jQuery

CS/IT 490 WD, Fall 2013

Last update 2013-11-05

Written by Rachel J. Morris

Breakdown

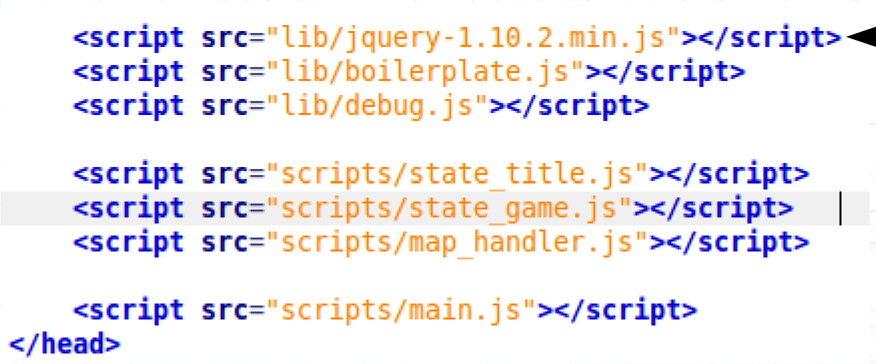
- What is jQuery?
- Download jQuery
- Jquery Basics

What is jQuery?

- Jquery is a JavaScript library that adds a **LOT** of functionality, as well as shortens up the traditional JS syntax.
- Instead of
document.getElementById(“name”)
you can use:
$(“#name”)
- Also has animation functions, AJAX functions, etc.

Download jQuery

- Download jQuery from: http://jquery.com/
- Save it to your hard-drive and use it in any projects with JavaScript.
- You include it like a standard JS file:



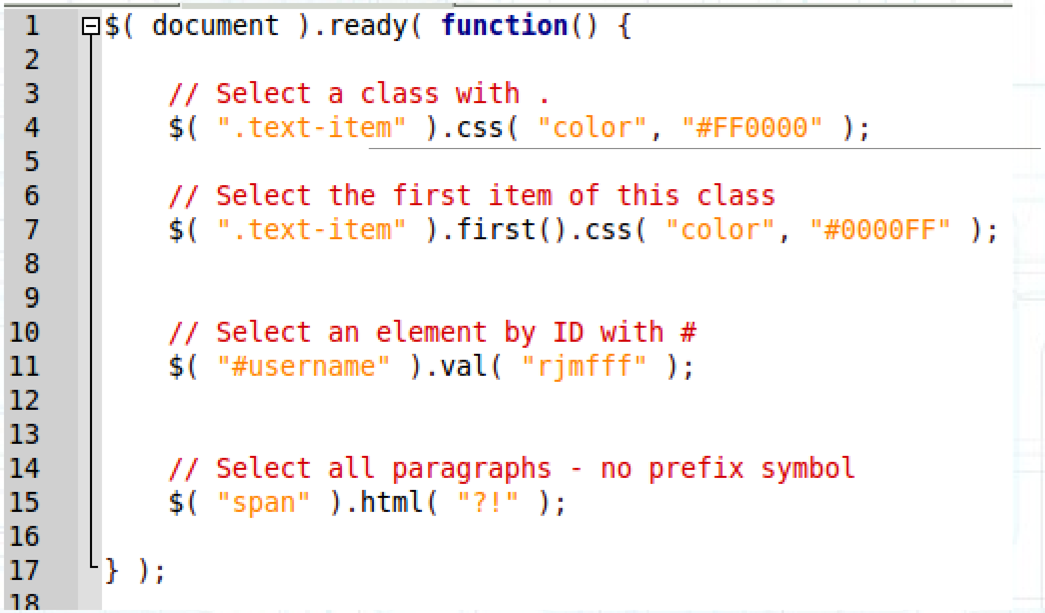
```
    <script src="lib/jquery-1.10.2.min.js"></script>
    <script src="lib/boilerplate.js"></script>
    <script src="lib/debug.js"></script>

    <script src="scripts/state_title.js"></script>
    <script src="scripts/state_game.js"></script>
    <script src="scripts/map_handler.js"></script>

    <script src="scripts/main.js"></script>
</head>
```

Jquery file

Jquery Basics

- Selecting Elements by ID, Class, or Type
- Modifying an element's CSS
- Modifying an element's InnerHTML
- Modifying an element's Value
- Appending elements to your webpage
- Adding and removing classes from an element
- Binding function callbacks
  - On click, on change, etc.
- Special Effects

