



jQuery

CSCI 216

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What is jQuery?

- A library of JavaScript functions
- Features:
 - Select and manipulate HTML
 -
 - Manipulate CSS
 -
 - JavaScript Effects and animations
 -
 - HTML DOM traversal and modification
 -
 - AJAX
 -
 - Utilities

Resources

- <http://jquery.com/>
- <http://www.w3schools.com/jquery>
- <http://jqueryui.com/>

Getting Started


```
<!DOCTYPE html>
<html>
  <head>
    <title>Fun with jQuery</title>
  </head>

  <body>
    <h2>Hello, jQuery!</h2>
    <button id='btnOuch'>Say Ouch</button>
    <script src="http://code.jquery.com/jquery.js"></script>
    <script>
      $("#btnOuch").click( function() {
        alert ("Ouch! That hurt.");
      });
    </script>
  </body>
</html>
```

Example 1: A Closer Look

`$("#btnOuch")` selects the element with ID `btnOuch`

- `click()` binds a click event to selected element
- The function executes when the click event is fired



Display an alert when
the button with ID
`btnOuch` is clicked

```
<script>  
    $("#btnOuch").click(function(){  
        alert("Ouch! That hurt.");  
    });  
</script>
```

How jQuery Works

The jQuery syntax is used to **select** HTML elements and perform some **action** on those element(s).

-
- Basic syntax: **\$(selector).action()**
-
-
- A dollar sign to define jQuery
-
- A (selector) to find HTML elements
-
- An action() to be performed on the element(s)

http://www.w3schools.com/jquery/jquery_syntax.asp

jQuery Selectors (like css)

Syntax	Description
<code>\$(this)</code>	Current HTML element
<code>\$("p")</code>	All <code><p></code> elements
<code>\$("p.intro")</code>	All <code><p></code> elements with <code>class="intro"</code>
<code>\$(".intro")</code>	All elements with <code>class="intro"</code>
<code>\$("#intro")</code>	The first element with <code>id="intro"</code>
<code>\$("ul li:first")</code>	The first <code></code> element of each <code></code>
<code>\$("[href\$='.jpg']")</code>	All elements with an <code>href</code> attribute that ends with <code>".jpg"</code>
<code>\$("div#intro .head")</code>	All elements with <code>class="head"</code> inside a <code><div></code> element with <code>id="intro"</code>

For a full reference please see <http://api.jquery.com/category/selectors/>

Comparison

- Compare the following:

```
$("#a").click(function(){  
    alert("You clicked a link!");  
});
```

What are the advantages of the jQuery method?

```
<a href="#" onclick="alert('You clicked a link!')">Link</a>
```


Example 2

```
<script>
    $("h2").click(function(){
        $(this).hide("slow");
    });
</script>
```

What will this do?

What happens if
you have more
than one h2?

Try it!

Example 3

Hide all blue paragraphs when
btnHideBlue is clicked

```
<script>  
  $("#btnHideBlue").click(function(){  
    $("p.blue").hide("slow");  
  });  
</script>
```

```
<button id='btnHideBlue'>Hide Blue</button>
```

jQuery Events

Event Method	Description
<code>\$(selector).click(function)</code>	Invokes a function when the selected elements are clicked
<code>\$(selector).dblclick(function)</code>	Invokes a function when the selected elements are double-clicked
<code>\$(selector).focus(function)</code>	Invokes a function when the selected elements receive the focus
<code>\$(selector).mouseover(function)</code>	Invokes a function when the mouse is over the selected elements
<code>\$(selector).keypress(function)</code>	Invokes a function when a key is pressed inside the selected elements

For a full jQuery event reference, please see <http://api.jquery.com/category/events/>

