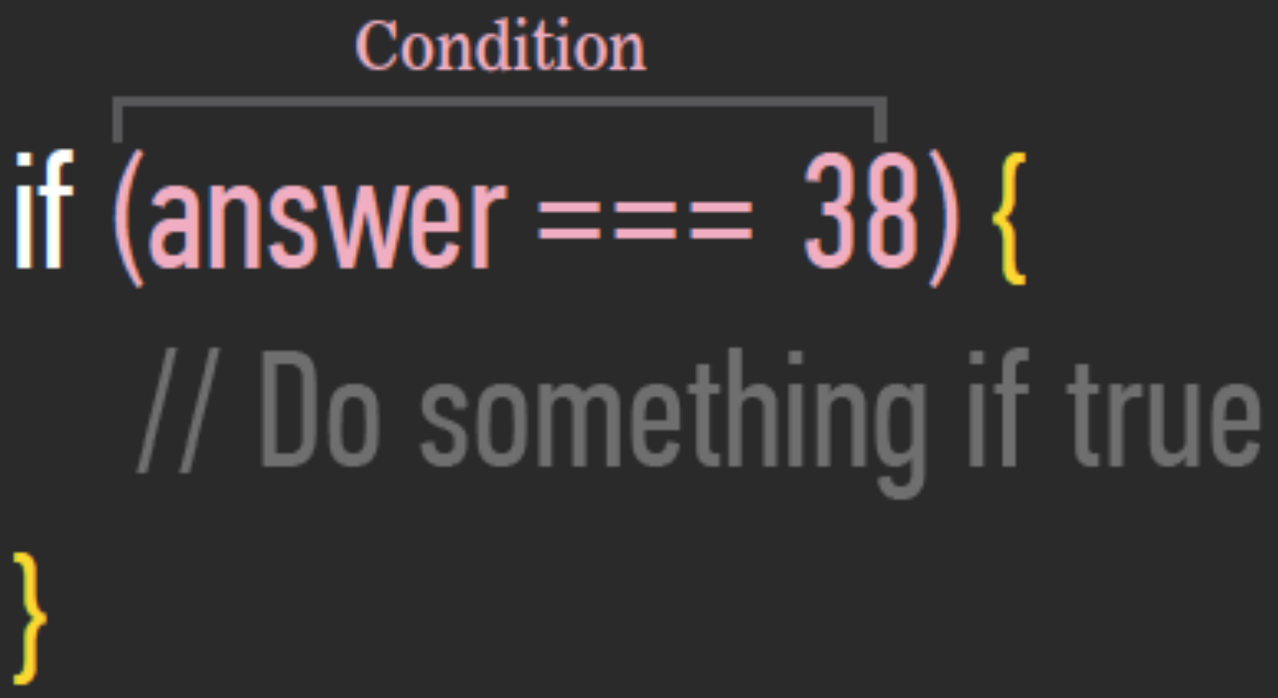
CLOSER LOOK — EQUALITY



Comparison Operators

IF STATEMENTS

JAVASCRIPT — IF STATEMENT



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
}
```

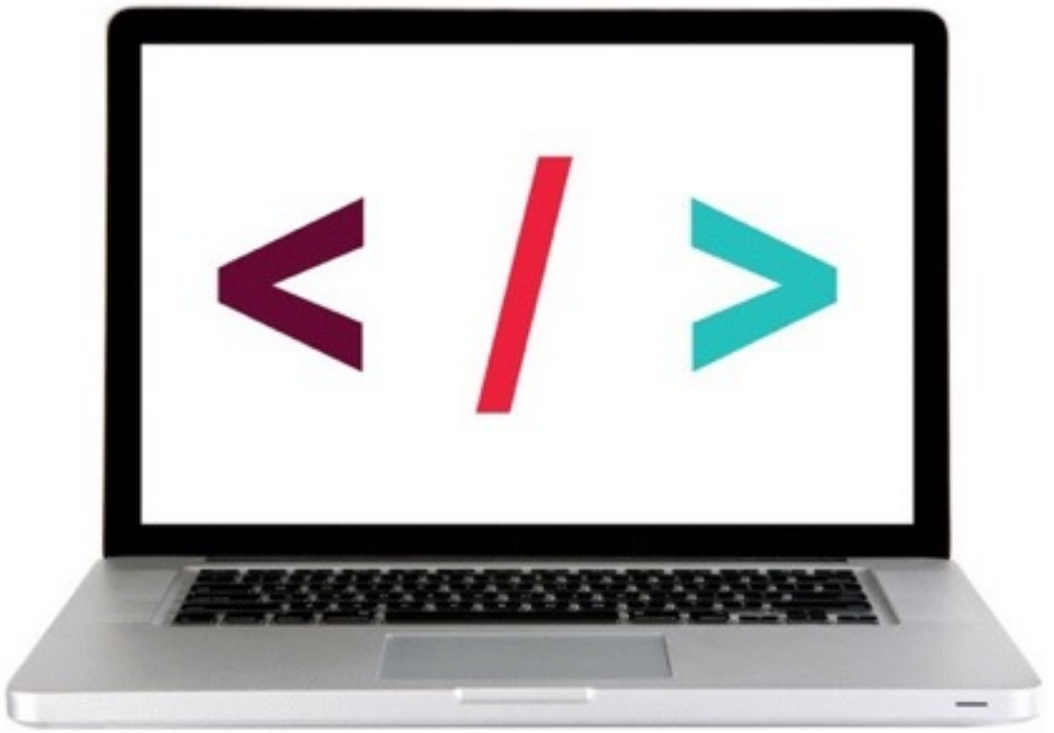
COMMENTS