Selecting Elements by ID, Class, or Type

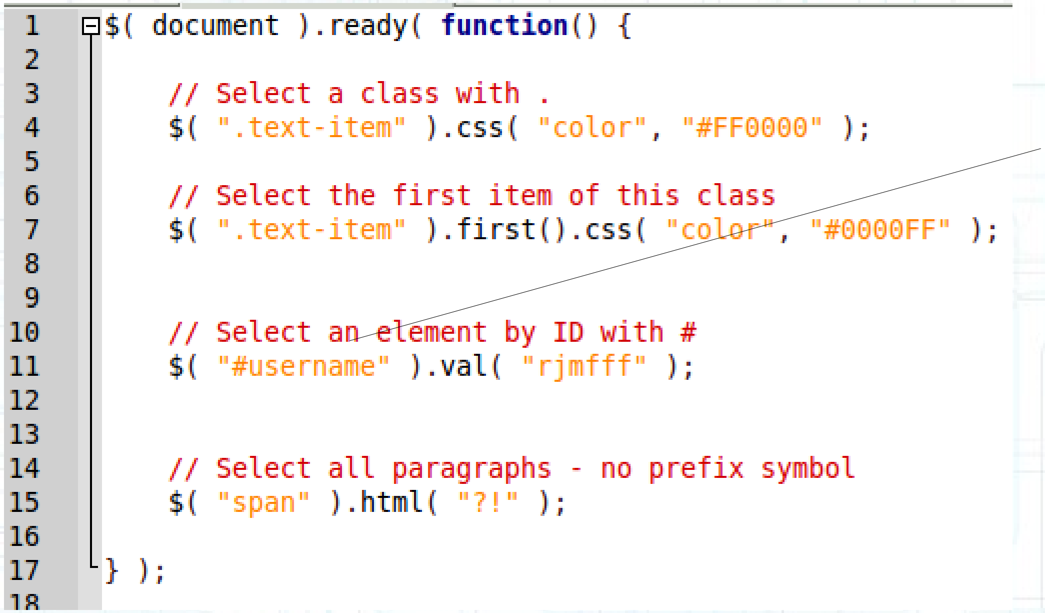


```
$( document ).ready( function() {

    // Select a class with .
    $( ".text-item" ).css( "color", "#FF0000" );

    // Select the first item of this class
    $( ".text-item" ).first().css( "color", "#0000FF" );


    // Select an element by ID with #
    $( "#username" ).val( "rjmfff" );


    // Select all paragraphs - no prefix symbol
    $( "span" ).html( "?!" );

} );
```

You can select all items of a given class with the dot operator .

This will return an array of items, since there could be more than one element with that class.

Selecting Elements by ID, Class, or Type



```
$( document ).ready( function() {

    // Select a class with .
    $( ".text-item" ).css( "color", "#FF0000" );

    // Select the first item of this class
    $( ".text-item" ).first().css( "color", "#0000FF" );


    // Select an element by ID with #
    $( "#username" ).val( "rjmfff" );


    // Select all paragraphs - no prefix symbol
    $( "span" ).html( "?!" );

} );
```

You can select a single element by its unique ID with the pound sign #.

