**Review: Accessing elements of the DOM**

* By DOM collection:  
  + Getting the entire collection  
    var imageArray = document.images;
  + Accessing a single element  
    - By the array index  
      var dogImage = document.images[0];
    - By the element id  
      var dogImage = document.images.dogImg.src
* By tag name:  
  var paragraphs = document.getElementsByTagName("p");
* By element id attribute:  
  var paragraph = document.getElementById("subtitle");

**jQuery**

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript. – [jQuery.com web site](http://jquery.com/) (May 30, 2017)

* **Add jQuery to your web page**
  + jQuery is a library of JavaScript objects and functions
    - You can add jQuery to your web page by downloading it from [jQuery.com](http://jquery.com/download/), putting it on your own web server, and adding a link in your web page.
      * There is both a “normal” version that is human readable,
      * And a minified version that saves space and loads faster into the browser.   
        Here is an example of a link to the minified version:  
        <head>  
         <script src="jquery-3.2.1.min.js"></script>  
        </head>
  + Or, you can just put a link to a jQuery library is hosted on a CDN (Content Delivery Network). There are multiple CDN providers. Here is an example of linking to the one provided by Google:  
    <head>  
     <script   
     src="https://ajax.googleapis.com/ajax/libs/jquery/3.2.1/jquery.min.js">  
     </script>  
    </head>
* **jQuery syntax**
  + You select (query) HTML elements and perform *actions* on them.
  + The basic pattern of syntax is: ***$(selector).action( )***
    - ***$*** – an alias for the jQuery function
    - ***selector*** – a "query" to select an HTML element object, or objects
    - ***action()***– a method that will be called on the selected object
    - Example:  
      The action in this example is the jQuery *.ready* method, which calls a self-invoking function.  
      <script>  
       $(document).ready(  
       function()  
       {  
       alert("Hello jQuery!");  
       }  
       );  
      </script>
  + Chaining: method calls can be chained, this is sometimes called *fluent* syntax.  
    $("p:last").css("color", "blue")  
     .text("Fine")  
     .wrapInner("<em></em>");
* **Selecting HTML Elements**  
  The jQuery selector function, *$()*, can select elements by:
  + tag name  
    $("img")[0].src = "Images/dog" + number + ".png";
  + element id  
    $("#subtitle").text("Query by id works!");
  + CSS class  
    $(".big").css("color", "purple");  
    - just the first or last element  
      $("p:last").css("color", "blue");
    - tag name + CSS class  
      $("p.big").css("color", "green");
  + Complete documentation on selectors: <http://api.jquery.com/category/selectors/>
* **HTML Element Manipulation**(just a sampling of methods for each type of manipulation)
  + Change an HTML attribute
    - The*.html()* method – sets or returns the html inside an element  
      $("div:first").html("<h3>All of this will go inside the div</h3>");
    - The *.text()* method – sets or returns the text in a method  
      $("#subtitle").text("Query by id works!");
  + Set CSS style
    - The *.css()* method – sets or returns a css key-value pair  
      $(".big").css("color", "purple");
    - The *.height()* method – sets or returns the height of the element in pixels as a number  
      $("#dogImg").height(150);
  + Modify an element itself
    - The *.after()* method – inserts html after the selected element  
      $("img").after("<hr>");
  + Retrieve information
    - The *.attr()* method – returns the attributes of an element  
      alert($("img:first").attr("id"));
  + Complete documentation on DOM manipulation: <http://api.jquery.com/category/manipulation/>
* **Event Handling**
  + The *.on()* method  
    $("p").on("click", function(){  
        $(this).text("new text");  
    });
  + There are event shortcuts for some events, like .*click()*  
    $("p").click(function(){  
        $(this).text("new text");  
    });