LET'S GET EVERYTHING SET UP!

1. In Schoology, go to: **Courses(in the top menu) > FEWD CHI 1: Section 1**
2. Then go to the **Class Materials** folder — it's the pink one!
3. Navigate to the **Week 5 (It's the yellow folder) > Lesson 9 folder**
4. There you'll find all the materials for today's class
5. Download starter_code_lesson_9.zip
6. Move it from your Downloads folder to your Desktop
7. Double-click on starter_code_lesson_9.zip to unzip it
8. After you've unzipped, delete the original .zip to avoid confusion and make sure you don't unzip it again later!!!

GENERAL ASSEMBLY

JQUERY

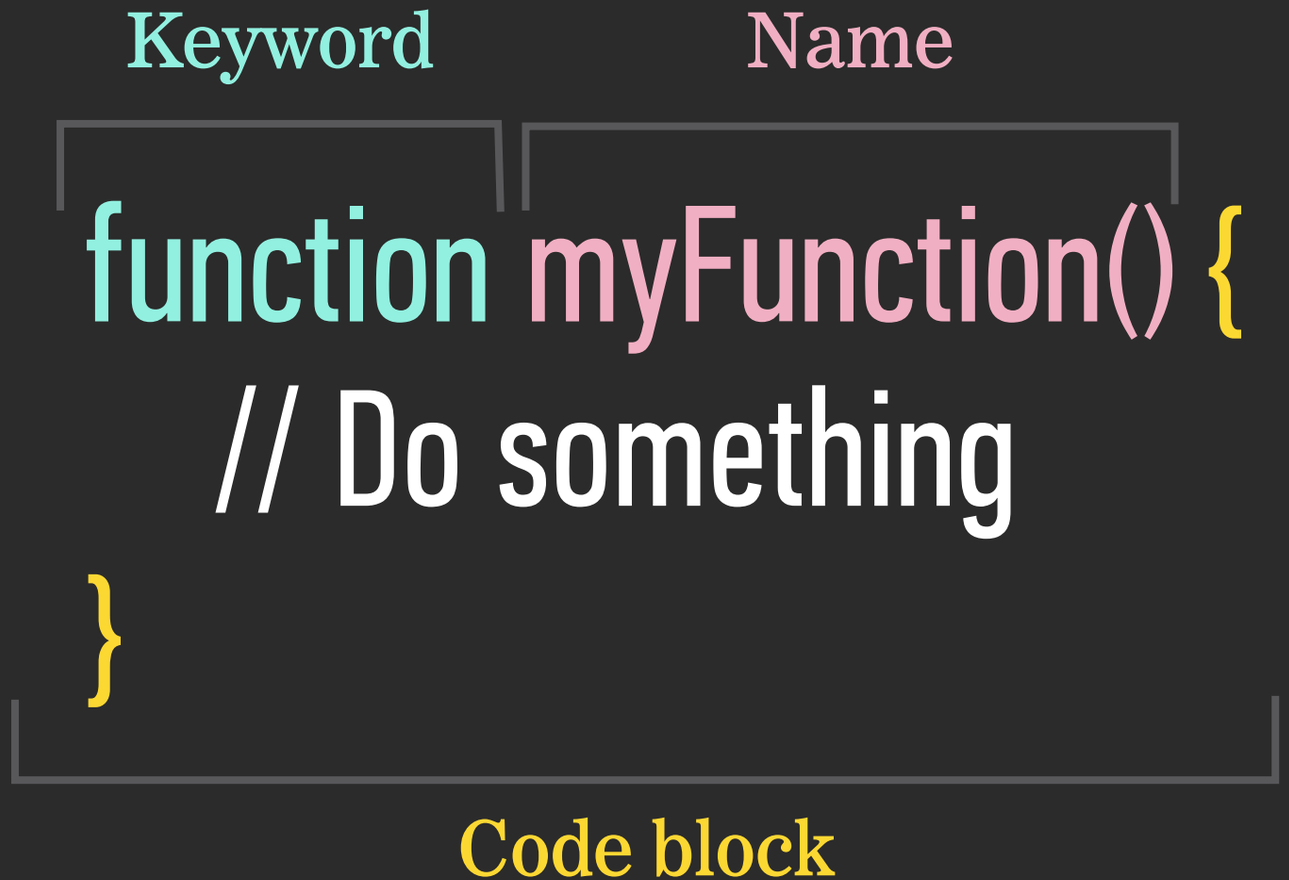
Sarah Holden

REMINDER

No Class Monday!!