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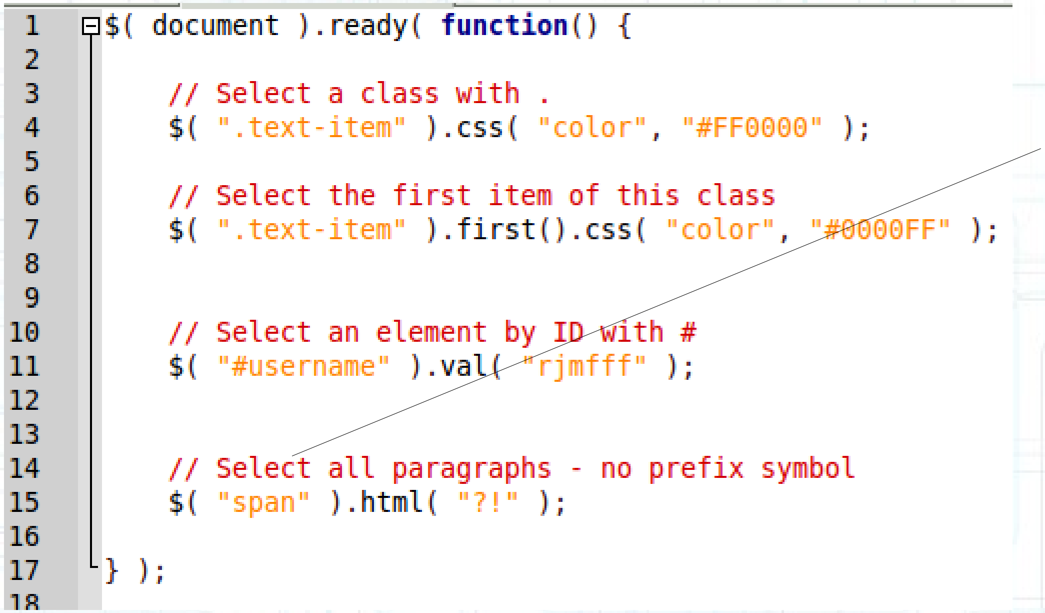
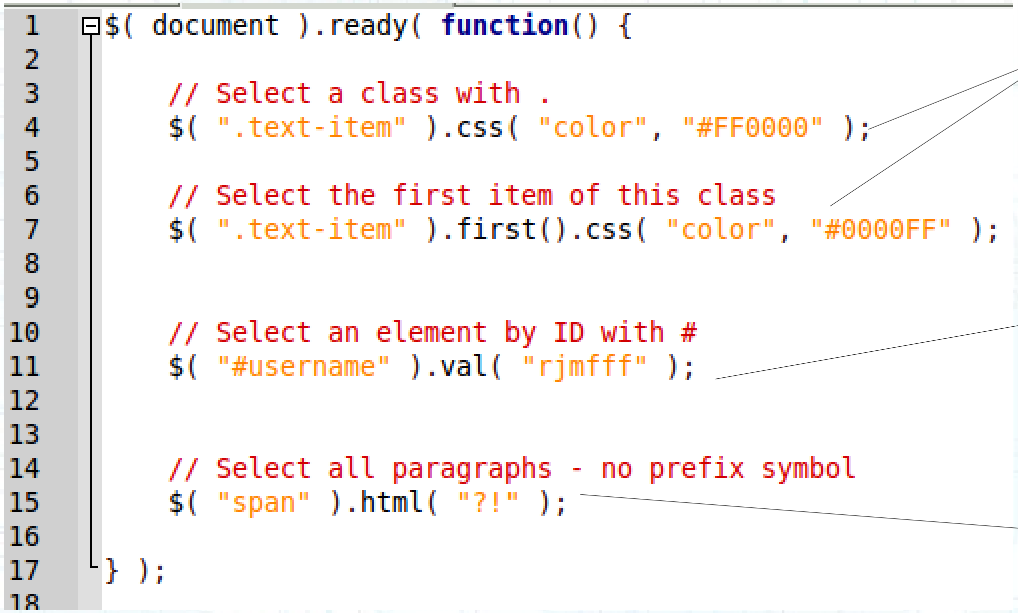
Selecting Elements by ID, Class, or Type



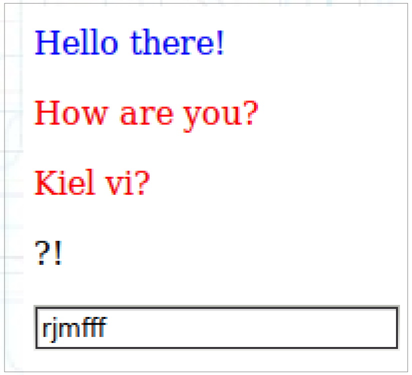
```
$( document ).ready( function() {

    // Select a class with .
    $( ".text-item" ).css( "color", "#FF0000" );

    // Select the first item of this class
    $( ".text-item" ).first().css( "color", "#0000FF" );


    // Select an element by ID with #
    $( "#username" ).val( "rjmfff" );


    // Select all paragraphs - no prefix symbol
    $( "span" ).html( "?!" );

} );
```

And you can select an array of all elements of a given type without any special prefix.

Selecting Elements by ID, Class, or Type



```
$( document ).ready( function() {

    // Select a class with .
    $( ".text-item" ).css( "color", "#FF0000" );

    // Select the first item of this class
    $( ".text-item" ).first().css( "color", "#0000FF" );


    // Select an element by ID with #
    $( "#username" ).val( "rjmfff" );


    // Select all paragraphs - no prefix symbol
    $( "span" ).html( "?!" );

} );
```



Hello there!

How are you?

Kiel vi?

?!

rjmfff

Here, we're modifying the **color** CSS property via the **.css** function.

