jQuery

Developing online news packages

What is jQuery?

Web pages are made up of three elements

- HTML – content
- CSS – design
- **JavaScript – interactivity**

The problem with teaching JavaScript

- Simple tasks like manipulating a webpage take lots of code.

- Different browsers have slightly different methods of doing things, requiring coders to create fallbacks.

- Writing code, like an animation, could be inefficient or not the the best method of doing something.

jQuery to the rescue!

jQuery is a **library** written in JavaScript

- jQuery is cross-browser compatible.

- Makes performing tasks like updating the page, relatively simple.

- Less code required to introduce interactivity.

JavaScript

jQuery

```
function fadeOut(elm, interval) {
  for (var i=10; i>0; i--) {
    var opacity = i/10;
    setTimeout( function(opacity) {
      elm.setStyle("-moz-opacity",opacity);
      elm.setStyle("opacity",opacity);
      elm.setStyle("filter","alpha(opacity=" +
(opacity*100).toString() );
      //set alpha values for various browsers
    }, interval);
  }
}

fadeOut(getElementById('box'), 100);
```

```
$('#box').fadeOut();
```

Where do I get jQuery?

jQuery.com

OR

Link directly to the
"Content Delivery Network" (CDN)

http://code.jquery.com/jquery-latest.js

Where do I put the jQuery file?

All JavaScript goes in the

`<script> </script>`

(not to be confused with the <style> tag)

Two ways to use <script> tag:

When including an external library:

```
<script src="jquery.js"></script>
```

When writing your custom code:

```
<script>
    //code here
</script>
```

Don't do this:

```html
<script src="jquery.js">

    //AND put code here


</script>
```

Where do I put jQuery?

```html
<head>
    <title>Some page title</title>
    <style>
        #container{
            width:600px;
        }
    </style>
</head>
<body>



    <script src="jquery.js"></script>
    <script>
        //your jquery commands go here
    </script>
</body>
```

CSS code

jQuery Library

Your jQuery commands

Review

What is jQuery?

A **library** written in JavaScript that makes it easier to do certain tasks.

What HTML tag does jQuery need to be included in a document?

`<script>`

How do I write the <script> tag to include the **jQuery library** in the page?

```
<script src="jquery.js"></script>
```

How do I write the <script> tag to include the **jQuery custom commands** in the page?

```
<script>

//code here

</script>
```

Where do I put the jQuery <script> tags in my page?

At the bottom of the page, before the closing <body> tag. Include library first, then custom code after that.

```
<script src="jquery.js"></script>
<script>
    //your jQuery commands go here
</script>
```

Understanding the syntax

Understanding the syntax

This means 'jQuery'

jQuery

What do you want to manipulate?

$(".somebox")

$("#video")

$("div")
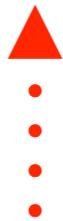
IMPORTANT: Note the **quotes** inside the parentheses

Building a jQuery selector

$

▲
⋮
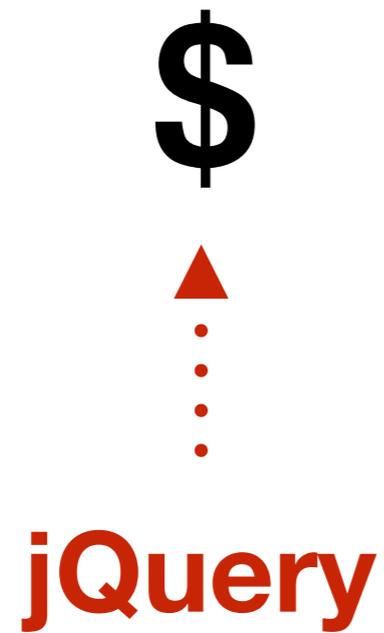
jQuery

Building a jQuery selector

$ ( )

Parenthesis

Building a jQuery selector

$("   ")

Quotes

Building a jQuery selector

$(".somediv")

