



1) HAVE SLACK OPEN

2) CREATE/LOGIN TO CODEPEN

FRONT-END WEB DEVELOPMENT

SNACKS & DESIGN

TODAY!

CHRISTOPHER ZALEK & COLIN QUIRK

(GOOGLE SHEET IS PINNED IN SLACK)

FEWD

Q & A

“What are the most popular JS frameworks right now?”

*“Can you both talk more about what
a normal day looks like for you at your jobs? “*

“I noticed that Google's font site indicates how the number of fonts being loaded could affect bandwidth. How many fonts is too many, and should we be taking advantage of the font-style and font-weight instead? “

“How to continue working towards responsive designs.”

“How can you use JavaScript to work with databases? Or can you? And at what point is more robust back-end technology necessary for querying databases?”

For example, on today's slide (under the intro to programming section) where the user chose "thai" and the site returned all thai restaurants...it seems like that site would be querying a database.

WHAT JAVASCRIPT CAN DO – PROGRAM RULES

Filters

Clear All

Filter

Clear All

Cuisine

Clear

☐ Dinner • 28

☐ Lunch • 19

☐ Asian • 7

☐ Sandwiches • 7

☐ Healthy • 6

☐ Mediterranean • 6

☒ Thai • 5

☐ Vegetarian • 5

☐ Japanese • 4

☐ Latin American • 4

+ See all

Rating


★ ★ ★ ★ ★

& up

Pick A Restaurant

7 Restaurants nearby

Sort By Default



Trike Thai Noodles & Sushi

Japanese, Asian

★★★★★

75 Ratings

\$20


Min

\$3

Delivery

60-70 m

Est. Wait



New China Chinese Restaurant

Asian, Dinner

★★★★★

222 Ratings

\$15


Min

\$3 - \$5

Delivery

60-70 m

Est. Wait



Dante's Pizzeria (MILWAUKEE)

Dinner, Sandwiches

★★★★★

40 Ratings

\$18

Min

\$3

Delivery

90-100 m

Est. Wait

Filter data when the user selects a filter

“Can we learn Angular JS?”

“Can you provide any best practices you use when setting up your html, css files? General rules, etc.”

“What is the difference with JS and jQuery?”

*“What are good resources for learning useful
JavaScript rules?”*

GITHUB + FILE ORGANIZATION

- **Homework 1**

- *index.html*
- *css*
- *images*

- **Homework 2**

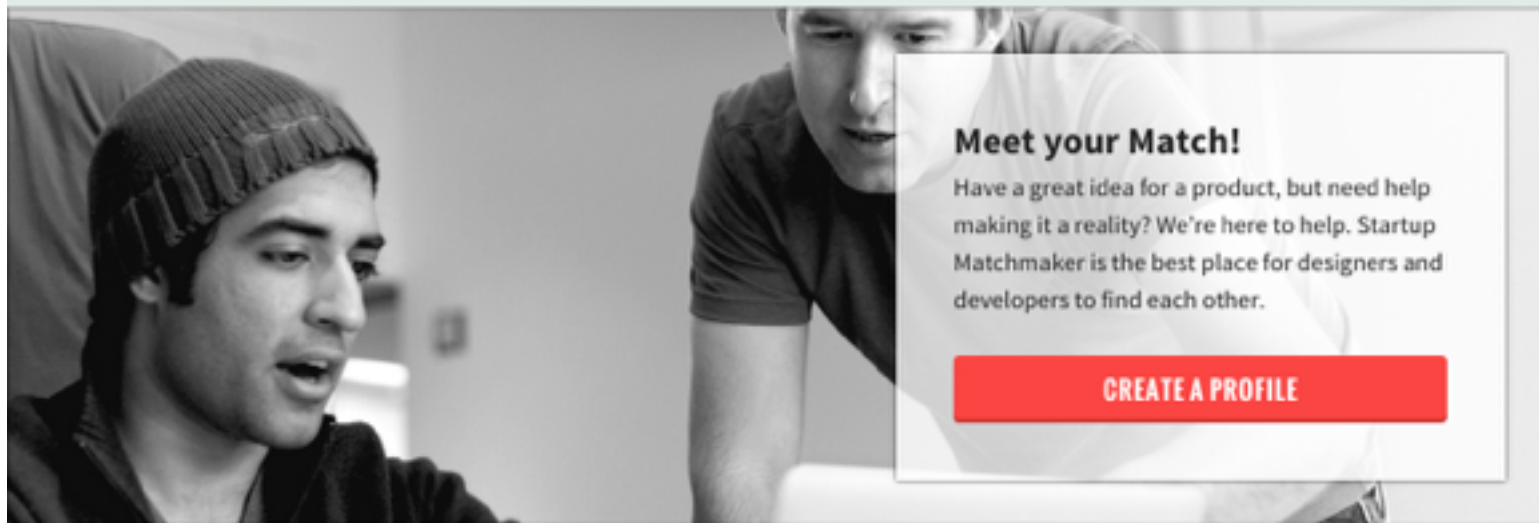
- *index.html*
- *css*
- *images*

- **Final Project**

- *index.html*
- *page1.html*
- *page2.html*
- *images*
- *css*
- *js*

** Go over today's Wiki resources **

Because two heads are better than one.



Meet your Match!

Have a great idea for a product, but need help making it a reality? We're here to help. Startup Matchmaker is the best place for designers and developers to find each other.

[CREATE A PROFILE](#)

Create a Profile

Are you a Designer? Put yourself out there so that others can find you!

[SIGN UP NOW](#)

Find a Developer

Looking for a developer to work with on the next big thing? Look no further.

