



# JavaScript

# JavaScript

You will (hopefully) learn:

JavaScript

jQuery

DOM

Events

Functions

Conditionals

Loops

JavaScript is ...

a programming language

# JavaScript is ...

the ONLY language that works in all  
browsers

# JavaScript is ...

the language behind modern web

(Google Maps, Office Online, iCloud Online)

# JavaScript is ...

fast becoming most popular language

# JavaScript is ...

now also available server-side  
(Node.js)

# JavaScript is ...

nothing to do with Java

“Java is to JavaScript as ham is to hamsters.”



# JavaScript



jQuery

JQuery is ...

a JavaScript library

# JQuery is ...

designed to simplify client-side scripting

# JQuery is ...

designed to work in all browsers

# JQuery is ...

the most popular JavaScript library in use today  
(used by over 80% of the 10,000 most visited  
websites)

# Selectors

```
<body>
  <h1>jQuery Rocks!</h1>
  <div id="foo">
    <p class="bar">
      Hello, world!
    </p>
    <p class="baz">
      Goodbye, world!
    </p>
  </div>
  <div id="quux"></div>
</body>
```

`$('h1')`  $\Rightarrow$  [`<h1>`]

`$('p')`  $\Rightarrow$  [`<p>`, `<p>`]

`$('p.bar')`  $\Rightarrow$  [`<p>`]

`$('#foo p.bar')`  $\Rightarrow$  [`<p>`]

# JavaScript



DOM

The DOM is ...

the Document Object Model



# The DOM is ...

a way of logically defining structured documents (such as HTML)

The DOM is ...

a pain in the arse

# DOM manipulation

```
<body>
  <h1>jQuery Rocks!</h1>
  <div id="foo">
    <p class="bar">
      Hello, world!
    </p>
    <p class="baz">
      Goodbye, world!
    </p>
  </div>
  <div id="quux"></div>
</body>
```

```
$( 'h1' ).css( 'color', 'red' )
$( 'p' ).addClass( 'important' )
$( 'p.bar' ).hide()
$( '#quux' ).html( '<p>Test</p>' )
```

# Exercise 1

<http://jsfiddle.net/urfolomeus/yZPz3>

1. Go to the site above.
2. Add some text to the empty p tag
3. Hint: you can add text using the text() function.
4. [BONUS] play around and see what you can do.

# JavaScript



Events

# Events are ...

things that happen that JavaScript can  
respond to

# Events are ...

clicking a link

```
$('a').on('click', <do a thing>);
```

# Events are ...

## submitting a form

```
$('#form').on('submit', <do another thing>);
```



# Events are ...

pressing a key in a certain area

```
$( 'textarea' ).on( 'keyup', <do something else> );
```

# JavaScript



Functions

# Functions are ...

a block of code that does something

```
function yell () {  
    alert("Oi!");  
}
```

# Functions are ...

used by calling them

```
function yell () {  
  alert("Oi!");  
}
```

```
yell()  
=> // 'Oi!' alert shown
```

# Functions are ...

can take arguments

```
function hello(name) {  
  alert('Hello, ' + name);  
}
```

```
hello('world')  
=> // 'Hello, world' alert shown
```

# Functions are ...

can return results

```
function hello(name) {  
  return 'Hello, ' + name;  
}
```

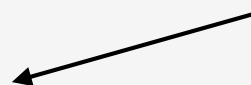
```
hello('world')  
=> Hello, world
```

# Callbacks are ...

functions called when an event triggers

```
$( 'a' ).on( 'click', function () {  
    alert( 'Hello, world' );  
});
```

Callback



# Exercise 2

<http://jsfiddle.net/urfolomeus/yZPz3/3>

1. Go to the site above.
2. Add a “Make text green button”.
3. Make the background colour of the p tag yellow when the page loads.
4. Add a link that will change the background colour of the p tag to orange when it is clicked.



# JavaScript

A large, light gray circle is centered on the page, below the 'JavaScript' title. It serves as a background for the 'Conditionals' text.

Conditionals

# Conditionals

```
if (condition) {  
    // do this if condition is true  
} else {  
    // do this if condition is false  
}
```

# Exercise 3

<http://jsfiddle.net/urfolomeus/TBKLh/>

1. Go to the site above.
2. Change the function so that it
  - A. outputs "Less than 10" when value is less than 10
  - B. outputs "Greater than or equal to 10" otherwise

# JavaScript



Loops

# Loops

```
for (var i=0; i < 10; i++) {  
    // do a thing  
}
```

```
for (var i=10; i >= 0; i--) {  
    // do a thing  
}
```

# Loops

```
while (condition) {  
    //do a thing  
}
```

```
// ! BEWARE INFINITE LOOPS !
```

# Exercise 4

<http://jsfiddle.net/urfolomeus/fDJEB/>

1. Go to the site above.
2. Change the forward loop so that it says "Hello!" ten times.
3. Change the backward loop so that it counts down to 0.
4. [BONUS] don't create an infinite loop ;)

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