REVIEW

SYNTAX — DECLARING A FUNCTION



SYNTAX — CALLING A FUNCTION

- To run the code in a function, we 'call' the function by using the function name followed by parenthesis.

```
myFunction();
```

Function name

SYNTAX — DECLARING A FUNCTION (WITH PARAMETERS)

Parameters

```
function myFunction(param1, param2) {
    return param1 * param2;
}
```

We can use these parameters like variables from within our function

SYNTAX — CALLING A FUNCTION (WITH ARGUMENTS)

RETURNING VALUES FROM A FUNCTION

- To return a value from a function, we use the **return** keyword
- From within a function, the **return** keyword 'hands' a value back to the code that called the function
- We can then do something with that value, or store it in a variable for use later in the script

```
function greeting(name) {
  var sayHello = "Hello " + name;
  return sayHello;
}

var sayHi = greeting("Sarah");
```

LEARNING OBJECTIVES

- Utilize jQuery tree traversal techniques to access and manipulate DOM elements.
- Utilize jQuery Docs to apply functions

AGENDA

- Intro to jQuery
- jQuery Documentation
- Lab

JAVA VS. JAVASCRIPT

Just a quick note! We're learning **JavaScript** *in this class, not Java. Java and JavaScript are actually two different languages.*

!==

INTRO TO JQUERY

THE BASICS

INTRO TO JQUERY

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!

INTRO TO JQUERY

JQUERY ALLOWS US TO:

- Select elements using CSS-style selectors
- Manipulate our CSS
- Handle events (click, hover, submit, etc.)
- Animation (Fade in, fade out, slide up, animate)
- Cross browser
- Form validation
- And more!

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

ADDING JQUERY TO YOUR PROJECT

ADDING JQUERY TO YOUR WEBSITE — OPTION 1: JQUERY FILE

STEPS TO INCLUDE JQUERY:

1. Download the jQuery script 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>
  <!-- Content here -->
  <script src="js/jquery-1.11.2.min.js"></script>
  <script src="js/main.js"></script>
</body>
```

ADDING JQUERY TO YOUR WEBSITE — OPTION 2: LINK TO CDN

STEPS TO INCLUDE JQUERY:

1. Include jQuery in your HTML page before the closing </body> tag by adding a <script> element with a src that points to the url where jQuery is hosted
2. Make sure to include jQuery **before** any other js files that use it!!!

```
<body>
  <!-- Content here -->
  <script src="https://ajax.googleapis.com/ajax/libs/
jquery/2.1.3/jquery.min.js"></script>
  <script src="js/main.js"></script>
</body>
```

- **Pro**: May be faster if users already have the file cached
- **Con**: Need to be online (can't work on project on train, for example)

MAKE SURE THE DOCUMENT IS READY

- If you ever need to load jQuery in the head of your html file, we can use jQuery's ready method to detect when the DOM is ready to be manipulated.
- This waits for our HTML and CSS to load before executing