[START YOUR SEARCH](#)

Find a Designer

Need someone who can make a product intuitive and appealing? Get ready.

[START YOUR SEARCH](#)

JQUERY

Eric Boyer

LEARNING OBJECTIVES

- Differentiate between jQuery and JavaScript, describe benefits of using them.
- Recognize jQuery syntax
- Use selectors and jQuery functions to effectively manipulate the DOM.

AGENDA



- Intro to jQuery
- Using jQuery
- Method Chaining
- Debugging
- jQuery Documentation
- Lab

JQUERY

INTRO TO JQUERY

BECOMING A PROGRAMMER

*It isn't about the programming language!!!
It is about changing how you think.*

YOUR RESPONSIBILITIES

Don't feel like you have to sit down and memorize the syntax!

It's important that you:

- Focus on understanding the key concepts
- Are resourceful — we'll work on honing your Google-ing skills
- Get as much practice in as possible

JQUERY

THE BASICS

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!

JS:



```
document.getElementsByTagName('body')[0]
```



```
document.getElementById('about')
```



JQUERY:

```
$('#body')
```



```
$('#about')
```



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

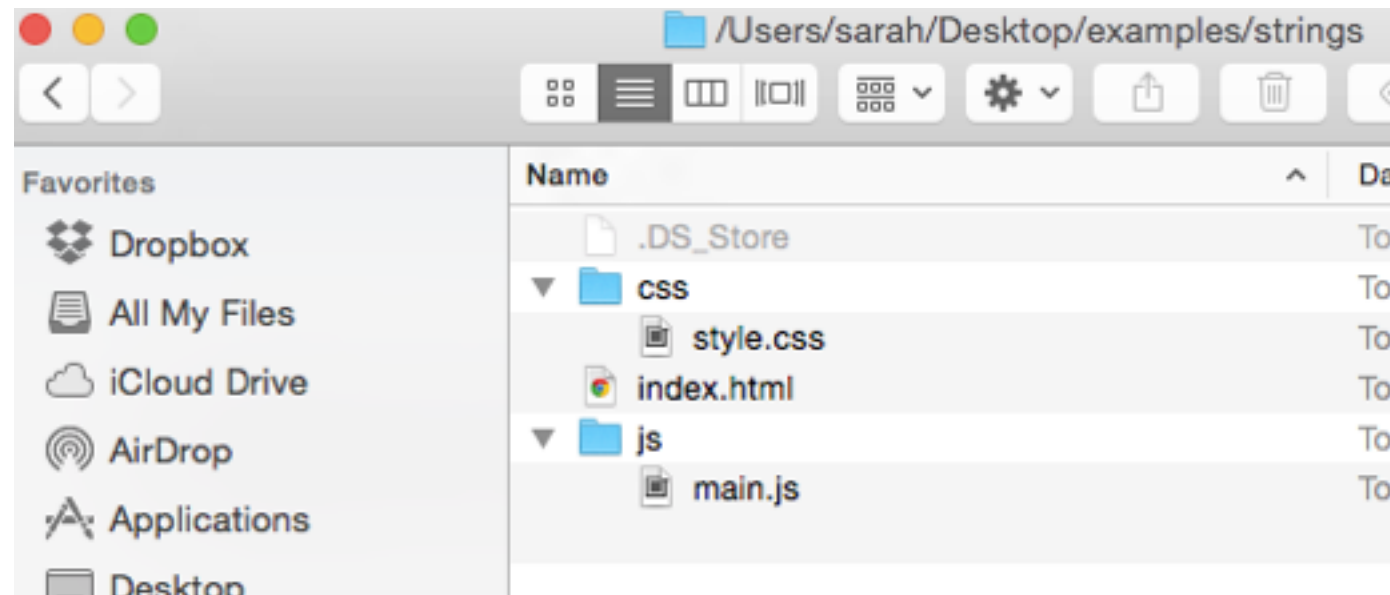
JQUERY

ADDING JQUERY TO YOUR PROJECT

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*).

sample structure:



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!!!!