Example 4

Append text to paragraph
lemon on mouseover

```
<script>
  $("#lemon").mouseover( function() {
    $(this).append(" Cookie! ");
  });
</script>
```

```
<p id='lemon'>Lemon drops biscuit chocolate...</p>
```

http://www.w3schools.com/jquery/jquery_events.asp

Manipulating CSS

CSS Properties

`$(selector).css(propertyName)`

Description

Get the style property value of the first selected element

`$(selector).css(propertyName,value)`

Set the value of one style property for selected elements

`$(selector).css({properties})`

Set multiple style properties for selected elements

`$(selector).addClass(class)`

Apply style *class* to the selected elements

For a full jQuery CSS reference, please see <http://api.jquery.com/css/>

For more on the css function, see http://www.w3schools.com/jquery/jquery_css.asp

Example 5

Change color of paragraph lemon when btnColor is clicked

```
<script>
  $("#btnColor").click(function() {
    $("#lemon").addClass("blue");
  });
</script>
```

```
<style type="text/css">
  .red{
    color:red;
  }
  .blue{
    color:blue;
  }
</style>
```

Example 6

```
<script>
$("#btnColorCheck").click( function() {
    alert ($("#lemon").css("color"));
});
</script>
```

Display the color of the paragraph lemon when btnColorCheck is clicked.

Example 7

Highlight (background-color = yellow)
any paragraph that is double-clicked

```
<script>
    $("p").dblclick(function() {
        $(this).css("background-color", "yellow");
    });
</script>
```


jQuery Effects

Function	Description
<code>\$(selector).hide()</code>	Hide selected elements
<code>\$(selector).show()</code>	Show selected elements
<code>\$(selector).toggle()</code>	Toggle (between hide and show) selected elements
<code>\$(selector).slideDown()</code>	Slide-down (show) selected elements
<code>\$(selector).slideUp()</code>	Slide-up (hide) selected elements
<code>\$(selector).slideToggle()</code>	Toggle slide-up and slide-down of selected elements
<code>\$(selector).fadeIn()</code>	Fade in selected elements
<code>\$(selector).fadeOut()</code>	Fade out selected elements
<code>\$(selector).fadeTo()</code>	Fade out selected elements to a given opacity
<code>\$(selector).fadeToggle()</code>	Toggle between fade in and fade out

Example 8

Create a toggle button that shows/hides paragraph lemon.

```
<script>
    $("#btnToggle").click(function() {
        $("#lemon").slideToggle("slow");
    });
</script>
```

For a full jQuery effects reference, please see <http://api.jquery.com/category/effects/>
For more on the effects function, see http://www.w3schools.com/jquery/jquery_hide_show.asp

Example 9

```
<script>
    $("#btnFade").click(function() {
        $("#lemon").fadeTo("slow", 0.5);
    });
</script>
```

Fade paragraph
lemon to 50% opacity
when btnFade is
clicked.

Manipulating HTML

Function	Description
<code>\$(selector).html(content)</code>	Changes the (inner) HTML of selected elements
<code>\$(selector).append(content)</code>	Appends content to the (inner) HTML of selected elements
<code>\$(selector).after(content)</code>	Adds HTML after selected elements

For a full jQuery HTML reference, please see <http://api.jquery.com/category/manipulation/>

Example 10

```
<script>
  $("#btnReplace").click(function() {
    $("#lemon").html("Lollipop soufflé ice
    cream tootsie roll donut...");
  });
</script>
```

Replace text in
paragraph lemon when
btnReplace is clicked.

Ajax

- The jQuery `$.post()` method loads data from the server using an HTTP POST request.

- Syntax

```
$.post(URL, {data}, function(data){...});  
$.post("/get_me", {name: value}, function(result) {  
    $("span").html(result);  
});
```

Web.py:

Parameter	Description
<i>URL</i>	Required. Specifies the url to send the request to.
<i>data</i>	Optional. Specifies data to send to the server along with the request.
<i>function(data)</i>	Optional. Specifies a function to run if the request succeeds. <ul style="list-style-type: none">• <i>data</i> - contains the resulting data from the request

```
class get_me:  
    def POST (self):  
        x = web.input().name  
  
        return ('send :%s ' % x)
```

Ajax

```
$('#show').click(function(){
```

When the button is clicked

```
    var prodId = $('#id').val();
```

Get the text box value

```
    $.post(
```

Ajax POST

```
        "/show_product",
```

url

```
        {id:prodId},
```

The key/value to be passed

```
        function(result) {
            $('#detail').html(result);
        }
```

Update the "detail" div
With the output of the PHP script

```
    );
```

```
});
```