



CGT 353 Lecture 2

Introduction to jQuery

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Introduction

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Getting Started

- Start with a new .html that contains the following:

```
<?xml version="1.0" encoding="UTF-8" ?>
<!doctype html>
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
  <head>
    <meta charset="utf-8">
    <title>Getting Started with jQuery</title>
  </head>
  <body>
    <a href="http://jquery.com/">jQuery</a>

    <!-- The script below points to your copy of jQuery -->
    <script src="jquery.js"></script>
    <script>

    </script>
  </body>
</html>
```

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Downloading jQuery

- jQuery can be downloaded from here:
 - http://docs.jquery.com/Downloading_jQuery
- You can download plugins developed by other contributors here:
 - <http://plugins.jquery.com/>
 - Don't do this to start... this is for after you have the hang of jQuery

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Understanding jQuery syntax

- Basic syntax:
 - \$(selector).action()**
 - The dollar sign \$ defines it as being jQuery
 - The (selector) is used to query (or find) HTML elements on the page
 - The .action() is the jQuery action that will be performed on the element(s)

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Case sensitivity

- Consider **everything** to be case sensitive and you'll be much better off.

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BASIC SYNTAX

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Examples of the syntax

- `$("#a").addClass("blue");`
 - Uses jQuery to add a CSS class named 'blue' to all <a> elements.
- `$("#a").removeClass("blue");`
 - Uses jQuery to remove the CSS class named 'blue' from all <a> elements.
- `$("#div").hide();`
 - Hides all <div> tags on the page
- `$("#div").hide("slow");`
 - Hides all <div> tags 'slowly' on the page

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Examples of the syntax

- `$(this)`
 - Refers to the current HTML element
- `$("#p")`
 - Refers to the paragraph element
 - Replace p with any HTML element
- `$("#a.example")`
 - Refers to the <a> element with `class="example"`
- `$("#example")`
 - Refers to the element with `id="example"`
- `$("#div#example")`
 - Refers to the <div> element with `id="example"`

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ATTRIBUTE SELECTORS USING XPATH

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Attribute Selectors using XPATH

- `$("[style]")`
 - Refers to all elements with a 'style' attribute
- `$("[style='text-align:center;']")`
 - Refers to all elements with `style="text-align:center;"`
- `$("[style!='text-align:center;']")`
 - Refers to all elements with a 'style' attribute NOT equal to `style="text-align:center;"`
 - Notice the use of the exclamation point !
- `$("[style*='text-align:center;']")`
 - Refers to all elements with a 'style' attribute that **contains** `text-align:center;` within it
 - Notice the use of the asterisk *

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Attribute Selectors using XPATH

- `$("[src$='.jpg']")`
 - Refers to all elements with a 'src' attribute that **ends with** `.jpg`
 - Notice the use of the dollar sign \$
- `$("[name^='address']")`
 - Refers to all elements with a 'name' attribute (think form elements) that **starts with** exactly `address`
 - Notice the use of the ^

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More about attribute selectors

- Suppose you have
 - `<input name="address1" />`
 - `<input name="address2" />`
 - `<input name="saddle" />`
 - `<div name="addme" />`
- Then you have
 - `$("#input[name*='add']").val("has add in it!");`
- Result
 - All 3 **input** elements will have the value set to: "has add in it!"

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CSS SELECTORS

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CSS Selectors

- `$("#div").css("background-color", "#ff0000");`
 - Sets the background-color of all `<div>` elements on the page to red
 - Use `#id` to identify an individual `<div>` by its id
- In your `<head>` element, you have:
 - `<style type="text/css">`
 - `a.test { font-weight:bold; }`
 - `</style>`
- Then
 - `$("#a").addClass("test");`
 - Adds the CSS class 'test' to all `<a>` elements
 - `$("#a").removeClass("test");`
 - Removes the CSS class 'test' from all `<a>` elements

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READY EVENT

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Ready event

- `$(document).ready(function(){`
 //add code here
});
- This is the code that will execute as soon as the document is loaded in the browser and ready to be worked on.
- Replaces `window.onload`

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Ready event

- `$(document).ready(function(){`
 `$("#a").addClass("test");`
 `$("#div#wrapper").css("background-color", "#ff0000");`
});
- When the page is finished loading in the browser, all `<a>` elements will have the CSS class 'test' applied to them and the `<div>` with `id="wrapper"` element will have a red background color applied to it.

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EVENT FUNCTIONS

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Event functions

- `$("#div#wrapper").click(function(event){
 event.preventDefault();
 $(this).hide("slow");
});`
- When the `<div>` with `id="wrapper"` is clicked, prevent any default functionality and hide the `<div>`
- 'event' is the variable name we used as a parameter: `function(event)...` sometimes you might see `function(e)` instead, and then: `e.preventDefault()`;
- `hide()` is a built-in **effect** provided by jQuery
- This has to be launched from the ready event.

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Event functions

- Thus, the entire code would be:

```
<script type="text/javascript">
    $(document).ready(function(){
        $("#div#wrapper").click(function(e){
            e.preventDefault();
            $(this).hide("slow");
        }); //end of click event
    }); //end of ready event
</script>
```

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CALLBACK AND FUNCTIONS

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Callback

- A callback is a function that is passed as an argument to another function and is executed after its parent function has completed.
- `$.get("somePage.html", callbackFunction);`
 - First parameter is the URL to get
 - Second parameter is the name of the function to call after getting the URL
 - Notice that there are **not** `()` after the function

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Callback with arguments

- You're familiar with passing arguments (also called parameters) the traditional way
- `arg1 = "fu";`
- `arg2 = "bar";`
- `someFunction(arg1, arg2);`
 - The two parameters are passed into the function

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Callback with arguments

- You **cannot** follow that example in jQuery
- Here is the **WRONG** way to do it – this will **not** work
- `$.get("somePage.html", callBackFunction(arg1, arg2));`
 - I make this mistake all the time*

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Callback with arguments

- Here is the **correct** way to pass arguments into the function that you want to call.
- `$.get("somePage.html", function(){
 callBackFunction(arg1, arg2);
});`

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EFFECTS

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.hide() effect

- `.hide()` is easy to use
- `$(this).hide("slow");`
 - Hides the current element
- `$("#wrapper").hide();`
 - Hides the element with id="wrapper"
- `$("#p").hide("fast");`
 - Hides all the `<p>` elements

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.animate() effect

```
<div id="clickme" style="width:300px;text-align:center;height:150px;background-color:#ccc;">
  click here
</div>


<script type="text/javascript">
$(document).ready(function(){
  $("#clickme").click(function(){
    $("#pic").animate({
      opacity:0.6,
      left:"+=25",
      height:"toggle"
    }, 3000, function(){
      //animation complete
    });
  });
});
</script>
```

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.animate()

- On the previous slide, if you have an image with id="img1"
- Clicking the div will shrink the image over 3 seconds until it disappears
- Clicking the div again will expand the image over 3 seconds until it is full size again.
- Opacity and position will remain adjusted, however.

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.animate()

- This is a particularly useful example of .animate(), relatively easy also

```


<script type="text/javascript">
$(document).ready(function(){
  $('#pic2').animate({opacity: 1}).hover(function() {
    //on hover, change opacity to 50%
    $(this).animate({opacity: .5});
  }, function() {
    //on exit hover, change opacity back to 100%
    $(this).animate({opacity: 1});
  });
});
</script>
```

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