PRO TIPS

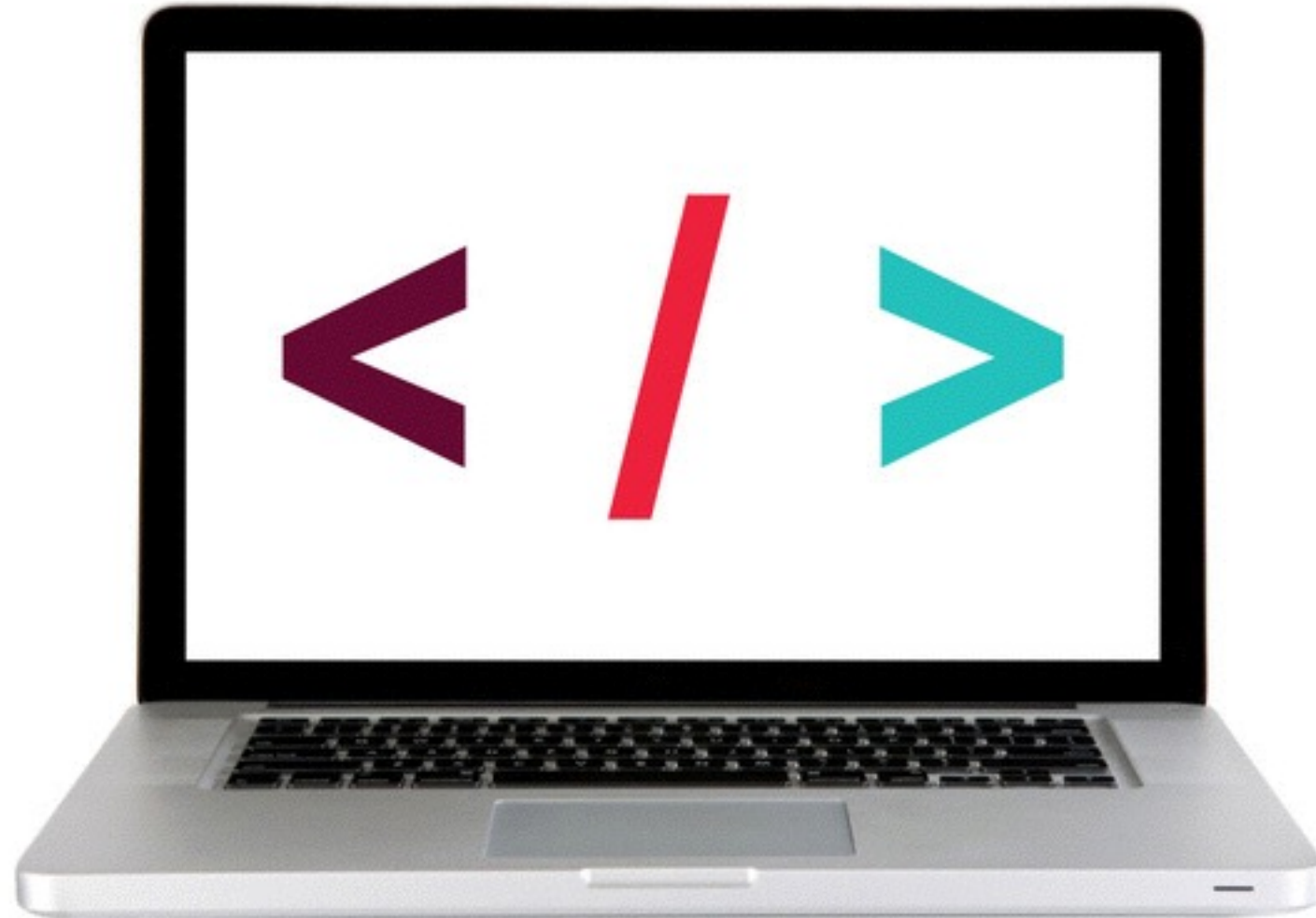
TO MAKE SURE YOUR JS IS HOOKED UP PROPERLY:

- Add an alert to the top of your JS file and load the page in the browser

```
alert('Hello from JS!');
```

- If you don't see an alert pop up when you load the page, you know you have linked your files incorrectly.

LET'S TAKE A CLOSER LOOK



JQUERY

USING JQUERY

STATEMENTS

- Last class we chatted about how scripts are a series of instructions that are executed one-by-one
- Each individual step is called a **statement**

```
var today = new Date();  
var hourNow = today.getHours()  
var greeting;  
  
if (hourNow > 18) {  
    greeting = 'Good evening';  
} else {  
    greeting = 'Good afternoon';  
}  
  
document.write(greeting);
```

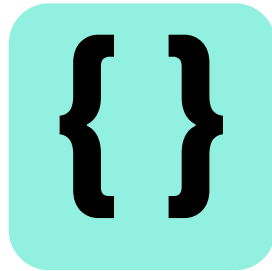


1. Begin on a new line
2. End with a **semicolon**

JS SYNTAX

Syntax: Spelling and grammar rules of a programming language.

- Like any language, there are formal rules around how to write Javascript. This is the syntax.



