

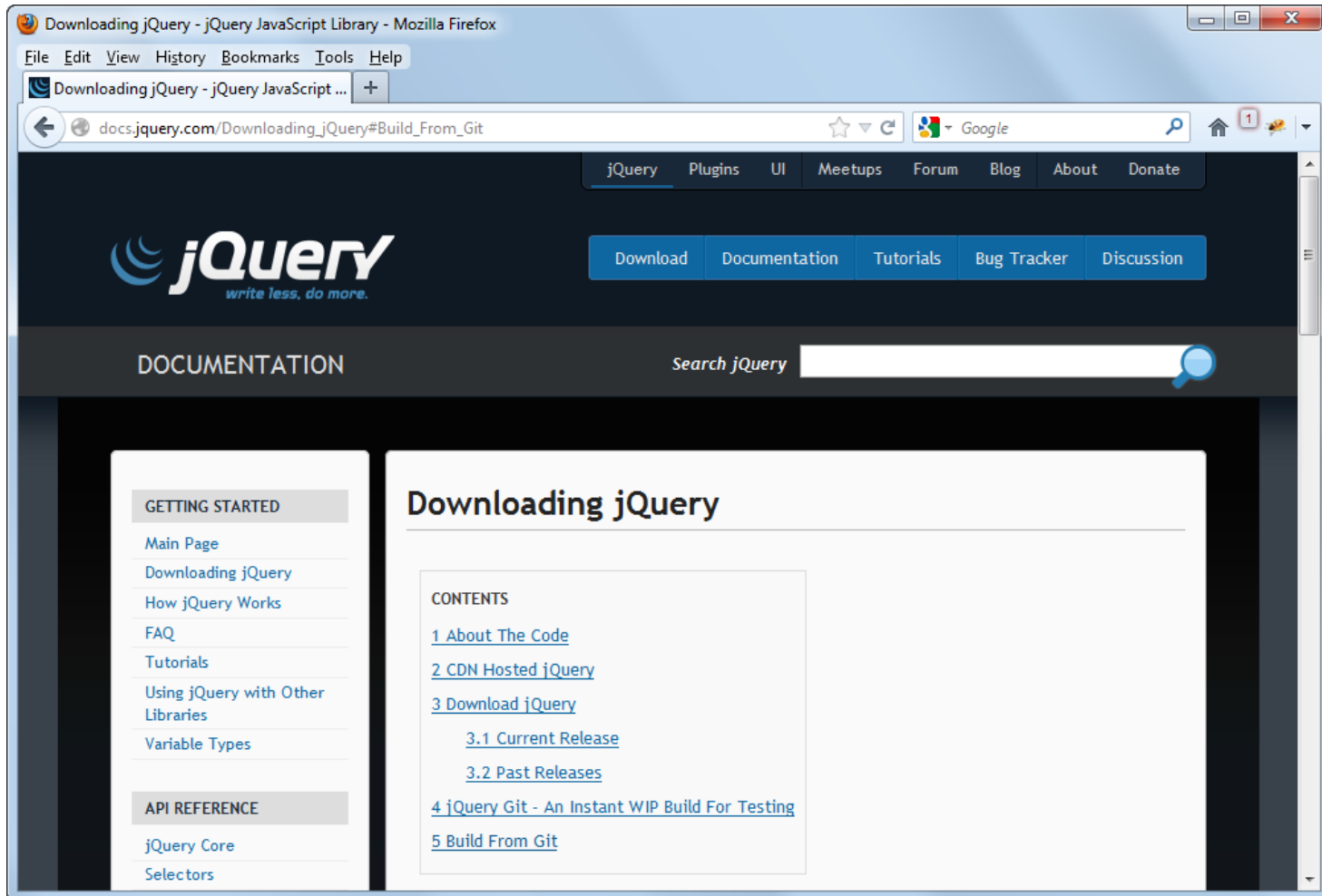
Chapter 7

Get off to a fast start with jQuery

Section 7-10

Introduction to jQuery

The jQuery web site at www.jQuery.com



What jQuery offers

- Dozens of methods that make it easier to add JavaScript features to your web pages
- Methods that are tested for cross-browser compatibility

How to include the jQuery file from your computer

```
<script src="jquery-1.8.2.min.js"></script>
```

How to include the jQuery file from a Content Delivery Network (CDN)

```
<script src="http://code.jquery.com/jquery-latest.min.js"></script>
```

FOR CODE YOU WILL USE IN THIS CLASS, USE THE SCRIPT TAG SHOWN IN THE "JQUERY SCRIPT TAG" LINK IN THE CHAPTER 7 LESSON

Basics of jQuery Programming

The syntax for a jQuery **selector**

`$("selector")`

Exactly the same as a CSS selector!