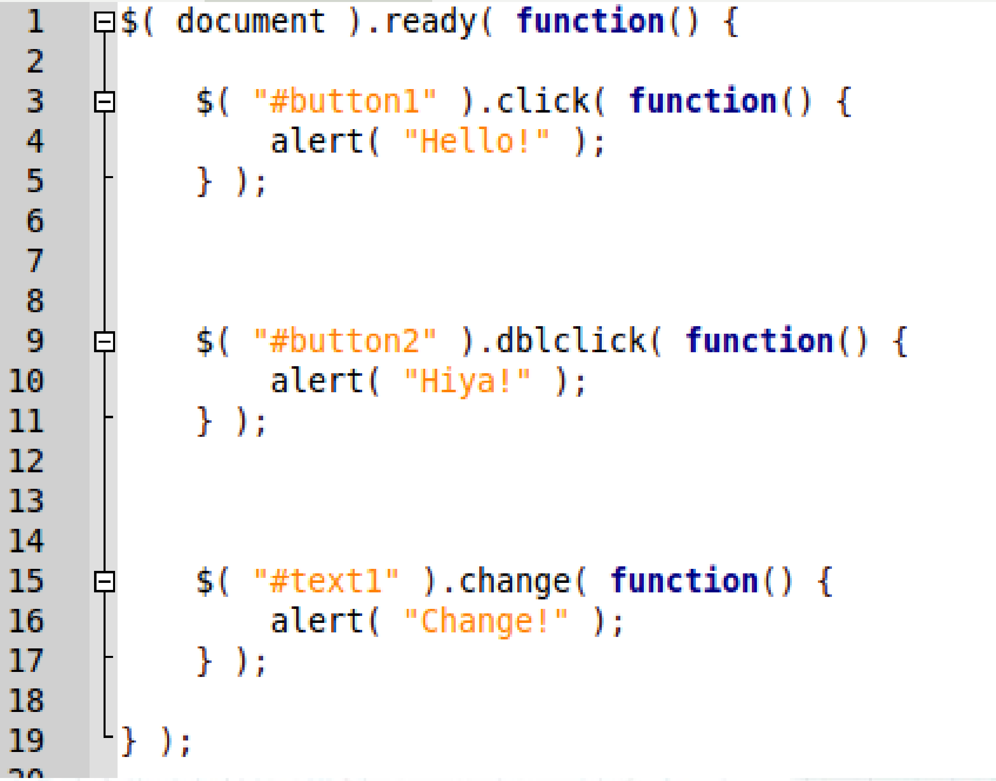
Here, we're changing the **value** of the input box with the **.val** function.

And we can add HTML inside a tag with the **.html** function.

Binding function callbacks

- You can set certain functions to happen when an element is clicked, changed, or other things.
- Select the item, then call .click(). The ARGUMENT of your click function will be a new function – the callback.

Binding function callbacks



```
$( document ).ready( function() {

    $( "#button1" ).click( function() {
        alert( "Hello!" );
    } );



    $( "#button2" ).dblclick( function() {
        alert( "Hiya!" );
    } );



    $( "#text1" ).change( function() {
        alert( "Change!" );
    } );

} );
```

When the button is clicked, it will display the message.

When the button is double-clicked, it will display the message.

This will display a popup once the user has changed the text box, and the text box has lost focus.

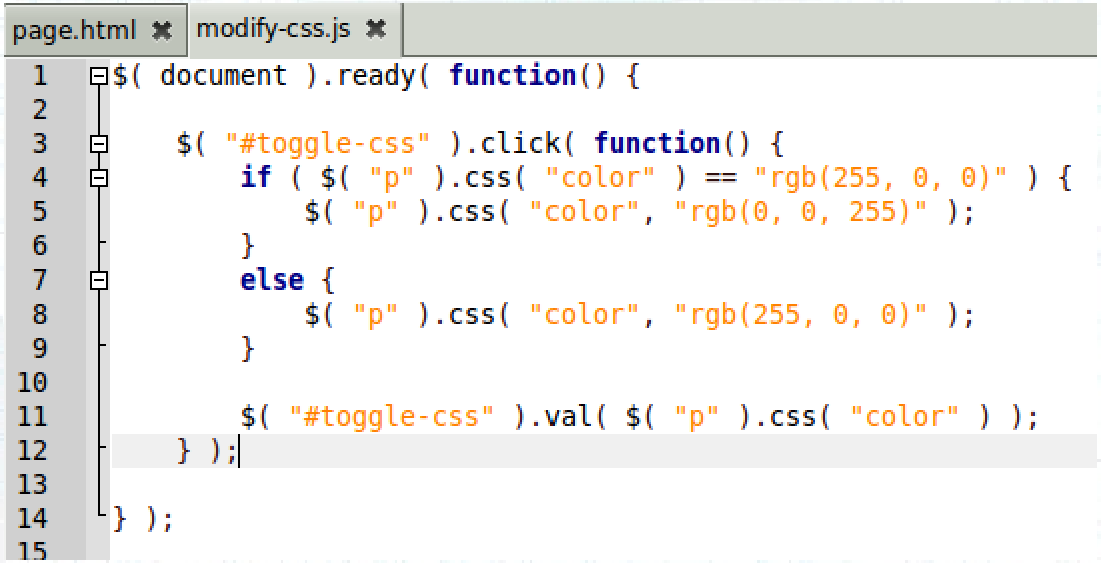
Modifying an element's CSS

To modify the CSS of an element, or elements, you can use the .css() function.