COMMENTS

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

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

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

JQUERY

PART 1 — SELECT AN ELEMENT

USING JQUERY TO MANIPULATE THE DOM

1

Select an element/elements

2

Work with those elements

JQUERY — SELECTING ELEMENTS

Selector

```
$('li').addClass('selected');
```

jQuery Function

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

PART 2 — ADD A METHOD

USING JQUERY TO MANIPULATE THE DOM

1

Select an element/elements

2

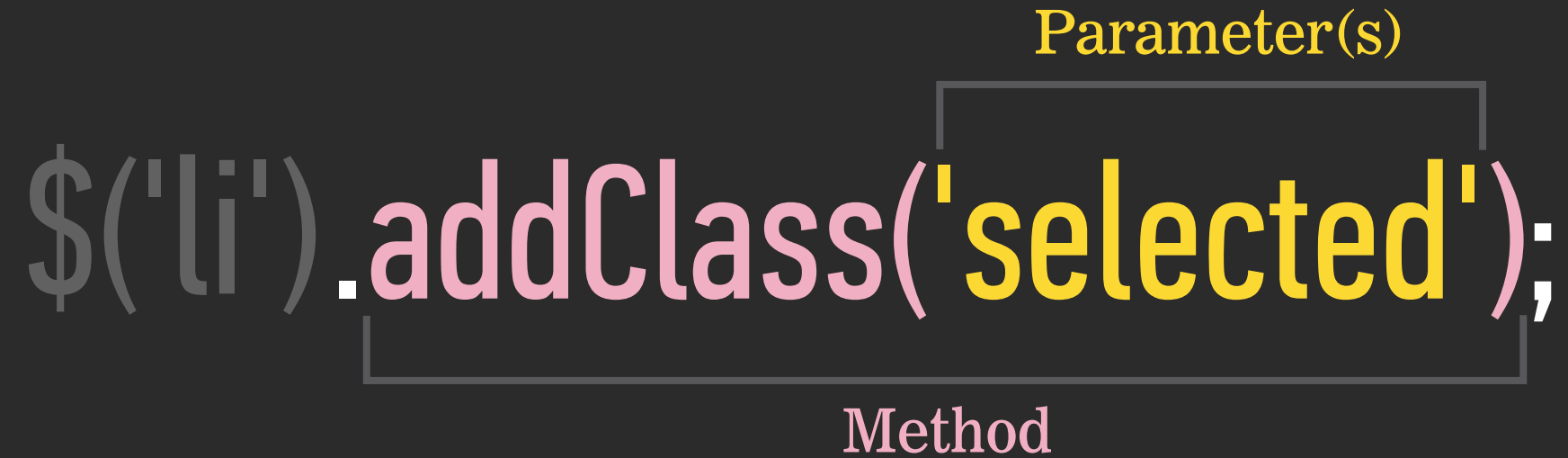
Work with those elements

JQUERY — WORKING WITH THOSE ELEMENTS

Parameter(s)

```
$('.li').addClass('selected');
```

Method

The image shows the jQuery code snippet `$('.li').addClass('selected');` with two annotations. A bracket above the code spans from the opening parenthesis of the selector to the closing parenthesis of the method call, with the label "Parameter(s)" centered above it. A bracket below the code spans from the dot after the selector to the closing parenthesis of the method call, with the label "Method" centered below it.

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.



See the [jQuery docs](#) for list!

JQUERY METHODS — WORKING WITH THOSE ELEMENTS

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

**FINDING
ELEMENTS**

**GET/SET
CONTENT**

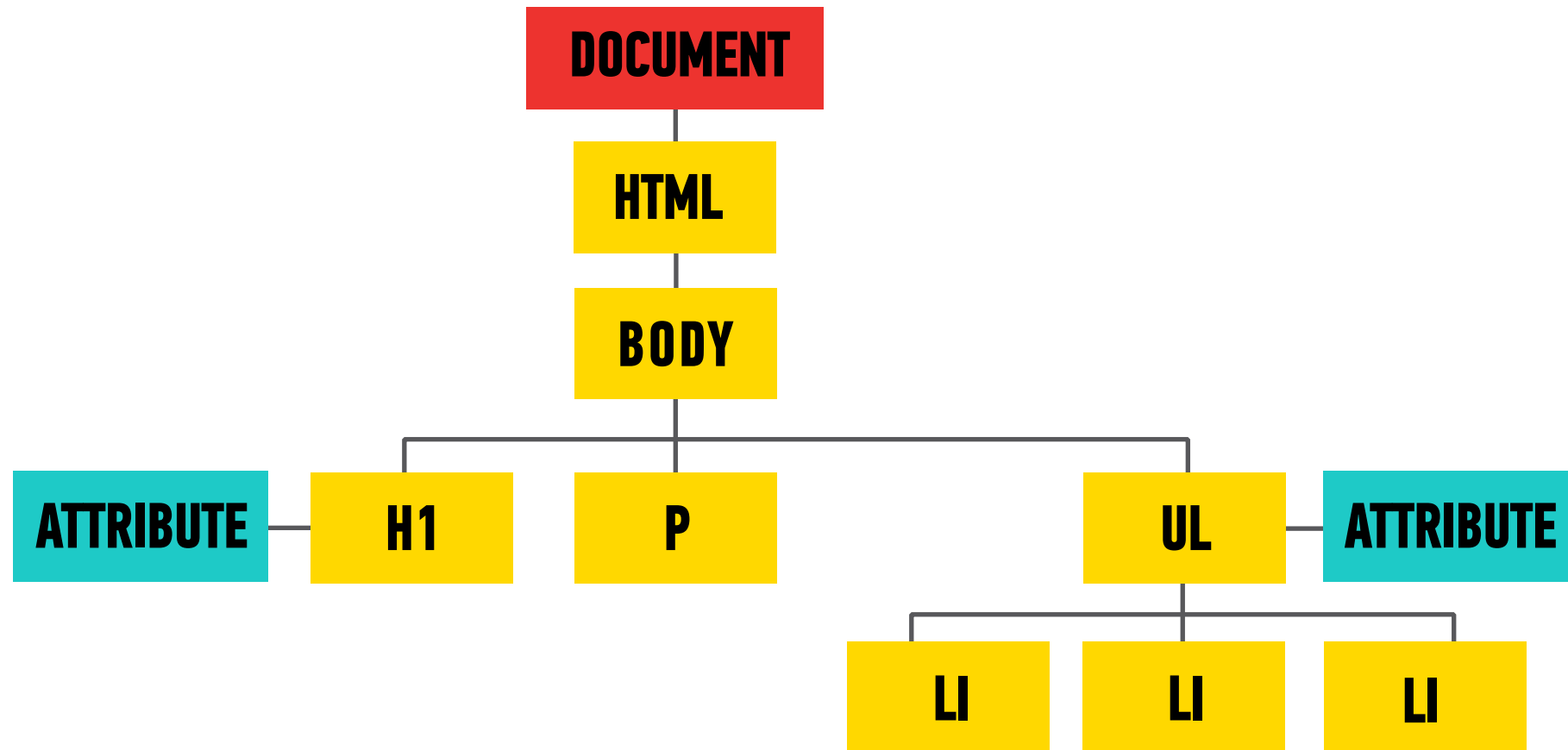
**ADD
EFFECTS/
ANIMATION**

**CREATE
EVENT
LISTENERS**



See the [jQuery docs](#) for list!

TRAVERSING THE DOM?



