

Intro to jQuery

Objectives

- Introduce the DOM
- Introduce jQuery
- Understand how jQuery is different than *native* javascript

Agenda

- Review Traffic Light exercise from last class
- Discuss the DOM
- Introduction to jQuery
- Review jQuery Code Examples
- Code Along: Color Scheme Switcher (with jQuery)
- Code Along: FAQ

Agenda (cont'd)

- Lab: jQuery DOM Selector Practice
- Homework: jQuery Traffic Light
- Homework: Submit Final Project Ideas

Protip for Learning Javascript/jQuery

- Practice, practice, practice
- Use your developer console
- Google your issues (the answer is out there!!!!)
- Use pattern matching
- Break things on purpose to see how they work¹
- Take a deep breath, errors are **Learning Opportunities**

¹ ...but make sure you fix them before turning in your assignments :)

What is the DOM

- Stands for Document Object Model
- Browsers view our webpages as **documents**
- Browsers represents documents in a couple of ways
 - In the browser window as html
 - Through the DOM
- The DOM is just another way that our browser represents our documents

What is the DOM (cont'd)

- We make our pages interactive by modifying the DOM
- Javascript is a scripting language that allows us to manipulate/modify the DOM
- Click [here](#) for a good overview of the DOM

What is jQuery?

- A javascript library
- Offers a simple way to achieve a variety of common javascript tasks
- Consistent across all browsers
- Does not do anything pure javascript cannot do, just does it with a more intuitive syntax

Benefits of jQuery?

- Uses CSS selectors
- Accomplishes more with less code

CSS selectors means less code

```
// selecting an element using native/pure javascript  
document.getElementById('flavors');
```

```
// using jQuery (same as above but with much more intuitive syntax)  
$('#flavors');
```

- Use of CSS selectors to 'select' elements is one of the main reasons jQuery is so popular today

CSS selectors means less code (continued)

```
// selecting an element using native/pure javascript  
document.getElementsByTagName('body')[0].style.backgroundColor = 'white';
```

```
// using jQuery (same as above but with much more intuitive syntax)  
$('body').css('backgroundColor', 'white');
```

- Note: best practice is to use **camel case** when referencing css properties that have multiple words i.e.
'backgroundColor' instead of 'background-color'

Mental Model for using jQuery

- 1) Select an element using CSS selectors
- 2) Do something with that element using jQuery methods

```
// selects an element with the id of 'flavor' and then  
// adds the 'favorite' class to that element using  
// the addClass() method  
$( '#flavor' ).addClass( 'favorite' );
```

Adding jQuery to your projects

Option #1 - Download jQuery file(s)

```
<html>
  <head>
    <title>Add jQuery by downloading jQuery file(s)</title>
  </head>
  <body>

    <script src="js/jquery-2.1.4.js"></script>
    <script src="js/app.js"></script>
  </body>
</html>
```

Adding jQuery to your projects

Option #2 - Use a CDN (Content delivery network)

```
<html>
  <head>
    <title>Add jQuery using a CDN</title>
  </head>
  <body>

    <script src="//code.jquery.com/jquery-2.1.4.js"></script>
    <script src="js/app.js"></script>
  </body>
</html>
```

Content Delivery Networks (CDNs)

- A content delivery network (CDN) places files in different locations so that the person using your webpage can receive the nearest copy of it faster
- Prevents your users' browsers from downloading commonly used libraries(like jQuery) every time they visit your site
- Use of CDNs increases page speed for highly trafficked sites
- Click [here](#) for a nice overview of CDNs

\$() function

- jQuery uses a function called `jQuery()` to find elements on the page
- `$()` is shorthand for `jquery()`; `$()` is what is used most often

```
// both of these creates a jQuery object around  
// the <p> element(s)  
// This allows you to use jQuery methods on the element
```

```
jQuery( 'p' ) === $( 'p' );
```


Document Ready

- jQuery must wait for a page to be loaded before it can manipulate the page's DOM
- jQuery provides a "document ready" function that will run once the DOM is fully loaded

```
$(document).ready(function(){  
    // place your code here  
    // jquery code must be placed inside of a document ready block  
})
```

Document Ready

alternative syntax

```
$(function(){  
    // this is the same as the $(document).ready(function(){} ) function  
    // just much less code  
  
    // place your code here  
});
```

Documentation

You will be here very often so get familiar with it!

api.jquery.com

Code Examples: jQuery in Action²

² The following examples are stored in `starter_code/js_examples`

Select Elements using CSS Selectors

Use common css selectors to select elements

```
// select all p elements within the .container and change  
// the text color to red  
$('.container .p').css('color', 'red');
```

Select Elements using jQuery Selectors

jQuery has some special selectors you can use to select elements

```
// use ':first' method to select first li element  
$('li:first').addClass('active');
```

Getting and Setting Content using jQuery

Using methods like `.html()`, `.text()` and `.val()` you can **get** (i.e. retrieve) and **set** content on your pages

```
// get the text content stored in an element  
$('p.intro').text();
```

```
// set the content to another value  
$('p.intro').text('Updated text that will replace existing content');
```

Adding New Content using jQuery

Use methods such as `.append()` and `.after()` to add content to your page

```
// use .after() to add a new paragraph after the  
// p element with a class of 'intro'
```

```
var newParagraph = "<p> I am a new paragraph. </p>";  
$('p.intro').after(newParagraph);
```

```
// Add a new list item to the end of the unordered list  
$('ul#to-do').append('<li>Pick up laundry</li>');
```


Events with jQuery

Use methods like jQuery's `.click()` and `.hover()` method to easily add event listeners to your page

```
// .click() takes one argument (additional information) -> a function that holds the code  
// you want to run when the click event happens
```

```
// Add a click event listener to a button with an id of 'submit'  
// and then show an alert when the button is clicked
```

```
$('#submit').click(handleSubmit){  
  });  
  
function handleSubmit(){  
  alert('you clicked the button!');  
}
```

Code Along: Color Switcher (using jQuery)

Code Along: FAQ

Lab: jQuery DOM Selector Practice

Homework #1 - jQuery Traffic Light

Directions:

1) Fork the following repository:

[Homework #3](#)

2) Review the assignment [here](#)

3) Use process covered in the Git/Github Tutorial to submit your assignment

Homework #2 - Final Project Milestone #1 (Initial project proposals)

- Submit a list of at least 3 final project ideas to me via direct message on Slack (**Due Tuesday 3/15**)
- I will meet with each of you next week to discuss your ideas