```
$(document).ready(function() {
  // your code here
});
```

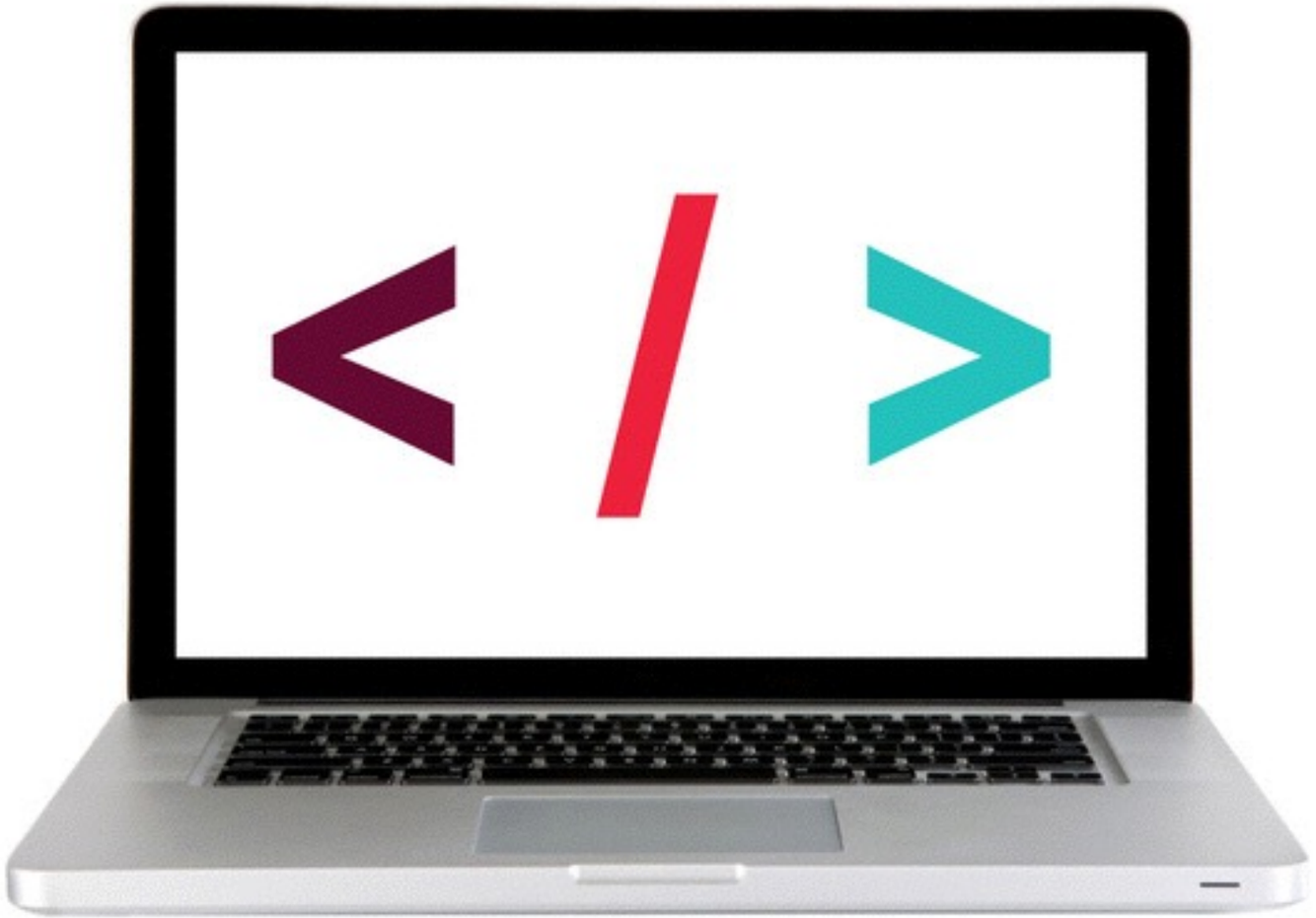
=

Or use the shortcut:

```
$(function() {
  // your code here
});
```

***You **only** need to use jQuery's ready method when you're including your scripts in the head of your page.*

LET'S TAKE A CLOSER LOOK



USING JQUERY

USING JQUERY TO MANIPULATE THE DOM

1

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)

JQUERY OBJECTS — FINDING ELEMENTS

- You can use your CSS-style selectors
- There are also some additional selectors added by jQuery
- We can store jQuery selectors as variables

- Note: jQuery objects returns values as an array of html elements when viewed in the console.

See your handout, pages 302-303 in the textbook, or the jQuery docs for list!

JQUERY OBJECTS — FINDING ELEMENTS: SOME EXAMPLES

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

& tons more!!!

See your handout, pages 302-303 in the textbook, or the jQuery docs for list!

USING JQUERY TO MANIPULATE THE DOM

1

Select an element/elements

2

Work with those elements

JQUERY — WORKING WITH THOSE ELEMENTS

JQUERY METHODS

Be forewarned!

There are a lot of methods! *Do not feel like you need to sit down and memorize these*. The important things is knowing that they're there and being able to look them up in the documentation.

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

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

See your handout, pages 304-305 in the textbook, or the jQuery docs for list!

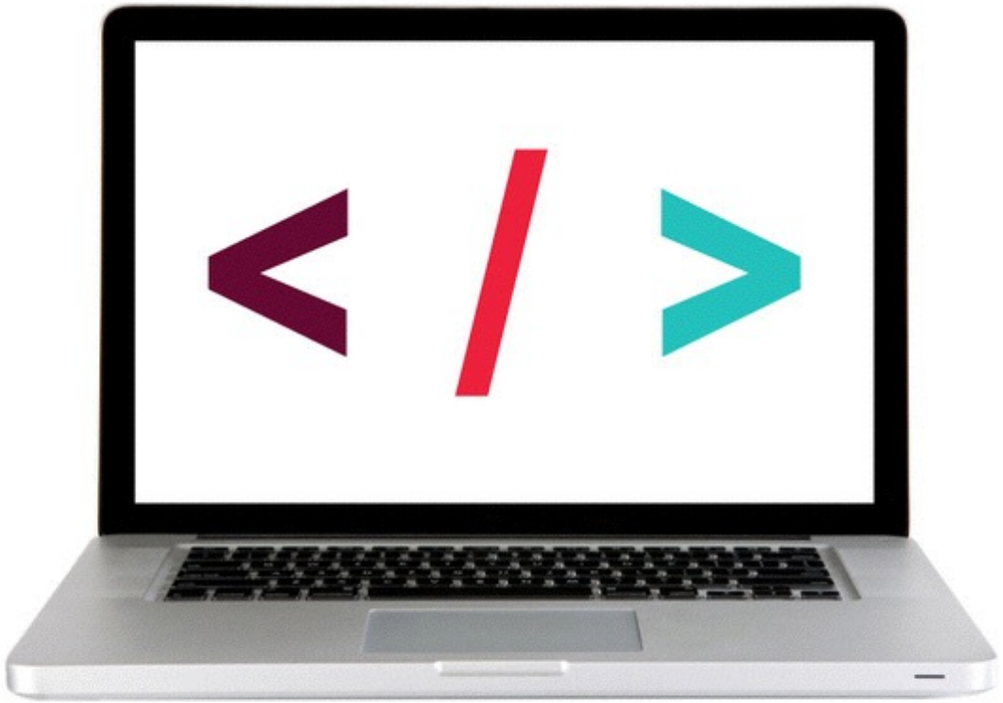
JQUERY METHODS — GETTING/SETTING CONTENT

Get/change content of elements, attributes, text nodes

Some methods available to us:

- .text()
- .html()
- .prepend()
- .append()
- .remove()
- .attr()
- .addClass()
- .removeClass()
- .css()

LET'S TAKE A CLOSER LOOK

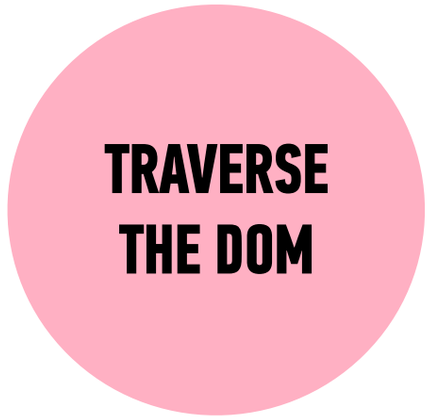


