TUTORIAL

The table below provides a list of some of the important attributes and methods of DOM objects that you should be aware of. The list is not comprehensive; it is intended to give you an idea of things that you can access from a DOM object.

Attribute/Method	Description
parentNode	Because DOM objects are part of a tree, they always have a link to their direct parent.
childNodes	As with parent nodes, if the DOM object has children, this attribute allows you to access them as an array.
click()	This enables you to execute and/or change the event handler that gets called when the HTML element is clicked.
innerHTML	Access to the content text that is placed between the elements' starting and ending tags. For example, the following line of code changes the inner HTML of an object. Notice that you are able to include DOM tags in with the HTML text. These will be rendered with the page: `obj.innerHTML = "This is <span>SOME</span> text";`
outerHTML	Access to the full text, including tags of the HTML element.
value	Some elements such as options and inputs contain a `value` attribute.
id	Direct access to the `id` attribute of the HTML element.
class	Direct access to the `class` attribute of the HTML element.
style	Direct access to the CSS `style` of the element. For example, to set the color, you could use the following: `obj.style.color="red";`
getAttribute(attribute)	Gets the `attribute` value in the DOM object. For example, to get the `name` attribute of an object, use the following: `obj.getAttribute("name")`
setAttribute(attribute, value)	Sets the `value` of `attribute` in the DOM object. For example, to set the `href` attribute of an object, you could use the following: `obj.setAttribure("href", "http://dayleycreations.com");`
appendChild(object)	Appends a child DOM element to the object. For example, to add a new `<option>` element to a `<select>` object, you could use the following: `var o = new Option("New", 1, false, false); selectObj.appendObject(o);`

Some of the More Commonly Used Attributes/Methods Attached to DOM Objects

The next table provides a list of some of the important methods of jQuery objects that you should be aware of. Again, the list is not comprehensive; it is intended to give you an idea of things that you can access from a jQuery object.

Method	Description
html([newHTML])	Gets the inner HTML text of the object or sets it to the optional newHTML.
val([newValue])	Gets the value of the object or sets it to the optional newValue argument if one is passed. For example, to set the value of an element, use the following: `$("#myInput").val("test");`
attr(attribute, [value])	Enables you to get the value of an attribute or set it to the optional value argument if one is passed. For example, to set the value of the href attribute, use the following: `$("#mainLink").attr("href", "www.dayleycreations.com");`
addClass(class)	Enables you to add a class attribute value that can result in new CSS rules being applied to the object.
css(property, [value])	Enables you to get or set a CSS property value for the jQuery object. For example, to set the background-color for all <div> elements, use the following: `$("div").css("backgorund-color", "yellow");`
click([function])	Enables you to get the onclick hander for the jQuery object or set a function definition for a new onclick handler.
height([value])	Gets or sets the height of the DOM elements. If the value is specified, the object's height is set; otherwise, the value of the object's height is returned.
width([value])	Gets or sets the width of the DOM elements.
hide()	Enables you to hide the DOM objects represented by the jQuery object.
show()	Enables you to unhide the DOM objects represented by the jQuery object.

Some of the More Commonly Used Methods Attached to jQuery Objects

Question 1.
Assuming you have a DOM object or a jQuery object how would you be able tell which is which?

Question 2
Use DOM documentation to answer the following:

    a) What method of the XMLHttpRequest object would you use to display all the HTTP response headers?

b) What property of the XMLHttpRequest object would you use to get the response content in the form of an XML document?

Question 3
Read Jesse James Garrett's original Ajax article at http://adaptivepath.org/ideas/ajax-new-approach-web-applications/

What, according to Garrett, are the biggest challenges in creating Ajax applications?

Question 4
Explain the difference between an asynchronous HTTP request and a synchronous one.

Question 5
Describe the components of Ajax and the role that each component plays.

Question 6
Explain the role of **onreadystatechange** and **readystate** in handling asynchronous XMLHttpRequests.

Question 7
Go to the following website, which will allow you to experiment with jQuery selectors:

http://codylindley.com/jqueryselectors/

Write down jQuery selectors which return each of the following sets of elements. You can test each answer before writing it down. Look at the page and at the source code of the page to help you.

  a) All paragraph elements
  b) All option elements which are within a select element
  c) The element with id=radio2
  d) All elements with class=left
  e) All h1 elements and all code elements
  f) All list items which are within list items (descendants)
  g) All child elements of paragraph elements
  h) All code elements within div element with id=myid
  i) All elements which immediately follow a paragraph element
  j) All sibling elements following code elements
  k) The first list item in a second level list
  l) All links (anchor elements) whose href contains "htm"
  m) The first three list items
  n) All paragraph elements which contain strong elements

Question 8
Use the jQuery documentation to answer the following:

  a) List all the jQuery methods, including shorthand methods, which can be used to send asynchronous requests,
  b) What jQuery.ajax setting can be used to send custom HTTP headers in a request?
  c) What is the purpose of the jsonpCallback setting for jQuery.ajax?
  d) Describe the effect of the crossDomain setting for jQuery.ajax?

Question 9
Find out what the role of each of the following JavaScript libraries/ jQuery plug-ins plays within a Single Page Application, and in each case, suggest an alternative choice of library/plug-in.

a) Knockout
b) jQuery.tmpl
c) mockjax
d) jQuery.history
e) QUnit
f) Sammy

Question 10
Discuss the security restrictions and issues associated with the use each of the following in consuming web services:

a) XMLHttpRequest
b) Dynamic Scripting
c) Hidden iFrame call

Question 11
a) When would you use the DOMContentLoad event rather than the DOMContentLoaded event?
b) What's the name of the HTML attribute of the <body> tag that can be used to call JavaScript code when the page has finished loading?

Question 12
Which HTTP method would you use to set a new password on a web server and explain why?

Question 13
a) What data type is the response data converted to for XML data?
b) What data type is the response data converted to for JSON data?