

# 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

```
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);
```

# jQuery

```
$( '#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:

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

```
    //AND put code here
```

```
</script>
```

# Where do I put jQuery?

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

CSS code

jQuery Library

Your jQuery commands

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

```
<script>  
  //your jquery commands go here  
</script>
```

```
</head>
```

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

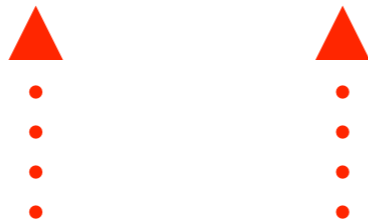
`jQuery`  This means 'jQuery'

# What do you want to manipulate?

`$(".somebox")`

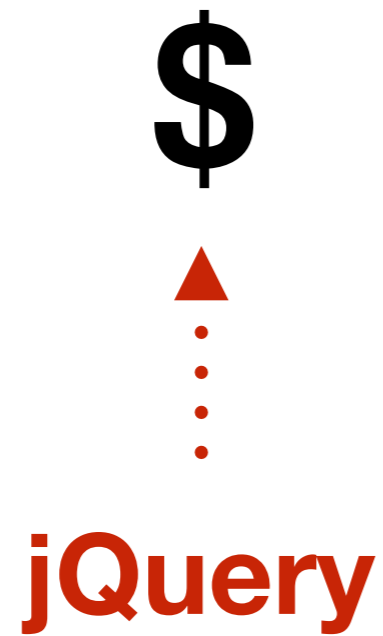
`$("#video")`

`$("#div")`



IMPORTANT: Note the **quotes** inside the parentheses

# Building a jQuery selector



# Building a jQuery selector

\$ ( )



**Parenthesis**

# Building a jQuery selector



# Building a jQuery selector

**\$ ( ".somediv" )**



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



# jQuery *methods*

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

jQuery **selector**      jQuery **method**

# jQuery *methods*

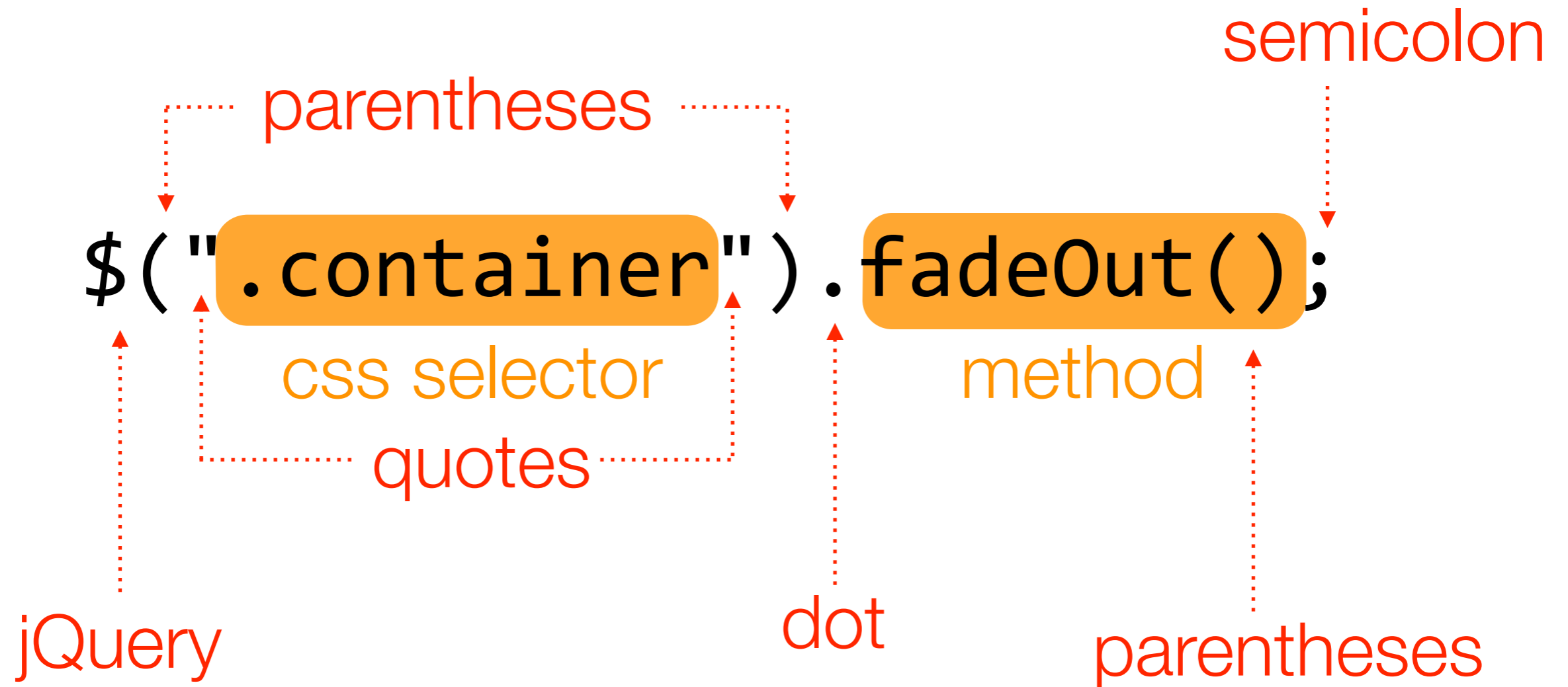
```
$(".photo").fadeOut();
```

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

