

Introduction to Web Design and Application Development

Lecture Overview

- Introduction to jQuery

What is jQuery?

- An open source JavaScript library that simplifies the interaction between HTML and JavaScript
- Created by John Resig in 2005, released in January of 2006
- Built in an attempt to simplify the existing DOM APIs and abstract away cross-browser issues

Why jQuery?

- Fully documented
- Great community
- Tons of plugins
- Small size (~30kb)
- Everything works in IE 6+, Firefox 2+, Safari 3+, Chrome, and Opera 9+

Who Uses jQuery?

- Microsoft, Google, Mozilla, IBM, Amazon, HP, Intel
- Ruby on Rails, Wordpress, Django, Drupal, CakePHP, ASP.NET MVC
- 26.95% of all sites use jQuery

jQuery Features

- Easy to Learn and Master
 - Uses CSS to layer functionality
 - Easy to separate behavior
 - Quick

The Focus of jQuery

- Find some elements
- Do something with them

```
$ ("div").addClass ("special");
```

The jQuery Object

- \$ is the jQuery Object (also named jQuery)
- "div" finds some elements using CSS selectors
- \$("div") returns a jQuery set (containing 0 to many DOM nodes)
- addClass(...) modifies all the divs

```
$(".div").addClass("special");
```


Graceful Scripting

- jQuery will gracefully fail when it can't find anything to run against
- Works just like CSS - write your queries to match what you want, doesn't break when nothing is found

```
$(".idontexist").addClass("special");
```

jQuery Ready Event

- In order to traverse and manipulate the page we must wait until it's ready to be used
- jQuery has a ready event that fires the instant the DOM is ready to be worked with
- Stick all your jQuery code in a ready block, load it unobtrusively

```
$(document).ready(function() {  
    // Your jQuery code goes in here  
});
```

CSS Selectors +

- CSS Selector 1-3 support
- Better CSS Selector support than most browsers
- Plus a several of custom selectors that make life easier
 - (Such as :first, :last, :has(), :visible, :hidden)

Traversing

- Sometimes CSS selectors alone aren't enough
- jQuery provides a full suite of methods for walking the DOM tree
- `.parent()`, `.next()`, `.prev()`, `.children()`, `.siblings()` and many more

```
$("button").parent().css("border", "3px solid red");
```

Chaining

- You can have multiple actions against a single set of elements
- Every jQuery method returns the jQuery set, for further actions (unless a value is returned)

```
$("#div").hide();  
$("#div").hide().css("color", "blue");  
$("#div").hide().css("color", "blue").remove();
```

Chained Traversal

- Sometimes CSS selectors alone aren't enough.
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```
$("button")  
  .parent().css("border", "3px solid red")  
  .siblings().css("border", "3px solid green");
```

Manipulating Elements

- Now that we've found the elements we're looking for, let's change them!
 - Attributes (addClass, attr)
 - CSS (css)
 - Manipulation (append, prepend, remove, clone)
 - Events (click, hover, toggle)
 - Effects (hide, show, slideDown, fadeOut)
 - Ajax (load, get, post)

Manipulation: **.after()**

```
$("#a[target=_blank]")  
  .after("<img src='open.png' />");
```


Manipulation: `.append()`

```
$( "a[target=_blank] " )  
  .append( " (Opens in New Window) " );
```

Manipulation: `.css()`

```
$("#li a").css({  
  color: "red",  
  fontWeight: "bold"  
});
```

HTML Selector

```
$("<li><a></a></li>")  
  .find("a")  
    .attr("href", "http://ejohn.org/")  
    .html("John Resig")  
  .end()  
  .appendTo("ul");
```

Events: **.submit()**

```
$( "form" ).submit (function () {  
    if ( $( "#name" ).val () === "" ) {  
        $( "span.help" ).show ();  
        return false;  
    }  
});
```

Events : **.click()**

```
$( "a.menu" ).click( function () {  
    $( this ).next () .toggle () ;  
    return false ;  
} ) ;
```

Events: **.hover()**

```
$( "li" ).hover( function () {  
    $( this ).animate( {marginLeft: 38, marginRight: 0} );  
}, function () {  
    $( this ).animate( {marginLeft: 18, marginRight: 18} );  
});
```

Effects: `.slideToggle()`

```
$("#a.menu").click(function(){  
    $(this).next().slideToggle("slow");  
    return false;  
});
```

Effects: `.animate()`

```
$("#div.block").animate({  
  fontSize: "2em",  
  width: "+=20%",  
  backgroundColor: "green"  
});
```


Effects: **.hide()/.show()**

```
$("#div.block").hide("slow", function() {  
    $(this).show("slow");  
});
```

In-Class Assignment

- Download and try all jQuery examples

Resources

- W3schools.com

Questions