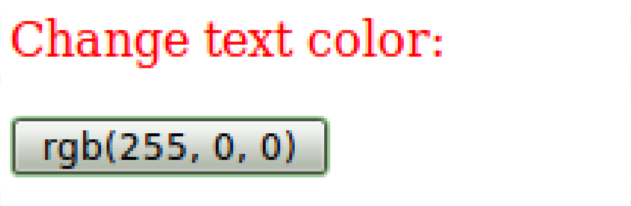
- The first argument is **what style to update**, and it matches your standard CSS style names.
- The second argument is **what to set it to**.

If you call just .css() with the first argument, the **return value** will be that css style's current value.

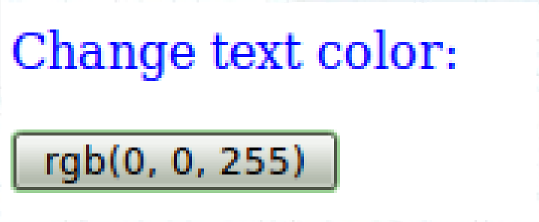
Modifying an element's CSS



```
$( document ).ready( function() {

    $( "#toggle-css" ).click( function() {
        if ( $( "p" ).css( "color" ) == "rgb(255, 0, 0)" ) {
            $( "p" ).css( "color", "rgb(0, 0, 255)" );
        }
        else {
            $( "p" ).css( "color", "rgb(255, 0, 0)" );
        }

        $( "#toggle-css" ).val( $( "p" ).css( "color" ) );
    } );

} );
```



Change text color:

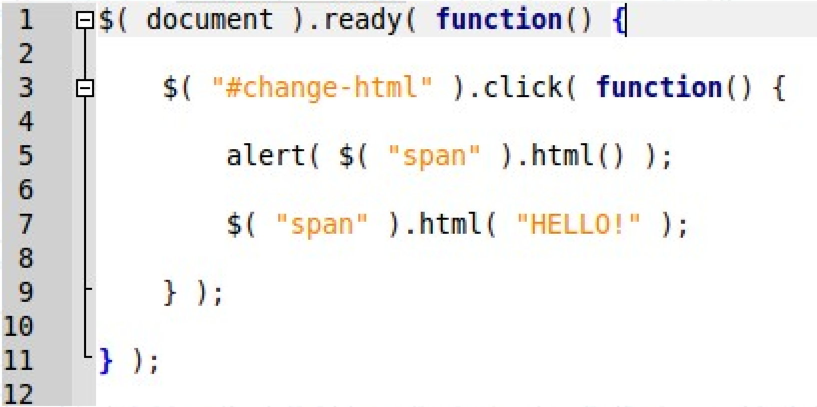


Change text color:

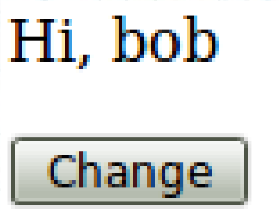
Modifying an element's Inner HTML

- You can retrieve any markup from within an element's open and close tags with .html().
- You can also replace the internals of that element by adding an argument inside.

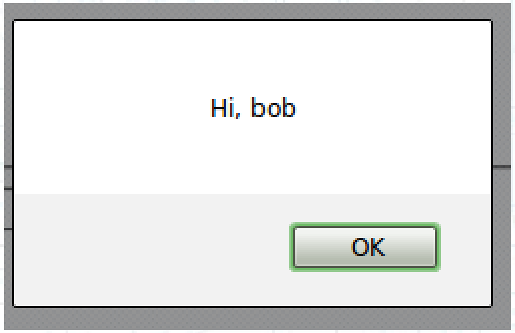
Modifying an element's Inner HTML



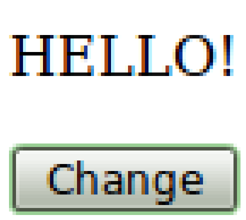
```
$( document ).ready( function() {

    $( "#change-html" ).click( function() {

        alert( $( "span" ).html() );

        $( "span" ).html( "HELLO!" );

    } );

} );