```
$(".photo").show();
```

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

# Parts of jQuery command



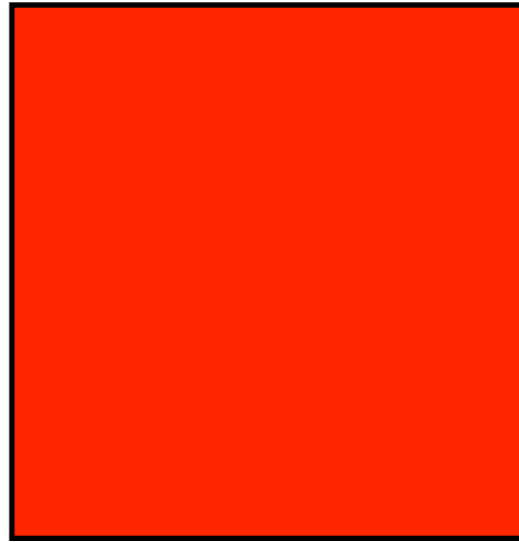
Review

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

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

# jQuery in action

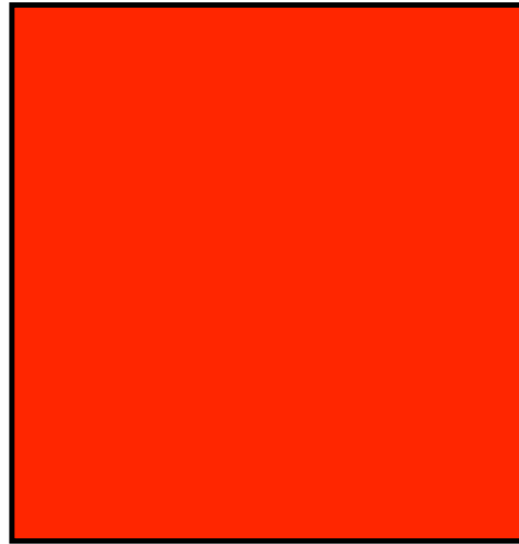
```
<div class="box"></div>
```



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

# jQuery in action

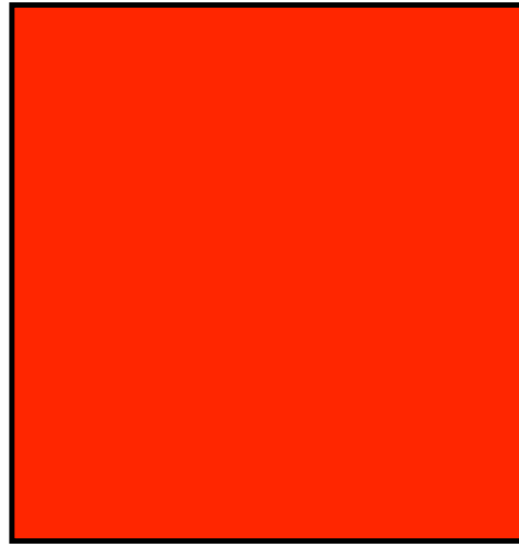
```
<div class="box"></div>
```



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

# jQuery in action

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

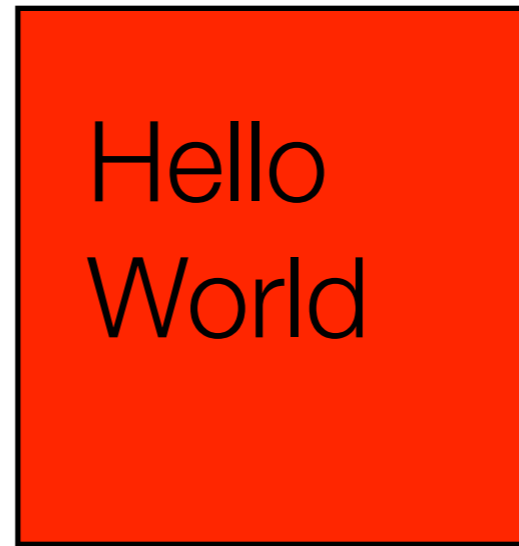


