

Lecture 11 –jQuery

INLS 760
Web Databases
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jQuery

- jQuery is a powerful javascript library
 - Many functions to make programming tasks easier
 - Uses short-hand notations
- Outline for jQuery:
 - Introduction
 - Selectors
 - Events
 - Ajax

some of this lecture is based on material from the w3schools jQuery pages: <http://www.w3schools.com/jquery/default.asp>

jQuery

- To use jQuery, you must include it in your HTML
- You can either:
 - Download it and serve it from your site

```
<script src="jquery-1.9.1.min.js"></script>
```

- Link to it from a hosted site such as Google

```
<script  
src="http://ajax.googleapis.com/ajax/libs/jquery/1.9.1/jquery.min.js">  
</script>
```

jQuery

- A common pattern for using jQuery is to:
 - SELECT some HTML elements from the page
 - Do some action to the selected elements

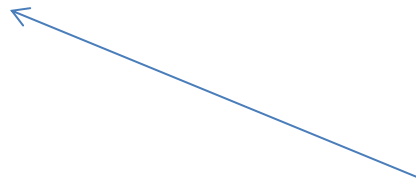
- Syntax:

`$(selector).action()`

- Examples:

`$("p").hide()` `// hides all <p> elements`

`$("#fred").hide()` `// hides element with id='fred'`



The selectors use CSS selector syntax

jQuery/CSS Selectors

- Good reference:
 - http://www.w3schools.com/jquery/jquery_ref_selectors.asp
 - http://www.w3schools.com/jquery/jquery_selectors.asp
- Summary:

Selector	Example	Description
*	<code>\$("*")</code>	All elements
#id	<code>\$("#fred")</code>	The element with id="fred"
.class	<code>\$(".ethel")</code>	All elements with class "ethel"
HTML element type	<code>\$("p")</code>	All <p> elements
Parent descendant	<code>\$("div p")</code>	All <p> elements that are descendants of a <div>

Events

lect11/select1.html

- jQuery allows us to assign **handler functions** to **events** on selected **elements**
- Many possible events:
 - Mouse, keyboard, form, document
 - http://www.w3schools.com/jquery/jquery_events.asp
- Example:

```
$ ("button") .click (function () {  
    alert ("Hello") ;  
}) ;
```

Document Ready Event

- Generally, we don't want to do any jQuery until the DOM of the page has finished loading.
- The `$(document).ready()` event signals this
- Example:

```
$(document).ready(function() {  
    // put jQuery stuff here  
});
```

Manipulating the DOM

- jQuery can get and set DOM elements lect11/select2.html
 - http://www.w3schools.com/jquery/jquery_dom_get.asp
 - text() – for text content
 - html() – for html
 - val() – for textboxes

```
$ ("button") .click (function () {  
    $ ("p") .text ("Hello") ;  
}) ;
```


Setting Different Events

- Different actions, elements, events

lect11/select3.html

```
<html> <script src="jquery.min.js"></script>
<script>
  $(document).ready(function() {
    $("button").dblclick(function() {
      $("p").hide();
    });
  });
</script>
```

Note: In jQuery, often event handlers are set from the jQuery script, not as an onclick.

```
<h1>Heading 1</h1>
<p>This is paragraph 1</p>
<p>This is paragraph 2</p>
<div id='fred1'>This is div fred1</div>
<div id='fred2'>This is div fred2</div>
<button id='button1'>Hide paragraphs</button>
<button id='button2' onclick='$("p").hide();'>Hide
id fred1</button>
</html>
```

jQuery load()

```
<html>
<script src="jquery.min.js"></script>
<script>
    $(document).ready(function() {
        $("#button1").click(function() {
            $("#fred1").load("ethel1.php");
        });
        $("#button2").click(function() {
            $("#fred2").load("ethel2.php");
        });
    });
</script>
```

lect11/load1.html

```
<h1>Heading 1</h1>
<p>This is paragraph 1</p>
<p>This is paragraph 2</p>
<div id='fred1'>This is div fred1</div>
<div id='fred2'>This is div fred2</div>
<button id='button1'>Load fred1</button>
<button id='button2'>Load fred2</button>

</html>
```

jQuery get()

lect11/get1.html

```
<html>
<script src="jquery.min.js"></script>
<script>
    $(document).ready(function() {
        $("#button1").click(function() {
            $.get("get1.php?sortBy=title", function(data, status) {
                $("#fred1").text(data);
            });
        });
    });
</script>

<h1>Heading 1</h1>
<p>This is paragraph 1</p>
<div id='fred1'>This is div fred1</div>
<button id='button1'>Load fred1</button>

</html>
```

jQuery post()

lect11/post1.html

```
<html> <script src="jquery.min.js"></script>
<script>
    $(document).ready(function() {
        $("#button1").click(function() {
            $.post("post1.php",
                {
                    sortBy:"title",
                    keywords:"water"
                },
                function(data, status) {
                    $("#fred1").text(data);
                }
            );
        });
    });
</script>
<h1>Heading 1</h1>
<p>This is paragraph 1</p>
<div id='fred1'>This is div fred1</div>
<button id='button1'>Load fred1</button>
</html>
```

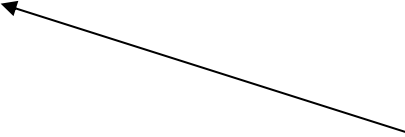
NOTE: post does
not cache data

ajax in jQuery

```
<body>
<h1>jQuery ajax test</h1>
<table border="1" width="100%">
<tr>
  <td width="30%">
    <div id="fred">
      fred<br>
      <button onclick='lucy();'>Click me!</button>
    </div>
  </td>
  <td width="70%">
    <div id="ethel">
      ethel<br>
    </div>
  </td>
</tr>
</table>
</body>
</HTML>
```

lect10/twodiv.html
(part 2)

lucy() is defined in
<head>, see part 1



See: <http://docs.jquery.com/Tutorials>

ajax in jQuery

lect10/twodiv.html
(part 1)

```
<HTML>
<head>
<script type="text/javascript"
  src="http://ajax.googleapis.com/ajax/libs/jquery/1.4.2/jquery.min.js">
</script>
<script type="text/javascript">
  function lucy() {
    $.ajax({
      type: "POST",
      dataType: "html",
      url: "twodiv.php",
      success: function(data) {
        $("#ethel").append(data);
        $("#ethel").append("<br>");
      }
    });
  }
</script>
</head>
```

ajax call to server

"anonymous" function to be executed on ajax success; data returned from server is put into "data"

jQuery syntax for appending data onto a specific div

ajax in jQuery

```
<HTML>
<head>
<script type="text/javascript"
      src="http://ajax.googleapis.com/ajax/libs/jquery/1.4.2/jquery.min.js">
</script>
<script type="text/javascript">
  function lucy() {
    $.ajax({
      type: "POST",
      dataType: "html",
      url: "twodiv.php",
      success: function(data) {
        $("#ethel").append(data);
        $("#ethel").append("<br>");
      }
    });
  }
</script>
</head>
```

```
<body>
<h1>jQuery ajax test</h1>
<table border="1" width="100%">
<tr>
  <td width="30%">
    <div id="fred">
      fred<br>
      <button
        onclick='lucy();'>Click
        me!</button>
    </div>
  </td>
  <td width="70%">
    <div id="ethel">
      ethel<br>
    </div>
  </td>
</tr>
</table>
</body>
</HTML>
```