```



Hi, bob



Hi, bob

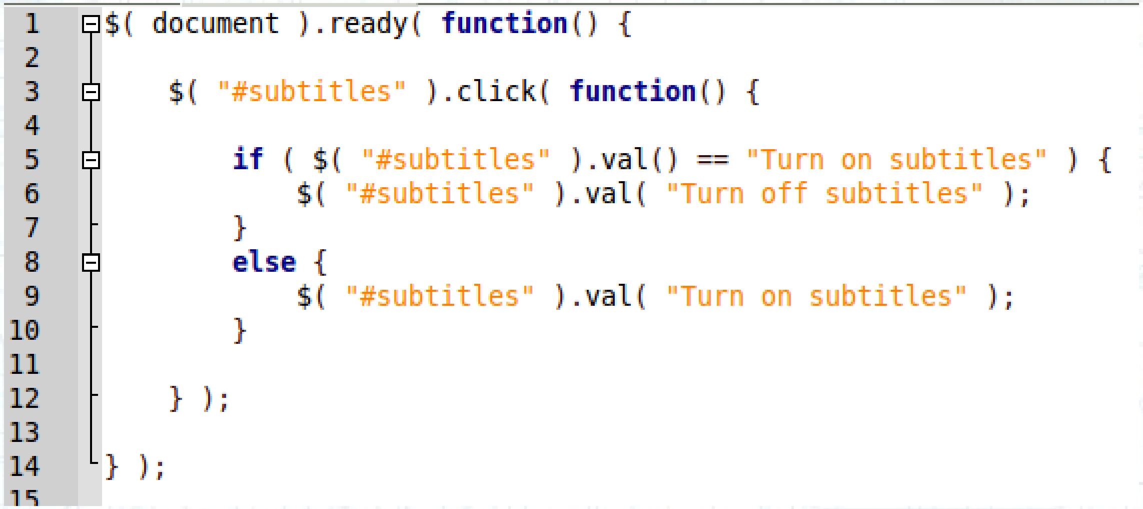


HELLO!

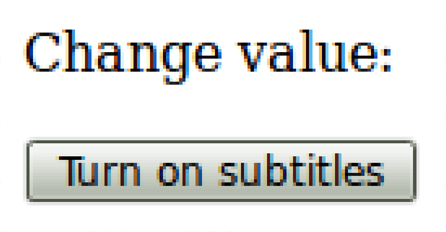
Modifying an element's Value

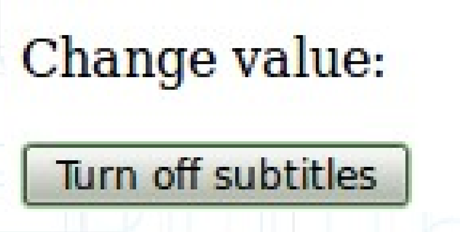
- If a tag has a **value** attribute (like an input element), you can get its current value with .val()
- You can also change its value by specifying an argument.

Modifying an element's Value



```
$( document ).ready( function() {

    $( "#subtitles" ).click( function() {

        if ( $( "#subtitles" ).val() == "Turn on subtitles" ) {
            $( "#subtitles" ).val( "Turn off subtitles" );
        }
        else {
            $( "#subtitles" ).val( "Turn on subtitles" );
        }

    } );

} );
```





Modifying an element's attributes

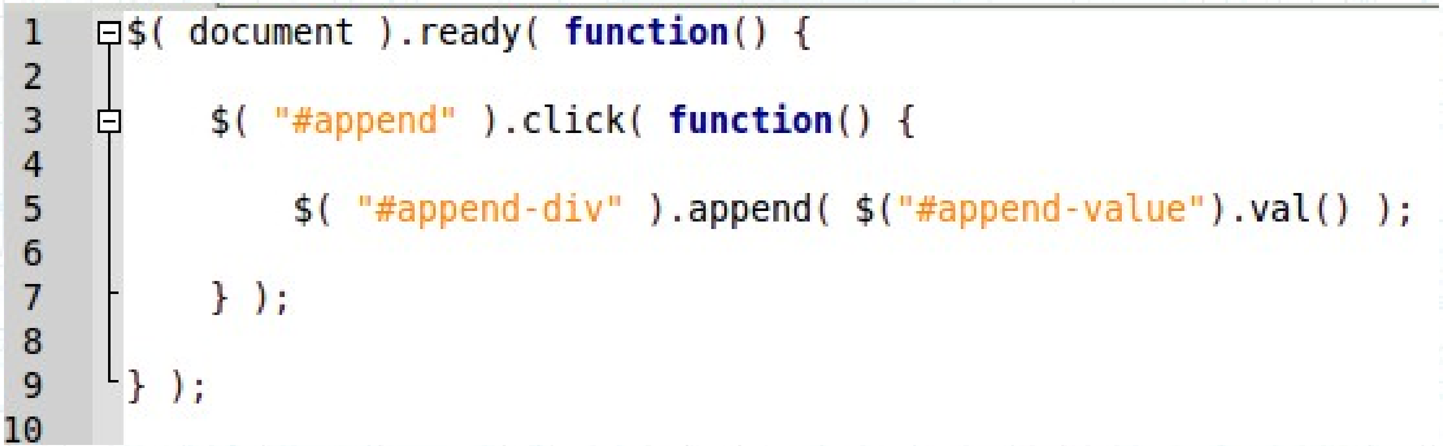
- Element tags might have various attributes beyond the value and style.
- ID, name, etc.
- You can access these with the .attr() function

```
// get its ID
$( “#myItem” ).attr( “id” );
```