JQUERY METHODS — TRAVERSING THE DOM

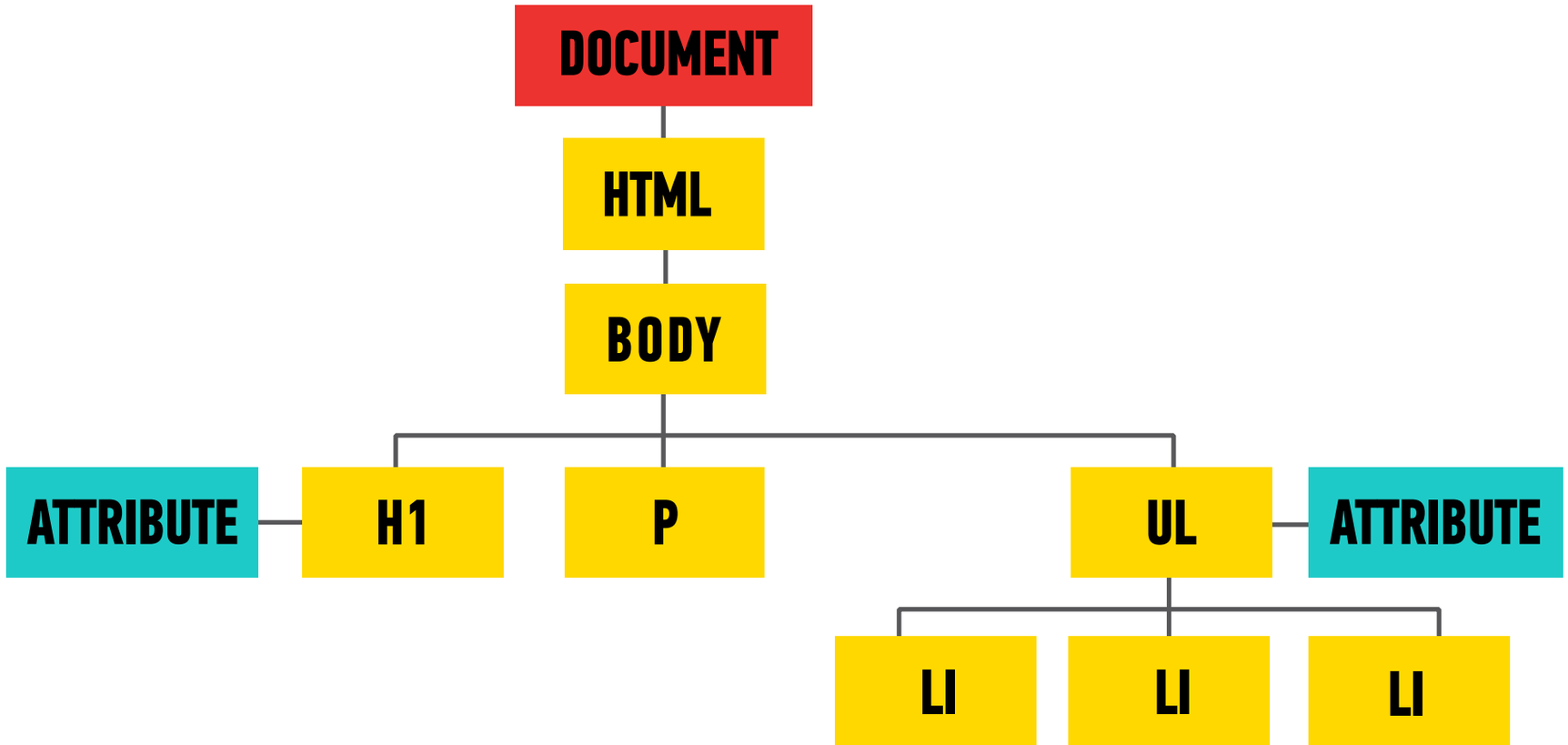
jQuery provides us with methods to find/select elements to work with & traverse the DOM

Some methods available to us:

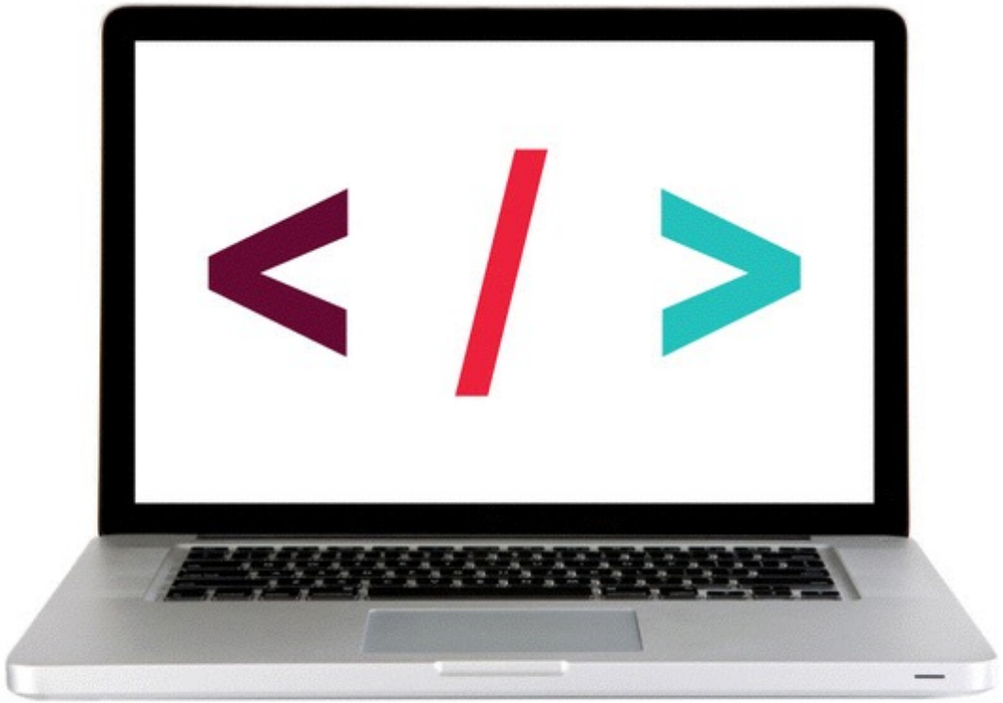
- .find()
- .closest()
- .parent()
- .parents()
- .children()
- .siblings()
- .next()
- .nextAll()
- .prev
- .prevAll()



TRAVERSING THE DOM?



LET'S TAKE A CLOSER LOOK



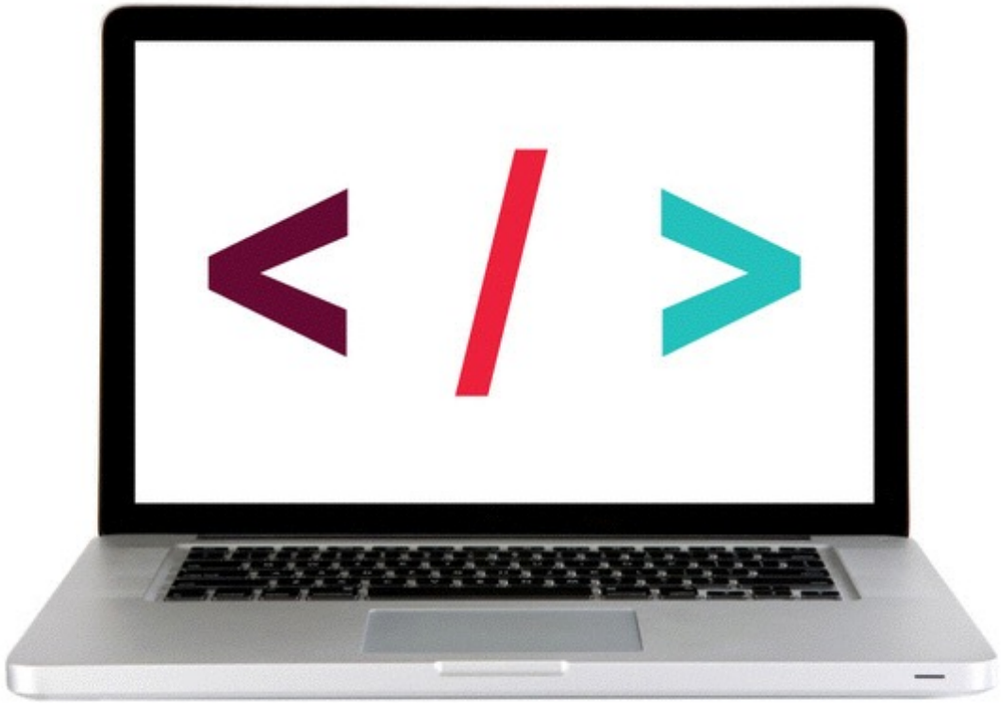
JQUERY METHODS — EFFECTS/ANIMATION

Add effects and animation to parts of the page

Some of the methods available to us:

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

LET'S TAKE A CLOSER LOOK



JQUERY METHODS — EVENTS!

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

To add an event:

1. Use a selector to create a jQuery selection
2. Use .on() to indicate which event you want to respond to