**CSS Selector
(class, id, or type)**

jQuery *methods*

`$("#container").doSomething();`

jQuery **selector**

jQuery **method**
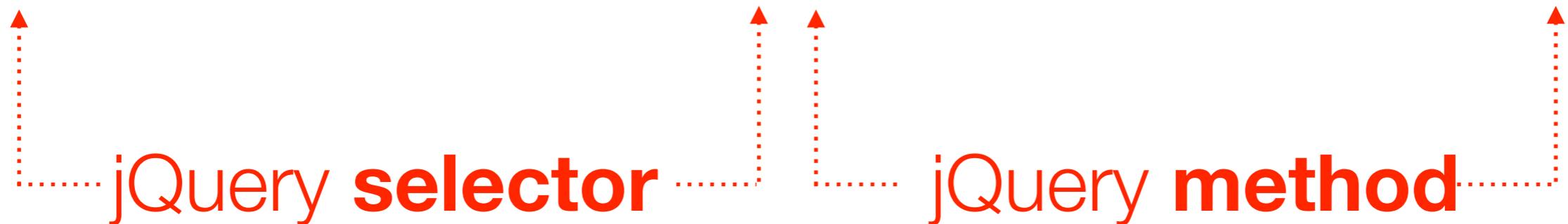
jQuery *methods*

```
$(".photo").fadeOut();
$(".photo").hide();
$(".photo").show();
$(".photo").slideUp();
```

Parts of jQuery command

semicolon

parentheses

$(".container").fadeOut();