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

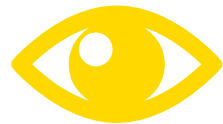
After we've selected elements, we can use jQuery methods to:

**FINDING
ELEMENTS**

**GET/SET
CONTENT**

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ANIMATION**

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EVENT
LISTENERS**



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()`

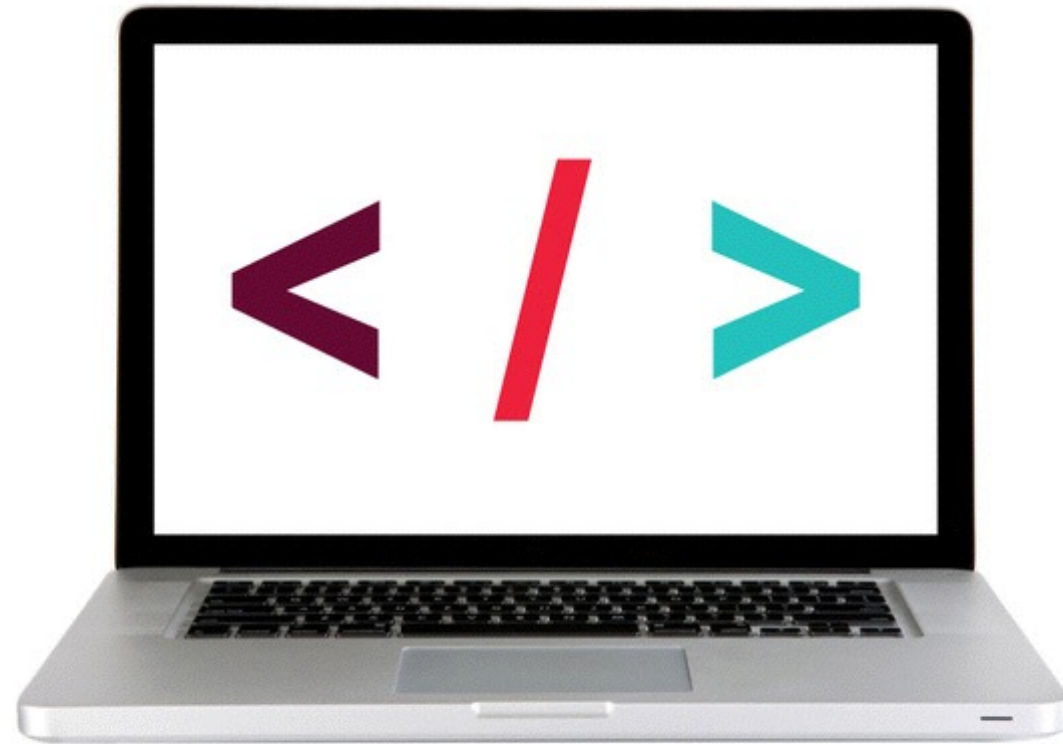
What goes in the parentheses?