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

Example:

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

CREATE EVENT LISTENERS

JQUERY METHODS — EVENTS!

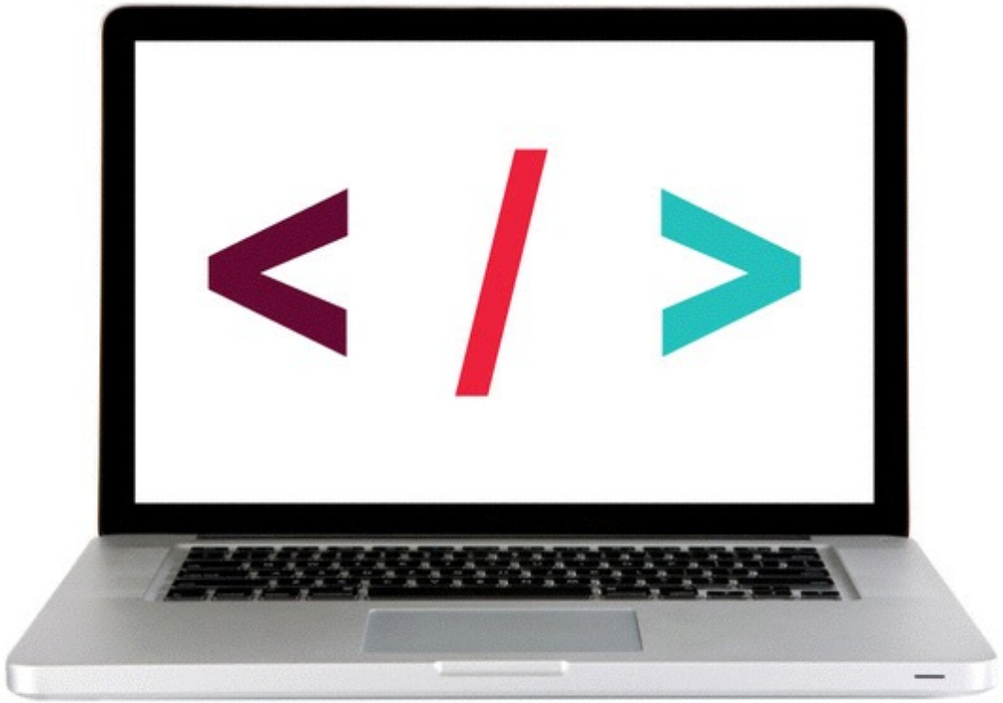
Some events that `.on()` deals with:

- **UI:** focus, blur, change
- **Keyboard:** input, keydown, keyup
- **Mouse:** click, mouse, mousedown, mouseover
- **Form:** submit, select, change
- **Document:** ready, load
- **Browser:** resize, scroll

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

CREATE EVENT LISTENERS

LET'S TAKE A CLOSER LOOK



JQUERY METHODS — THE EVENT OBJECT

- The event object has properties and methods that tell you more about the event that took place.
- We'll look at more later, but for now let's look at the preventDefault() method
- By using this method, the default action of the event will not be triggered.

Parameter name