css selector

quotes

method

jQuery

dot

parentheses
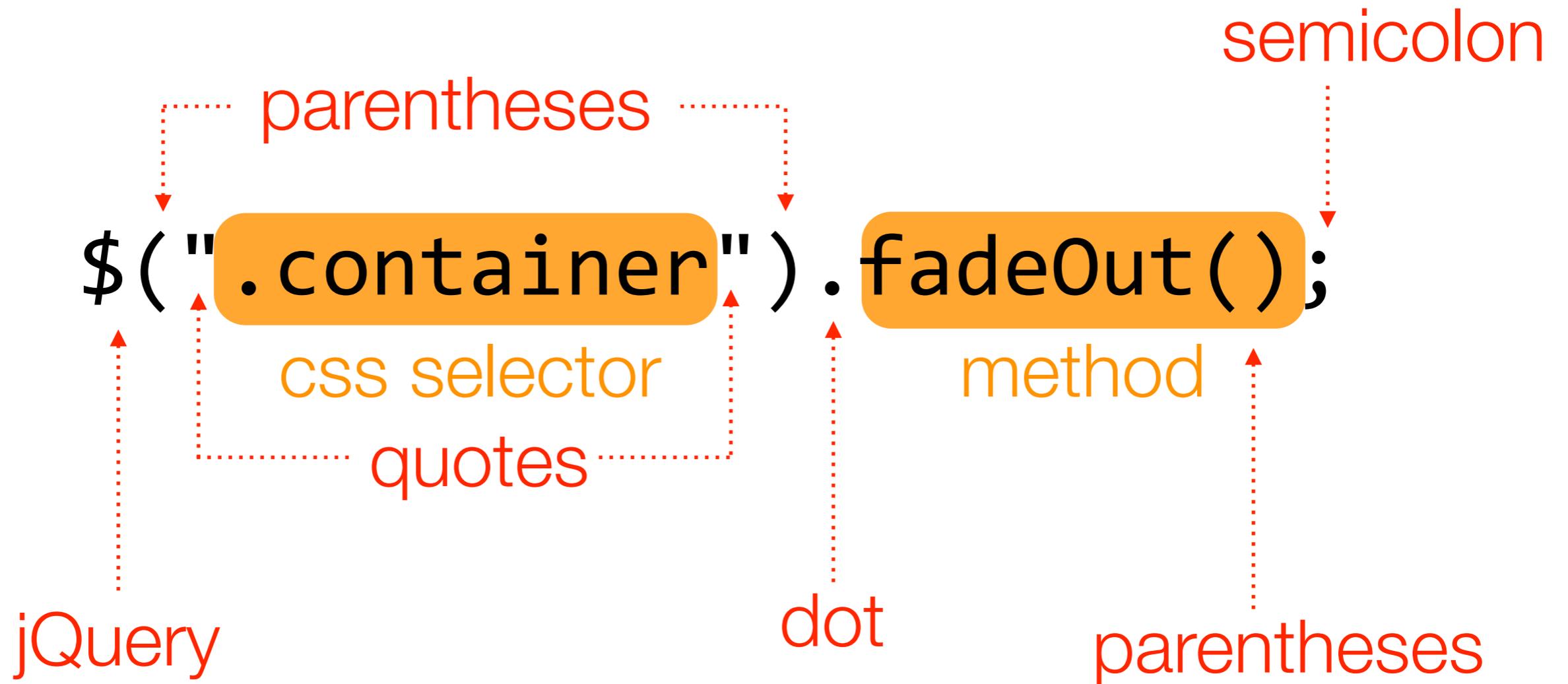
Review

From left to right, describe the jQuery statement to fade out a div element with the class name "container"

```
$(".container").fadeOut();
```

jQuery in action

```
<div class="box"></div>
```
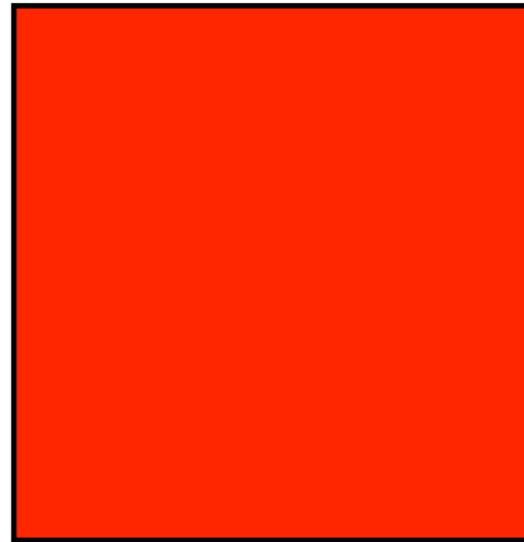


```
$(".box").fadeOut();
```

jQuery in action

```
<div class="box"></div>
```
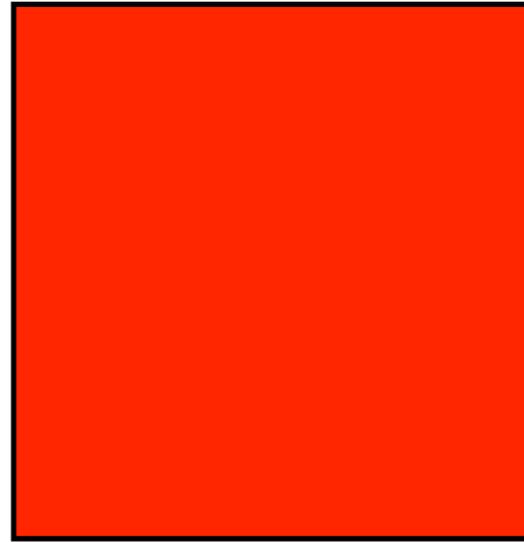


```
$(".box").slideUp();
```

jQuery in action

```
<div class="box"></div>
```
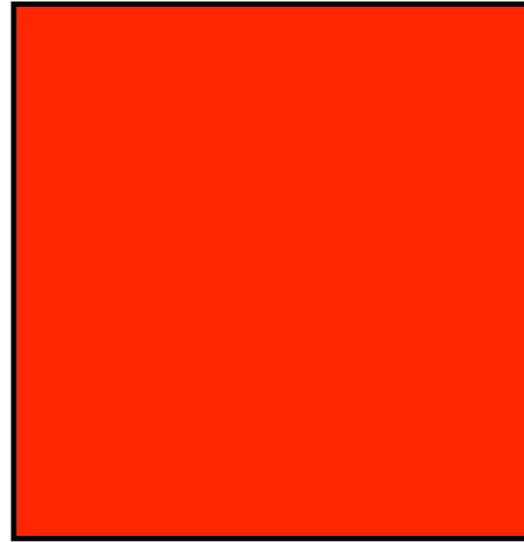


```
$(".box").hide();
```