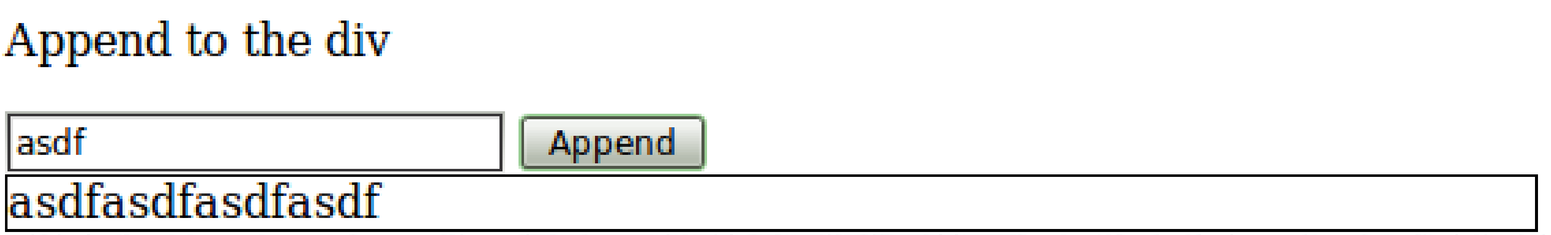
```
// change ID
$( “#myItem” ).attr( “id”, “newID” );
```

Appending elements to your webpage

You can use the .append() function to add HTML to the end of an existing element.



```
$( document ).ready( function() {

    $( "#append" ).click( function() {

        $( "#append-div" ).append( $("#append-value").val() );

    } );

} );
```



Append to the div

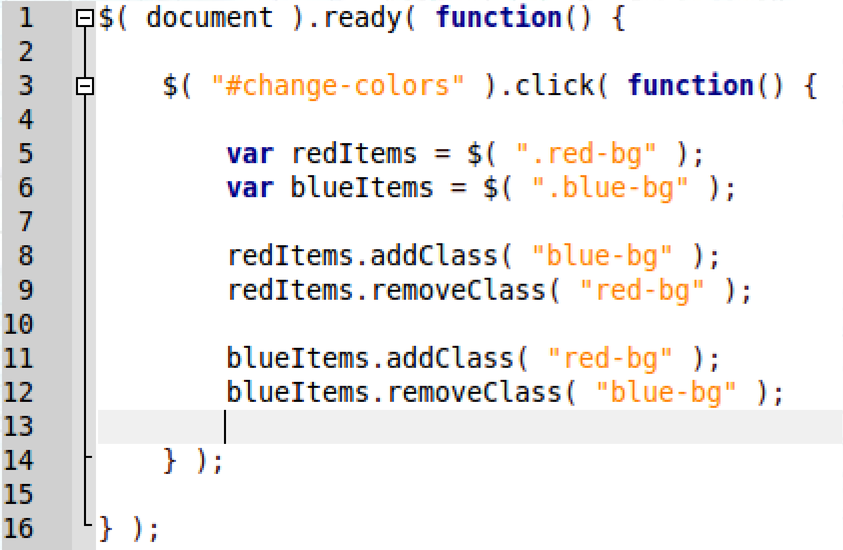
asdf

asdfasdfasdfasdf

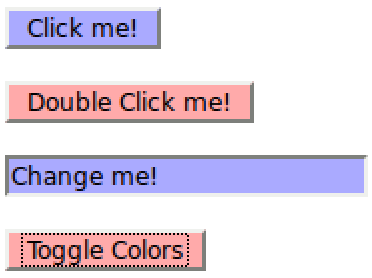
Adding and removing classes from an element

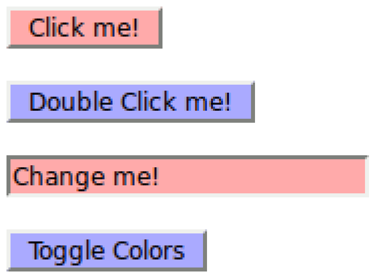
- You can dynamically change the styling of an element by using .css()...
- but you can also add and remove classes from an element, which is much cleaner.

