Bienvenidos

Clase número 8

Objectives

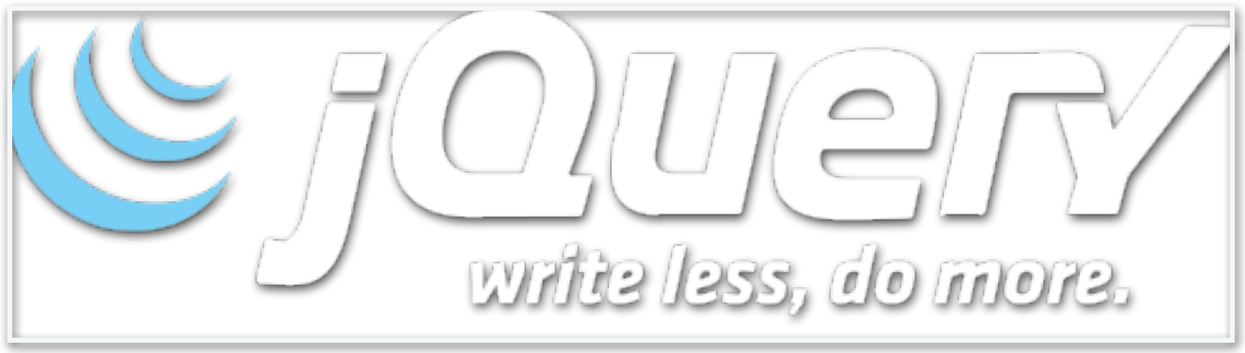
- Basics of jQuery and all of its majestic-ness.

- Continuation of the events that can be listened to in the browser

What is jQuery?

- “jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers”

- It reduces the amount of pain working with Javascript in the browser on a lot of things.



Remember these methods?

- `document.getElementById` retrieves a single element with a matching ID.

- `document.getElementsByClassName` retrieves an array of elements that match the given class.

- `document.getElementsByTagName` retrieves an array of elements that are of the given type.

- These are methods provided by the browsers default javascript engine.

These are great but…

- What if we wanted to retrieve the first **<li>** element within a particular list with class **specialList**?

- In CSS you can do this something such as this:
  - `.specialList li:first-child`

- So why not Javascript?!?

jQuery provides tools like this

- jQuery is an open-source project that was released in 2006
- Currently the most widely used JavaScript library on the web
- Provides tools for working with the DOM, Networking, and much more!

Why use it?

- jQuery provides a ton of useful functions for finding elements on a page.

- It also has a wide gamut of 3rd party plugins for things like Calendar pickers, Image Carousels, etc.

- It provides a lot of essentials for manipulating the DOM such as adding elements, removing, etc.

For example

- Given we have this HTML on our page:

- ```
  <ul class="specialList">
    <li>First Child</li>
    <li>Second Child</li>
  </ul>
  ```

- We want to select the very first list item (li tag)

- In CSS, you can use a CSS selector:

  - `ul.specialList li:first-child`
  ```

Finding the element we're looking for

- jQuery allows us to find elements in the DOM using CSS selectors like so…

- `jQuery(".specialList li:first-child”)`

- This will find the element with a class “`specialList`” and then the first <li> inside of it.

- ```
  <ul class=“specialList”>
    <li>First Child</li>
    <li>Second Child</li>
  </ul>
  ```
  ```

Differences between jQuery and plain old javascript

- In the last class, we used the method **document.getElementById()**
- This method will return a DOM Object from somewhere on the page
- On the element you call things such as “appendChild”, “.value”, “.onclick”, etc.
- With jQuery however, the return value will be a jQuery object

Return Value

- This returns a jQuery object that contains our search result for the DOM element.

- So to retrieve the specific item we're looking for in this list:

- `var xyz = jQuery(".specialList li:first-child”)`

- `var firstOne = xyz[0]`

- `// firstOne is the element that jQuery found in the DOM`

To Create a New Element

- To create a new element using jQuery, you can use the elements tag as you would in HTML:

- ```
  var myElem = $('Hello');
  ```
  ```

With this new element

- You can append this element to the page like so:

```
var body = $('body');
var myElem = $('<strong>Hello</strong>');
myElem.appendTo(body);
```

Retrieving elements on a page

```
<div class="alert alert-success">
  <ul>
    <li>Sup</li>
  </ul>
</div>
```

```
var ulElem = $('div.alert-success ul');
```

This selects all div elements on the page with “alert-success” and the “ul” within it.

Code Along

- Selecting elements in the DOM using jQuery to select it

- Creating new elements and appending them

Trading JavaScript for jQuery

- Tips for reading documentation successfully:
    - Read *all* of the page before continuing. This will catch most of the problems you'll probably encounter 90% of the time.
    - Do the smallest thing possible first after reading the documentation. Basically, don't go and try to change the world after reading the docs.
- We'll be reading / experiencing documentation and code in a bit.

jQuery documentation

- When reading the jQuery documentation, be sure to scroll through the whole document to ensure you're looking at the correct method signature.

- Most jQuery methods change their behavior depending on the number of arguments they have when called.

- When you need to look something up, most popular libraries will have a website dedicated to documentation. For example: http://api.jquery.com/

Documentation Along

- `hide()`
- `show()`
- `toggle()`
- `fadeOut()`
- `fadeIn()`

Code Along

- Please make a folder for #08 in your GA-JS directory on your laptop.

- Open your editor for the newly created folder.

Exercise

- Make a new folder called “exercise-01”
- Make a file called index.html and app.js
- Include the javascript in your HTML file using a **`<script>`** tag
- Make a **`<div class=“container”>`** on the HTML page and then select them using jQuery in your app.js file.
- Hide the element using jQuery

Now I solve it

Click Events

- To add Click Events using jQuery, it's very similar to the last class where we added events using the "onclick" property

```
$('a').click(function(event) {
  event.preventDefault();
  alert('You clicked the link!');
});
```

On the jQuery object that is returned from **$('a'),** you run the "click" method with the callback function to run when the event is triggered.

Code Along

- Adding a click event to an element in your DOM using jQuery.

Exercise 2

- Add to the HTML page that when I click on a box, it triggers a “click” event that changes the text inside the box to “You Clicked Me!”

- Here the page for the jQuery documentation on this subject:

  - http://api.jquery.com/click/

- After you’ve accomplished that, try switching it to use this version “click” instead:

  - http://api.jquery.com/on/

My philosophy on problem solving

- Using Google is a requirement of being a developer.
- Identifying when a forum post applies to you is key to finding solutions quickly and efficiently.

Search (& Destroy)

- Mastery of programming is not knowing everything.
- Mastery of programming is knowing *how* and *where* to find everything.
- It is knowing how to search for solutions to your problems.

Identifying the problem

- Figuring out what your problem is, and formulating it into a search query is a skill that you should be practicing *all* the time.

- This doesn't just apply to programming, but its a good vehicle to mastering it.

For example…

- I want to change the color of a link to green when it is clicked.

- The question to Google becomes “change color of link with jQuery”

- Followed by “change color of Link on click with jQuery”

So here is your task

- Using the same file for the “click” exercise, lets change the functionality just a skosh.

- Please…
    - When the box is clicked, change the background color to purple.

    - When the box is double clicked, change the background to orange.

- Use google, stackoverflow, bing, whatever you want to solve this.

Exercise

http://bit.ly/bt-jquery1

The exercise instructions are in the javascript file