

jQuery

JavaScript

- JavaScript is a scripting language developed by Netscape to allow basic dynamic operations to be performed in browsers.
- Originally created to be easily learned by web developers to add basic interactivity to an HTML page
- JavaScript has since evolved into a tool most developers can't live without.
- However, because of various cross browser and legacy issues,
 - many operations programmers would consider simple in environments such as app development are comparatively complex.

jQuery

- jQuery offers the JavaScript developer more power and flexibility while simplifying and reducing the amount of code required.
- Started as a way to simplify object selection by John Resig back in 1995,
 - jQuery has become necessary tool for any JavaScript developer.

jQuery

- jQuery is designed to offer cross browser support,
 - allowing you to write your code once and have it run properly on every browser.
- jQuery makes it much easier to perform operations
 - such as selecting individual or groups of items for manipulation,
 - changing elements or the entire DOM in an HTML page,
 - or making calls to the server to access remote resources.

Adding jQuery to a Web Page

- Add a referenced to a minified JavaScript file
 - Lacks whitespace, good variable names, and other things that computers don't need but human like
- Better yet, use a **Content Delivery Network (CDN)**

Content Delivery Network

- Geographically distributed set of servers
- Hosts common scripts and files
 - jQuery
 - Bootstrap
 - Knockout
- Faster for the user to download
- Less data for your servers to send
- Many organizations host CDNs
 - Microsoft
 - Google
 - MaxCDN

jQuery

- JQuery.min.js is a compressed version of jquery.js
 - whitespaces and comments stripped out, shorter variable names, ... in order to preserve bandwidth.
 - In terms of functionality they are absolutely the same.
 - It is recommended to use this compressed version in production environment.

Adding jQuery to Webpage

- `<script src="https://ajax.aspnetcdn.com/ajax/jquery/jquery-3.3.1.min.js" type="text/javascript"></script>`

The Magic of \$

- jQuery uses \$ as a shortcut to its factory
 - Returns an instance of the root jQuery object
- Two main uses of \$
- \$(content)
 - Find an item or a group of items
 - Register a ready event handler
- \$.method()
 - Access global utilities
 - Does not act on an object

Registering a Ready Event Handler

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

OR

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

Common CSS selectors using jQuery

- //select all h1 elements
 - \$('h1')
- //select all elements with a class of class-name
 - \$('.class-name')
- //select an element with an id 'demo'
 - \$('#demo')

Attribute based selectors

- // selects ****all**** elements with an attribute matching the specified value
 - \$('[demo-attribute="demo-value"]')
- // selects all ****h1**** elements with an attribute matching the specified value
 - \$('h1[demo-attribute="demo-value"]')

Locating items by partial attribute values

- find all elements where the value starts with a string, use the ^= operator.
 - `$('[class^="col"]')`
- find all elements where the value contains a string, use the *= operator.
 - `$('[class*="md"]')`

Selecting elements based on position

- Parent/Child
- `//` Selects all a elements that are direct descendants nav element
- `$('nav > a')`
- `<nav>`
- `(First) This will be selected`
- `<div>`
- `(Second) This will **not** be selected`
- `</div>`
- `</nav>`

Selecting elements based on position

- **Descendants**

- // Selects all a elements that are descendants nav element
- // The elements can appear anywhere inside of the element listed first
 - \$('nav a')

- `<nav>`

- `(First) This will be selected`

- `<div>`

- `(Second) This will be selected`

- `</div>`

- `</nav>`