Must have a good understanding CSS element selection to use jQuery

CSS: p
jQuery: "p"

The HTML for the selected elements

```
<section id="faqs">
  <h1>jQuery FAQs</h1>

  <h2 class="plus">What is jQuery?</h2>

  <div>
    <p>jQuery is a library of the JavaScript
      functions that you're most likely to need as you
      develop web sites.</p>
  </div>

  <h2 class="plus">Why is jQuery becoming so popular?</h2>

  <div>
    <p>Three reasons:</p>
    <ul>
      <li>It's free.</li>
      <li>It lets you get more done in less
        time.</li>
      <li>All of its functions cross-browser
        compatible.</li>
    </ul>
  </div>
</section>
```

How to select elements by element, id, and class

By element type: All <p> elements in the entire document

`$("p")`

By id: The element with “faqs” as its id

`$("#faqs")`

By class: All elements with “plus” as a class

`$(".plus")`

How to select elements by relationship

Descendants: All `<p>` elements that are descendants of the section element

```
$("#faq p");
```

Adjacent siblings: All `div` elements that are adjacent siblings of `h2` elements

```
$("#h2 + div")
```

General siblings: All `<p>` elements that are siblings of `ul` elements

```
$("#ul ~ p")
```

Children: All `ul` elements that are children of `div` elements

```
$("#div > ul")
```


jQuery Methods

The syntax for calling a jQuery **method**

`$("selector").methodName(parameters)`

Some common jQuery methods

`val()`

`val(value)`

`text()`

`text(value)`

`next([type])`

`submit()`

`focus()`

Examples that call jQuery methods

How to get the value from a text box

```
var gallons = $("#gallons").val();
```

How to set the value for an input element

```
$("#gallons").val("");
```

How to set the text in an element

```
$("#email_address_error").text("Email is required");
```

How to submit a form

```
$("#join_list").submit();
```

How to move the focus to a form control or link

```
$("#email_address").focus();
```

DEMO: Simple jQuery Example

Simple Example

What is your Name?

Simple jQuery Example – HTML

```
<h1>Simple Example</h1>
```

```
<br>
```

```
<div>
```

```
    <p>What is your Name?
```

```
        <input type="text" id="firstname" size="30" />
```

```
    </p>
```

```
    <p>
```

```
        <input type="button" id="clickme" value="Click Me">
```

```
    </p>
```

```
</div>
```

Simple jQuery Example – jQuery

```
$(document).ready(function() {  
  
    $("#clickme").click(function () {  
        var myfirst = $("#firstname").val();  
  
        if (myfirst == 'Steve')  
        {  
            alert("Hi Professor");  
        } else {  
            alert("Hi " + myfirst);  
        }  
  
    })    //end of click handler  
  
})    // END OF READY
```

Exercise 7-1

- Do the exercises for this section
(shown to the right for the link to this presentation)

Section 7-20

Data Validation

jQuery Event Methods

The syntax for a jQuery **event method**

```
$(selector).eventMethodName(function() {  
    // the statements of the event handler  
});
```

Two common jQuery event methods

Event method	Description
<code>ready(<i>handler</i>)</code>	The event handler runs when the DOM is ready.
<code>click(<i>handler</i>)</code>	The event handler runs when the selected element is clicked.

How to code an event handler for the ready event

The long way

```
$(document).ready(function() {  
    alert("The DOM is ready");  
});
```

The short way

```
$(function(){ // (document).ready is assumed  
    alert("The DOM is ready");  
});
```

An event handler for the click event of all h2 elements

```
$("#h2").click(function() {  
    alert("This heading has been clicked");  
});
```

The click event handler within the ready event handler

```
$(document).ready(function() {  
    $("#h2").click(function() {  
        alert("This heading has been clicked");  
    }); // end of click event handler  
}); // end of ready event handler
```

DEMO: Heading Clicked Example

Heading Clicked Example

What is jQuery?

jQuery is a library of the JavaScript functions that you're most likely to need as you develop web sites.

Why is jQuery becoming so popular?

Three reasons:

- It's free.
- It lets you get more done in less time.
- All of its functions are cross-browser compatible.

Which is harder to learn: jQuery or JavaScript?

For most functions, jQuery is significantly easier to learn and use than JavaScript. But remember that jQuery is JavaScript.

Heading Clicked Example – HTML

```
<h1>Heading Clicked Example</h1>
<h2>What is jQuery?</h2>
<div>
  <p>jQuery is a library of the JavaScript functions that you're
  most likely to need as you develop web sites.
</p>
</div>
<h2>Why is jQuery becoming so popular?</h2>
<div>
  <p>Three reasons:</p>
  <ul>
    <li>It's free.</li>
    <li>It lets you get more done in less time.</li>
    <li>All of its functions are cross-browser compatible.</li>
  </ul>
</div>
...
```

Heading Clicked Example – jQuery

```
$(document).ready(function() {  
  
    $("h2").click(function() {  
        alert("This heading has been clicked");  
    }); // end of click event handler  
  
}); // end of ready event handler
```

Demo: Data Validation

Data Validation Example

What is your Name?