```
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");
}
```

LET'S TAKE A CLOSER LOOK



View here (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

&& and

|| or

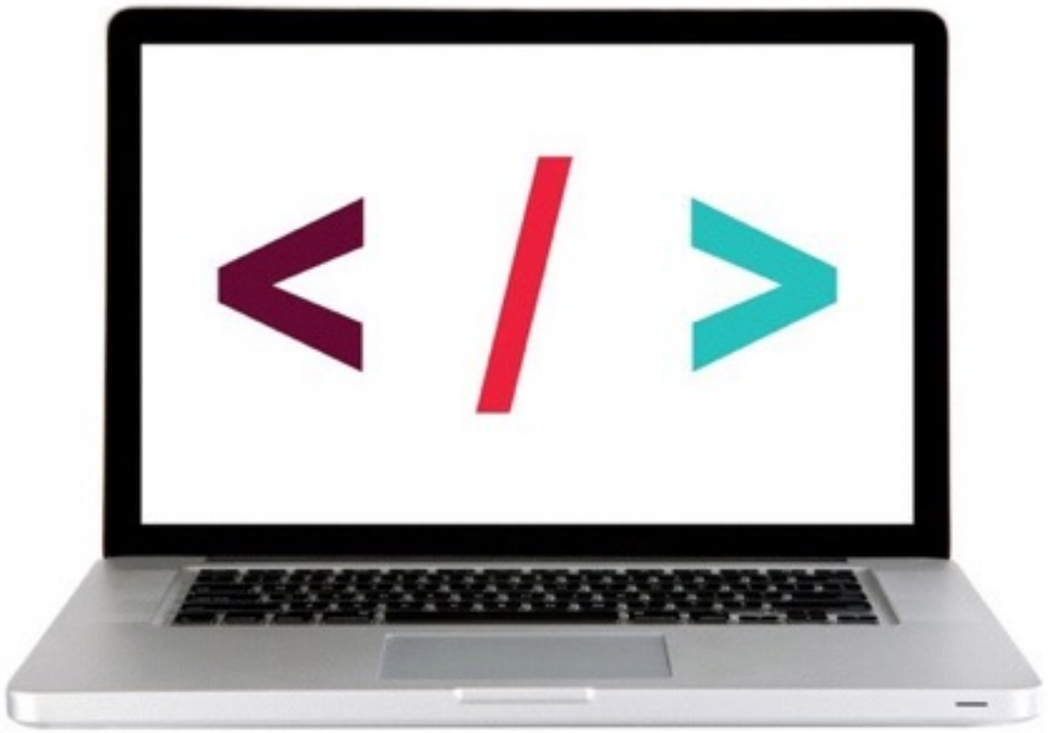
! not

MULTIPLE CONDITIONS

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

WORKING WITH USER INPUT

LET'S TAKE A CLOSER LOOK



View here (Codepen)

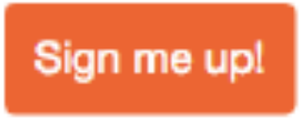
INPUT AND BUTTON ELEMENTS

TEXT INPUT ELEMENT

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

BUTTON ELEMENT

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



BOOLEANS

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

METHODS	GOAL	EXAMPLES
.val()	Get value from input	$('input').val();
	Change value in input	$('input').val('New Value');

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)

LAB

LAB

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

HOMEWORK

- **Starter match maker**
- **Select fun 2**

EXIT TICKETS