```
$('li').on('eventGoesHere', function(e) {
  e.preventDefault();
});
```

Use that name in the function and use dot notation to access its properties and methods.

CREATE EVENT LISTENERS

CODE ALONG — JQUERY CODE ALONG

JQUERY DOCUMENTATION

JQUERY DOCUMENTATION – IT'S YOUR FRIEND!

Help! There's too much to learn! I feel overwhelmed!

A good developer is one that can look things up!!!

jQuery documentation to the rescue

DASH – MAKING YOUR LIFE EASIER ONE DOC AT A TIME

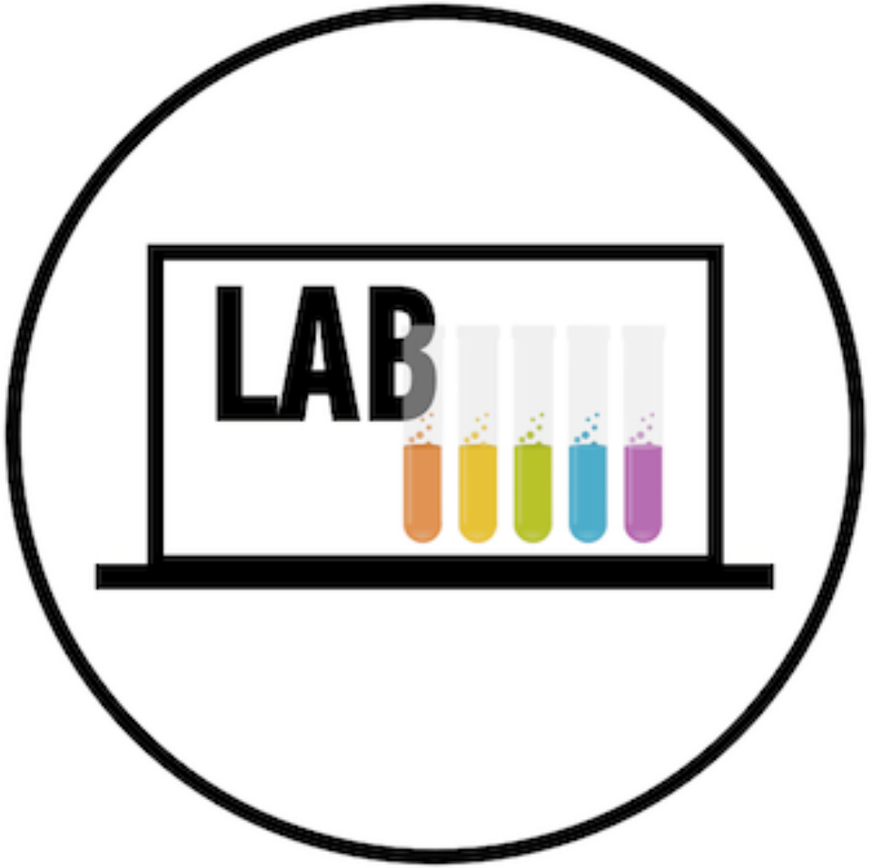
I highly recommend that your download Dash

CODE ALONG — OH NO, NOT THE COLOR SWITCHER AGAIN!

Let's take a look at our old friend the Color Switcher in CodePen

LAB

LAB



ACTIVITY

EXERCISE

KEY OBJECTIVE

- Utilize jQuery tree traversal techniques to access and manipulate DOM elements.

TYPE OF EXERCISE

- Partners/small groups

AS A CLASS

Until 8:50 Lab is in starter_code_lesson_9 > select_fun

1. Follow the instructions in instructions.txt
2. Use jQuery docs to look up methods

LEARNING OBJECTIVES

- Utilize jQuery tree traversal techniques to access and manipulate DOM elements.
- Utilize jQuery Docs to apply functions

HOMEWORK

HOMEWORK

ASSIGNMENT:

Finish Selector lab — Due February 14th at 11:30pm

FINAL PROJECT:

Final Project Part 1 — Due February 14th at 11:30pm

OPTIONAL BUT HIGHLY ENCOURAGED READING:

From the textbook - Javascript & jQuery by Jon Duckett

- Read pages 310 - 365 (jQuery - continued from last week's reading)

EXIT TICKETS