Simple Data Validation Example – HTML

```
<h1>Data Validation Example</h1>
<br />
<div>
    <p>
        What is your Name?
        <input type="text" id="firstname" size="30" />
        <span id="errorfirst" style="color: red;"></span>
    </p>

    <p>
        <input type="button" id="clickme" value="Click Me">
    </p>

    <p id="message">
    </p>
</div>
```

Simple Data Validation Example – jQuery

```
$(document).ready(function() {  
  
    $("#clickme").click(function () {  
  
        $("#errorfirst").text("");  
        $("#message").text("");  
  
        var myfirst = $("#firstname").val();  
  
        if (myfirst == '')  
        {  
            $("#errorfirst").text("Name is required");  
            return;  
        }  
  
        $("#message").text("Hi " + myfirst);  
  
    })    //end of click handler  
  
})    // END OF READY
```


Exercise 7-2

- Do the exercises for this section
(shown to the right for the link to this presentation)

Section 7-30

Selectors and Methods

Working Subset of Selectors, Methods, and Event Methods

1. Useful Selectors
2. Useful Methods
3. Useful Event-Methods

Some of the most useful jQuery selectors

`[attribute]`

`[attribute=value]`

`:eq(n)`

`:even`

`:first`

`:first-child`

`:gt(n)`

`:header`

`:last`

`:last-child`

`:lt(n)`

`:not(selector)`

`:odd`

`:text`

Examples that use jQuery selectors

Select the li elements that are the first child of their parent element

```
$( "li:first-child" )
```

Select the even tr elements of a table

```
$(tr:even")      // numbering starts at 0
```

Select the third descendant <p> element of an element

```
$( "#faqs p:eq(2)" )      // numbering starts at 0
```

Select all input elements with “text” as the type attribute

```
$( ":text" )
```

A summary of the most useful jQuery methods

`next([selector])`

`prev([selector])`

`attr(attributeName)`

`attr(attributeName, value)`

`css(propertyName)`

`css(propertyName, value)`

`addClass(className)`

`removeClass([className])`

`toggleClass(className)`

`hide([duration])`

`show([duration])`

`each(function)`

Examples that use jQuery methods

Get the value of the src attribute of an image

```
$("#image").attr("src");
```

Set the value of the src attribute of an image to the value of a variable

```
$("#image").attr("src", imageSource);
```

Set the value of the color property of the h2 elements

```
$("h2").css("color", "blue");
```

Add a class to the h2 descendants of the “faqs” element

```
$("#faqs h2").addClass("minus");
```

Run a function for each <a> element within an “image_list” element

```
$("#image_list a").each(function() {  
    // the statements of the function  
});
```

DEMO: Selectors & Methods

Selectors & Methods Example

SOFTBALL TEAM

First Name	Last Name	Position
Jane	Smith	First Base
George	Jones	Pitcher
Sally	Parks	Center Field
Bob	Barker	Right Field
Claude	Busey	Left Field

Some of the most useful jQuery event methods

`ready(handler)`

`unload(handler)`

`error(handler)`

`click(handler)`

`dblclick(handler)`

`mouseenter(handler)`

`mouseover(handler)`

`mouseout(handler)`

`hover(handlerIn, handlerOut)`

Examples that use jQuery event methods

A handler for the double-click event of all text boxes that clears the clicked box

```
$(":text").dblclick(function () {  
    $(this).val("");  
})
```


A handler for the hover event of each img element within a list

```
$("#image_list img").hover(  
    function() {  
        alert("The mouse pointer has moved into an img element");  
    },  
    function() {  
        alert("The mouse pointer has moved out of an img element");  
    }  
); // end hover
```

DEMO: Event-Methods

Event-Method Example

What is your Name? (Double-click to clear text)



Pause this slide and click the link below for a...

[Video Demonstration](#)

Event Methods Example – HTML

```
<h1>Event-Method Example</h1>
<br />
<div>
  <p>
    What is your Name?
    <input type="text" id="firstname" size="30" />
    <span id="errorfirst" style="color: red;"></span>
    <span id="errorfirst" style="color: black;">
      (Double-click to clear text)</span>
  </p>
  <p>
    <input type="button" id="clickme" value="Click Me">
  </p>
  <p id="message">
  </p>
</div>
```

Event Methods Example – jQuery – 1 of 2

```
$(document).ready(function() {  
  
    $("#clickme").click(function () {  
        $("#errorfirst").text("");  
        $("#message").text("");  
  
        var myfirst = $("#firstname").val();  
        if (myfirst == '')  
        {  
            $("#errorfirst").text("Name is required");  
            return;  
        }  
        $("#message").text("Hi " + myfirst);  
  
    })    //end of click handler
```

Event Methods Example – jQuery – 2 of 2

```
$("#text").dblclick(function () {  
    $(this).val("");  
})    //end of dblclick handler
```

```
$("#img").mouseover(  
    function() {  
        $(this).attr("src", ".../Examples/unbirthday.jpg");  
    })
```

```
$("#img").mouseout(  
    function() {  
        $(this).attr("src", ".../Examples/unbirthday.jpg");  
    })
```

```
})    // END OF READY
```

Exercise 7-3

- Do the exercises for this section
(shown to the right for the link to this presentation)

End of Lesson