jQuery in action

```
<div class="box"></div>
```
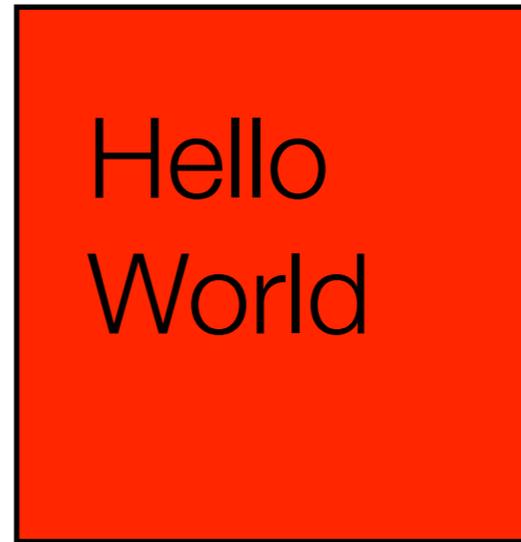


```
$(".box").text("Hello World");
```

Exercise

Parameters (arguments)

Arguments in jQuery

```
$(".container").fadeOut();
```

parentheses

Arguments in jQuery

```
$(".container").fadeOut("slow");
```

argument

Arguments in jQuery

```
$(".container").fadeOut(3000);
```

argument

Arguments in jQuery

```
$(".container").text("Hello World");
```

quotes

All text has to be in quotes, unless it is some special command recognized by JavaScript.

Arguments in jQuery

```
$(".container").fadeOut(200);
```

Will fade out element with class **.container**
in 200 milliseconds

Review

Why is there a parenthesis at the end of every jQuery method?

```
$(".someclass").method();
```

To include additional information about how the command should operate

What does the following jQuery command do?

```
$(".title").fadeOut(4000);
```

Fades out some HTML element with an class attribute "title" over the course of four seconds

What's wrong with the following jQuery command?

```
$("#footer").text(This is copyrighted);
```

When the parameter is text, it NEEDS
to have quotes or it won't work.

```
$("#footer").text("This is copyrighted");
```

Multiple Arguments

Multiple Arguments

comma

$("#container").css("background", "red");

1st argument   2nd argument

Multiple Arguments

comma

$("#container").fadeTo(5000, 0.5);
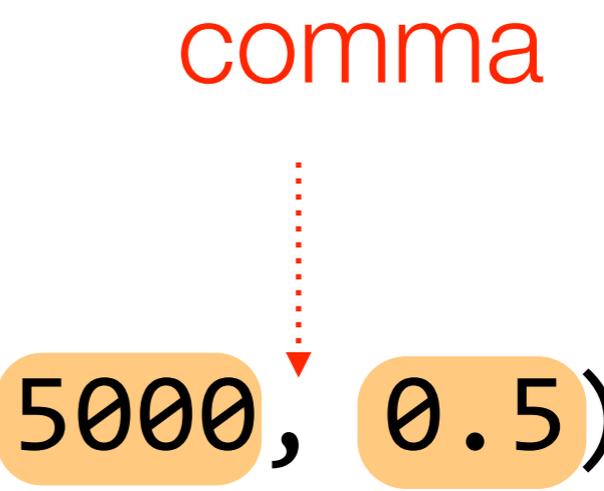
Review

What character symbol do I use to separate multiple parameters?

A comma

```
$(".container").css("background", "red");
```

How would I write a command to change the CSS of class box so that the text color is blue?

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

Exercise

Functions

What are functions?

- Functions are simply blocks of code that are in a waiting queue to be run.

- Think of it as a way of saying "do the following…" but only when activated.

- Functions only run at certain times. In jQuery, a function is usually runs when a user clicks a button, or performs some type of action.

jQuery functions

wait for something to happen

```
$(".button").on("click"…
```

jQuery functions

parenthesis, which we won't use

```
$(".button").on("click", function(){});
```

We put code inside the curly brackets to be called only after the event click happens.

jQuery functions

```
$(".button").on("click", function(){});

    $("#box").fadeOut();
```
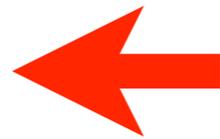
← Code only runs after button is clicked.