```
$(".box").hide();
```



# 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);
```

↑  
parameter

# Arguments in jQuery

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



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 command?

```
$(".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 id 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

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

comma

1st argument

2nd argument

A diagram illustrating the arguments of a CSS function. The code snippet `$("#container").css("background", "red");` is shown. The string `"background"` is highlighted with an orange rounded rectangle, and a red dotted arrow points from the label "1st argument" below to it. The string `"red"` is also highlighted with an orange rounded rectangle, and a red dotted arrow points from the label "2nd argument" below to it. A red dotted arrow points from the label "comma" above to the comma character between the two strings.

# Multiple Arguments

comma

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

A diagram illustrating the comma separator in a function call. The word "comma" is written in red above the comma in the code. A red dotted arrow points from the word "comma" down to the comma character in the code. The two arguments, "5000" and "0.5", are highlighted with orange rounded rectangles.

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 #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

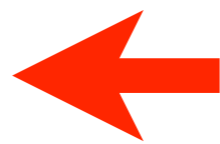
```
$(".button").on("click", function(){});
```

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

# jQuery functions

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

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

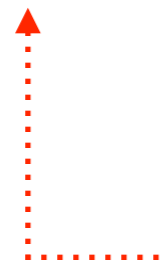


Code only runs after  
button is clicked.



# Anatomy of a function

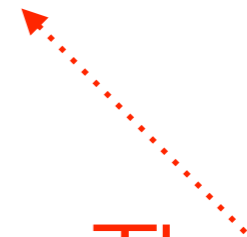
function () {}



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?

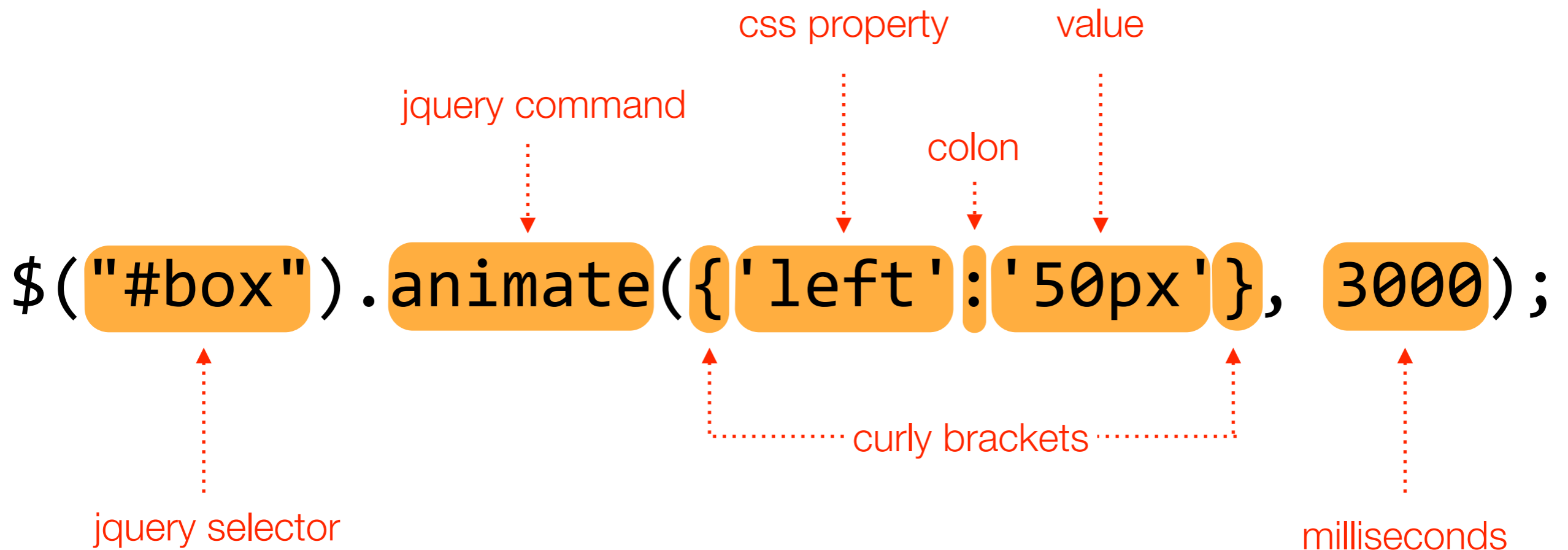
```
$(".button").on("click", function(){  
    $("#title").fadeOut("fast");  
});
```

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

# Animation



# animate method



**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($){  
  
});
```