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');
```

LET'S TAKE A CLOSER LOOK

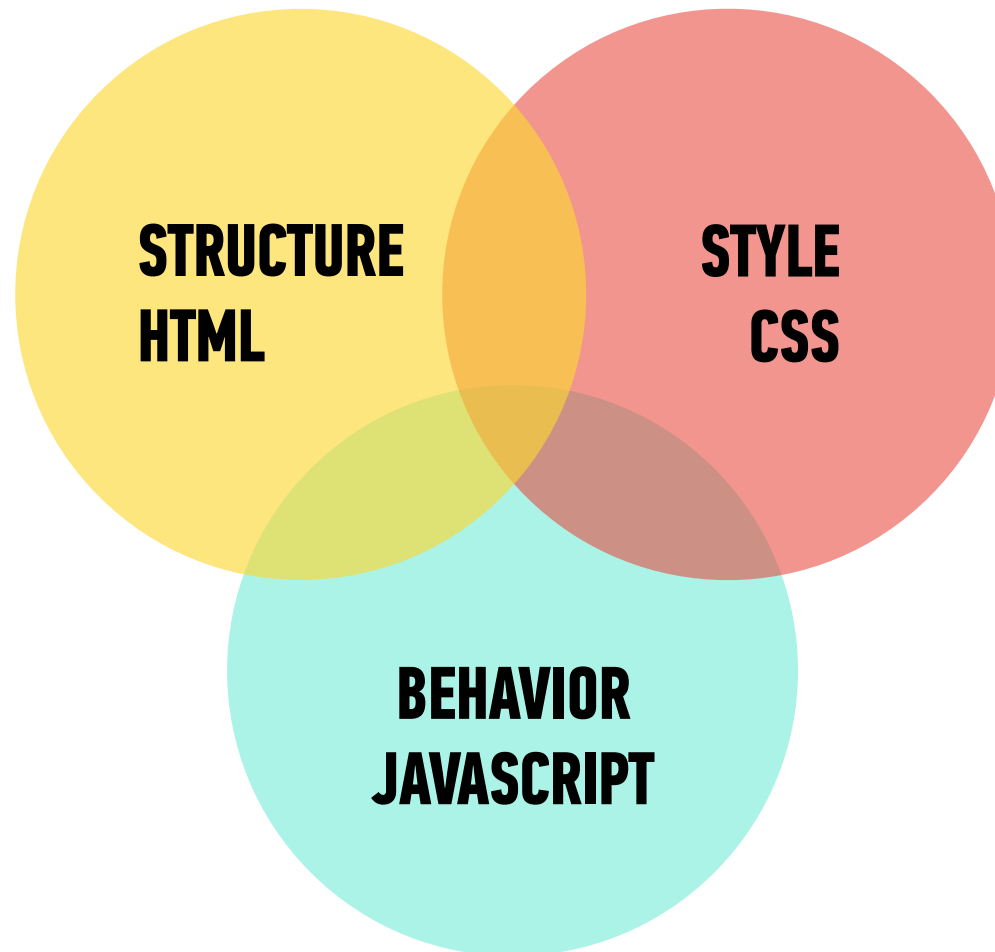


JQUERY

SEPARATION OF CONCERNS

THE THREE AMIGOS: STRUCTURE, STYLE, BEHAVIOR

- HTML = Noun
- CSS = Adjective
- Javascript = Verb



SEPARATION OF CONCERNS

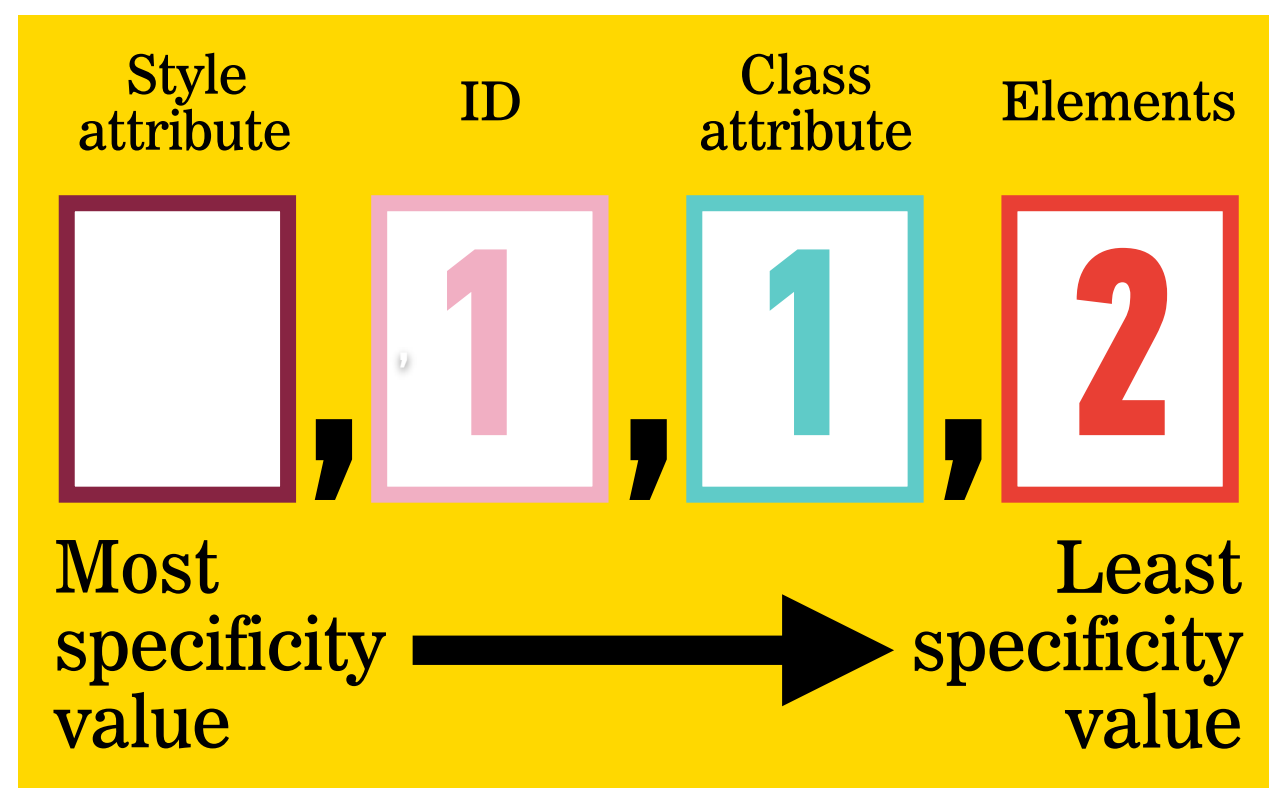
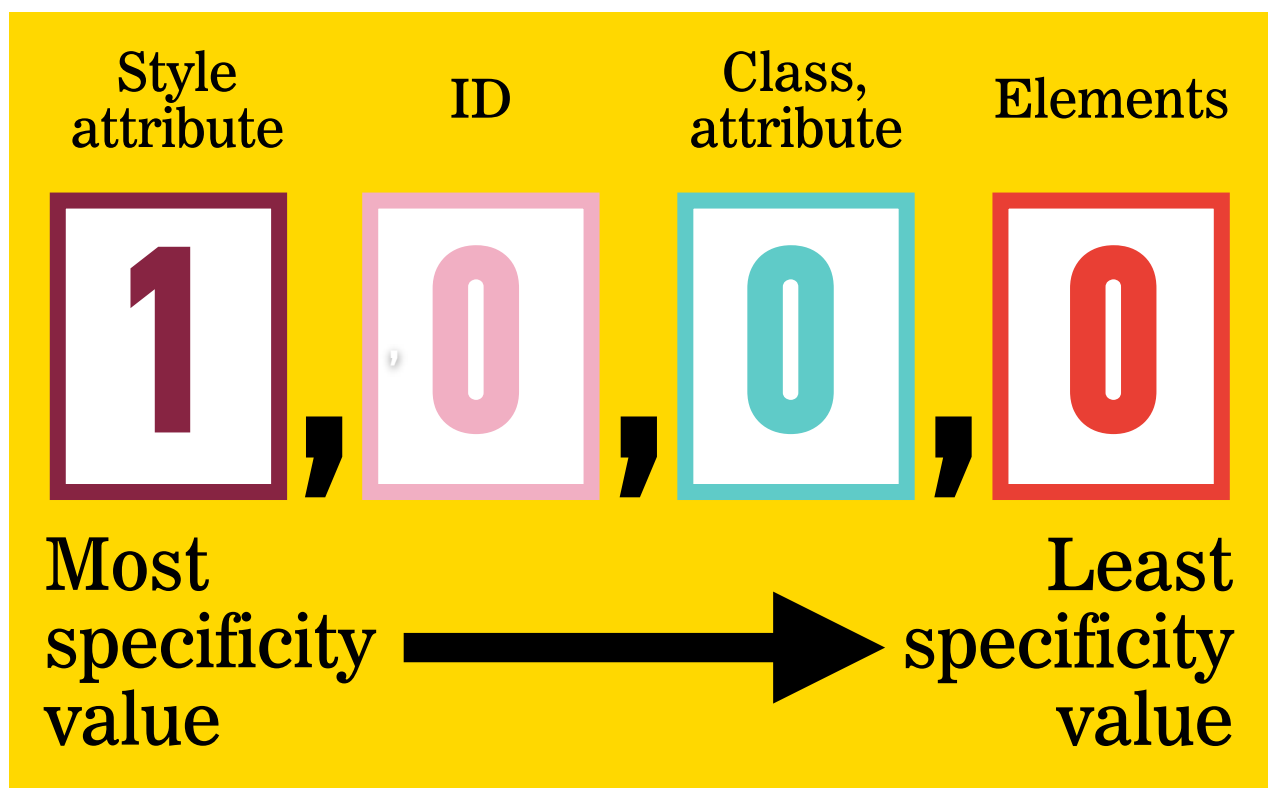
- Our JavaScript should focus on *behavior* and not on *presentation* (that's what our CSS is for!)
- How could we refactor our Color Switch from Tuesday to follow this guideline?
- <http://codepen.io/eboyer/pen/grPZay>

CSS CASCADING

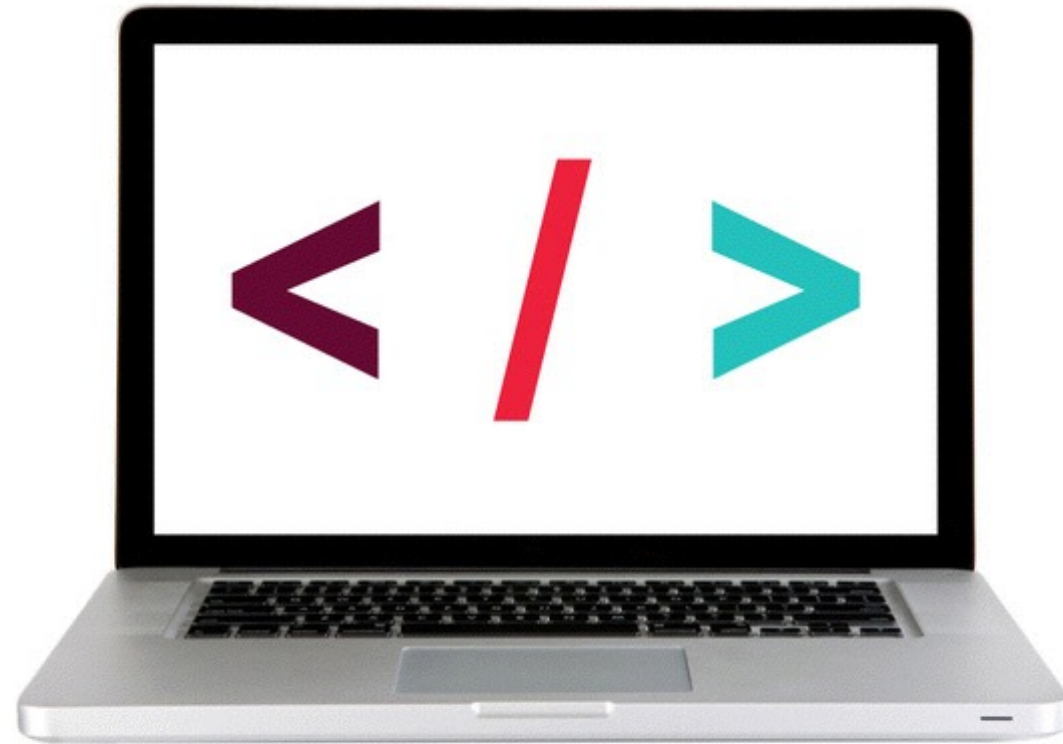
WINNER!

`<li style="color: red">`

`#about .first h2 + li`