Adding and removing classes from an element



```
$( document ).ready( function() {

    $( "#change-colors" ).click( function() {

        var redItems = $( ".red-bg" );
        var blueItems = $( ".blue-bg" );

        redItems.addClass( "blue-bg" );
        redItems.removeClass( "red-bg" );

        blueItems.addClass( "red-bg" );
        blueItems.removeClass( "blue-bg" );

    } );

} );
```





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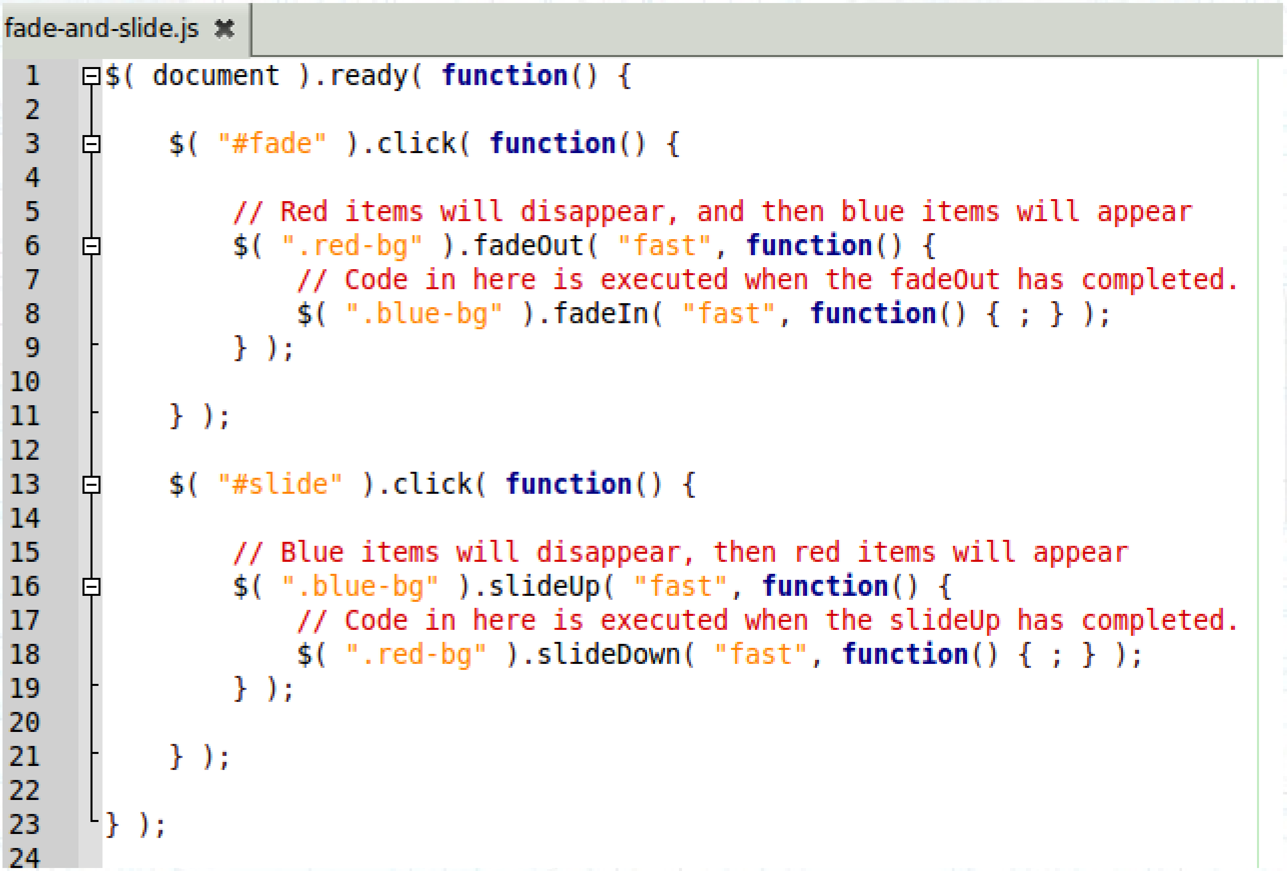
Special Effects

- Want to have a slideshow? A picture disappears and another re-appears?
- You could use .css() to quickly set **display:none**, but it's kind of rough.
- Let's use the Slide and Fade functions!

Special Effects



```
$( document ).ready( function() {

    $( "#fade" ).click( function() {

        // Red items will disappear, and then blue items will appear
        $( ".red-bg" ).fadeOut( "fast", function() {
            // Code in here is executed when the fadeOut has completed.
            $( ".blue-bg" ).fadeIn( "fast", function() { ; } );
        } );

    } );

    $( "#slide" ).click( function() {

        // Blue items will disappear, then red items will appear
        $( ".blue-bg" ).slideUp( "fast", function() {
            // Code in here is executed when the slideUp has completed.
            $( ".red-bg" ).slideDown( "fast", function() { ; } );
        } );

    } );

} );
```

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References

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