Anatomy of a function

`function (){}`

the word "function"

some parenthesis here
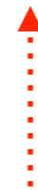
Then you got some curly brackets here

Anatomy of a function

```
function (){}
```

← Code goes here

Review

What's a function?

A block of code which is only run at a certain time, like after an event, such as when a user clicks on a button.

Describe all the parts of a function from beginning to end.

```
function(){}
```

Where does the code go that should execute when this function is run?

`function(){}`
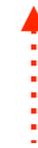
Right here

What does the following do in jQuery?

```
$(".button").on("click", function(){

    $("#title").fadeOut("fast");

});
```

When the HTML element with the id attribute "button" is clicked, an element "title" will fade out quickly.

Animation

animate method

css property · value

jquery command

colon

`$("#box").animate({'left':'50px'}, 3000);`

jquery selector

curly brackets

milliseconds
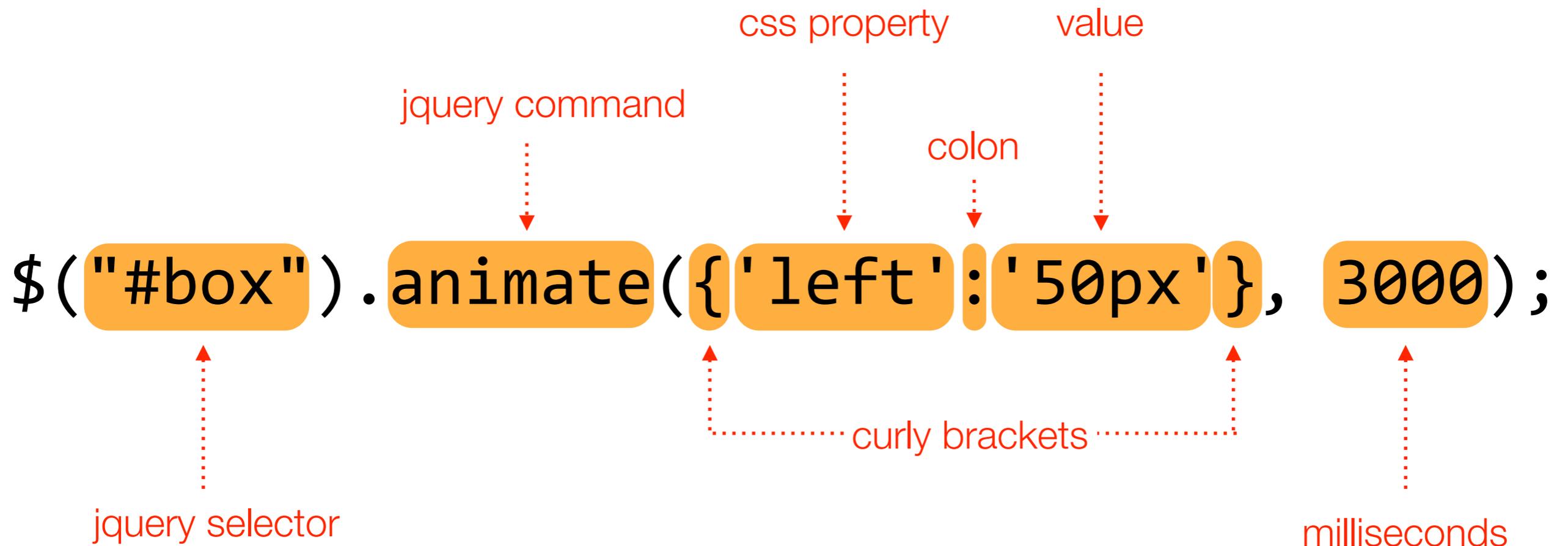
Just to expose you to this command
(don't worry about memorizing it)

jQuery "ready"

- jQuery can't do certain things like manipulate content until the entire webpage is fully loaded.

- Because web pages run from the top to bottom, we need to place a trigger to prevent jQuery from running until the web page is fully loaded.

All jQuery code goes into a "ready" block

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



});
```