LET'S TAKE A CLOSER LOOK



JQUERY METHODS — WORKING WITH THOSE ELEMENTS

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

**FINDING
ELEMENTS**

**GET/SET
CONTENT**

**ADD
EFFECTS/
ANIMATION**

**CREATE
EVENT
LISTENERS**



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:

**FINDING
ELEMENTS**

**GET/SET
CONTENT**

**ADD
EFFECTS/
ANIMATION**

**CREATE
EVENT
LISTENERS**



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

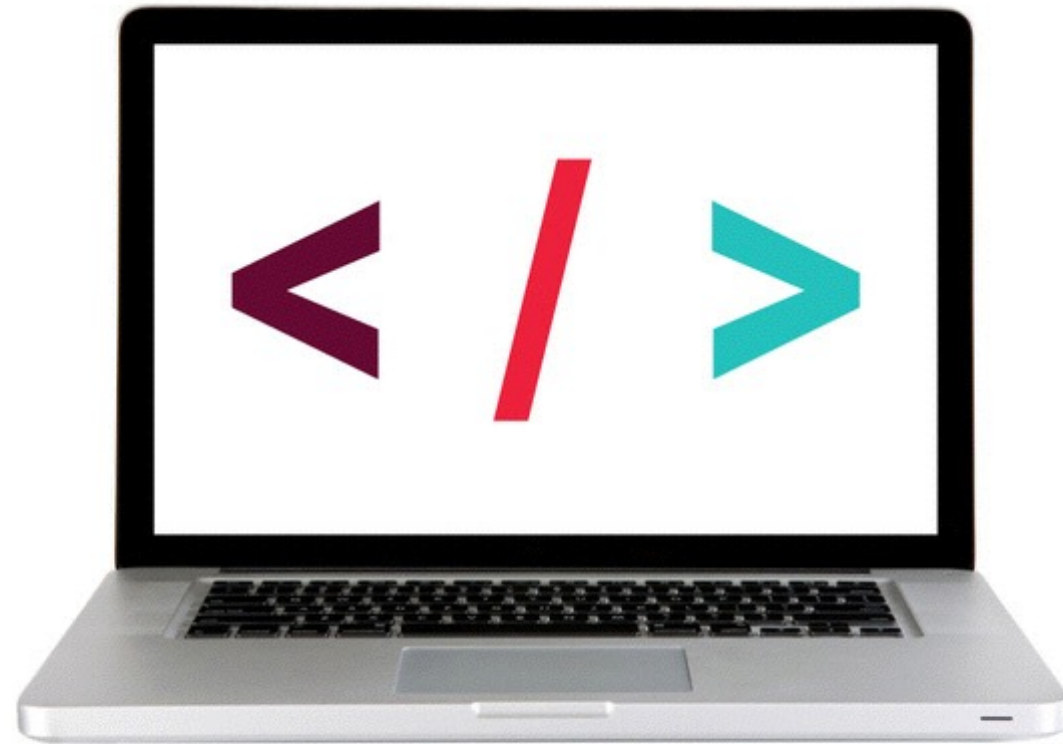
Some events that `.on()` deals with:

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



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

LET'S TAKE A CLOSER LOOK



JQUERY

METHOD CHAINING

JQUERY METHODS — METHOD CHAINING

```
$('.item').find('h2').slideUp(300)
```

JQUERY METHODS — METHOD CHAINING

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

JQUERY METHODS — METHOD CHAINING

```
$('h3').siblings('p').show()
```

JQUERY

VANILLA JS VS. JQUERY

JQUERY

DEBUGGING



WHY ISN'T IT WORKING?

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*

DEBUGGING

To access debugging console:

Open the Chrome Inspector, click the Console tab

DEBUGGING — LEVEL 1

Check for errors in console

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



Uncaught SyntaxError: Unexpected token)

main.js:13



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*

DEBUGGING — LEVEL 3

Do some Googling!

- Try Googling it
- Be ready to clearly articulate the problem (Write out what your problem is)

DEBUGGING — LEVEL 4

Get help!

If you still can't find a solution, ask your fellow classmates and instructors.

Help us help you!

1. Upload work to Github.
2. Post in Slack in the class channel.
3. Be descriptive about the problem.
4. Tell us what you've already done to try to figure it out.
5. Link to your specific file from Github that you're having issues with.

JQUERY

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!!!

1. The [jQuery Examples](#) page has an example for almost every method!
2. [jQuery documentation](#) — Look things up

DASH – MAKING YOUR LIFE EASIER ONE DOC AT A TIME

I highly recommend that you download [Dash](#)



JQUERY

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_7 > select_fun`

1. Follow the instructions in `main.js`
2. Use cheat sheet as a guide for syntax and look up any methods you're not familiar with in the jQuery documentation.
3. **Bonus:** Complete part 2 of the lab for more practice (`starter_code_lesson_7 > select_fun_part_2`)

LEARNING OBJECTIVES

- Differentiate between jQuery and JavaScript, describe benefits of using them.
- Recognize jQuery syntax
- Use selectors and jQuery functions to effectively manipulate the DOM.

LAB

HOMEWORK

HOMEWORK

FEEDBACK GROUPS FOR SELECT_FUN_PART_2

FEEDBACK GROUPS

IF YOU ARE STUCK...

- 1) Use the “Chrome Inspector” to look at your code, use the console, Google for answers.
 - 2) Ask your question in the Slack channel and see if any fellow students might know the answer
 - 3) Ask Eric & Adriana
- * When using your fellow students and instructors, pushing your code to Github is a great place to share where all of your code is currently at.

FEEDBACK GROUPS

GROUP 1 (ERIC)

Kimberly Baird
Tom Bunting
Michael Fischer
Jim Howes
Jon Iler
Peyton Lee
Blanca Leon-Carter
Anna Matras
Christopher Zalek

TO: EBOYER@GMAIL.COM

GROUP 2 (ADRIANA)

Corin Menuge
Colin Quirk
Allison Schaffer
Kevin Sella
Michael Sena
Nicholas Skeba
Ashley Sullivan
Lisa Vasquez
Katrina Wang
Xi Yue Li

TO: ADRIANA.LCS316@GMAIL.COM

FEEDBACK GROUPS

DUE 11:59PM, SUNDAY MAR 13TH

- Complete the “select_fun_part_2” lab assignment
- Write your proposal for your final project, send to both Eric & Adriana
- Add files, Commit, and Push/Publish your homework to your class Github Repo

*Feedback given between Monday AM - Wednesday PM

FEEDBACK GROUPS

ALL FINAL PROJECT PROPOSALS

TO: EBOYER@GMAIL.COM, ADRIANA.LCS316@GMAIL.COM

FRONT-END WEB DEVELOPMENT

SNACKS & DESIGN

TUESDAY MAR 15TH

ALLISON SCHAFFER & KEVIN SELLA

(GOOGLE SHEET IS PINNED IN SLACK)

JQUERY

EXIT TICKETS