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

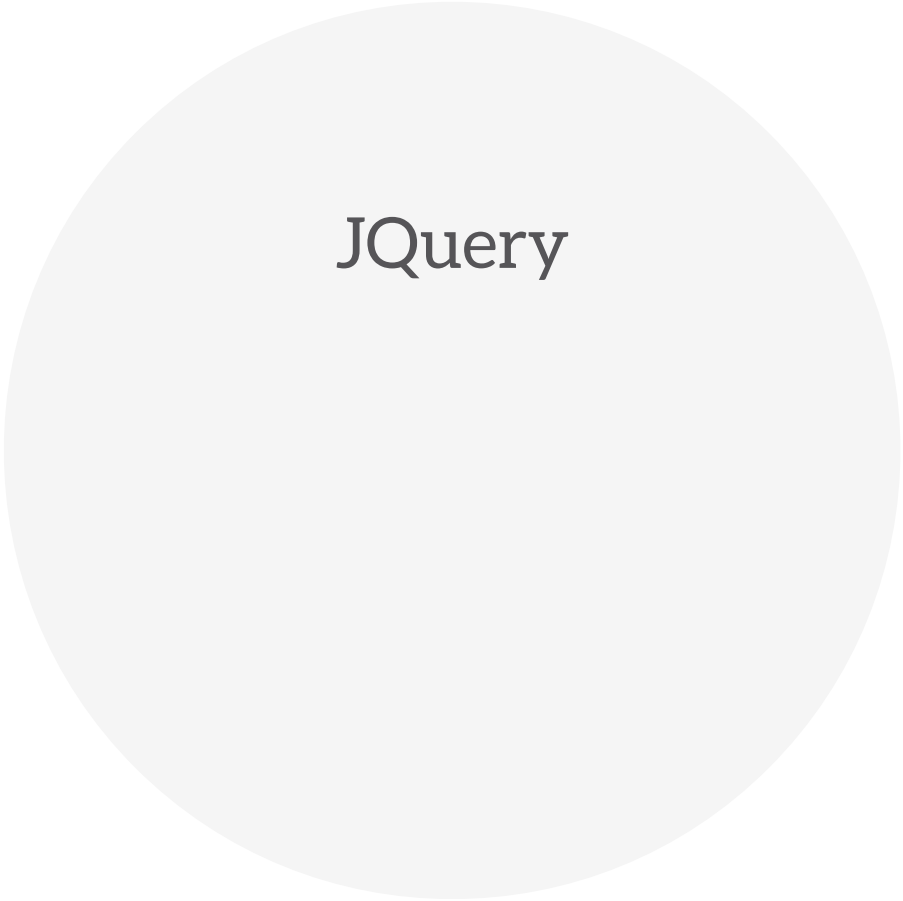
(Node.js)

JavaScript is …

nothing to do with Java

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

JavaScript



JQuery 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')          => [<h1>]

$('p')           => [<p>, <p>]

$('p.bar')       => [<p>]

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

JavaScript

The DOM is …

the Document Object Model

The DOM is …

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

Document Object Model

```
<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>
```

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>
```

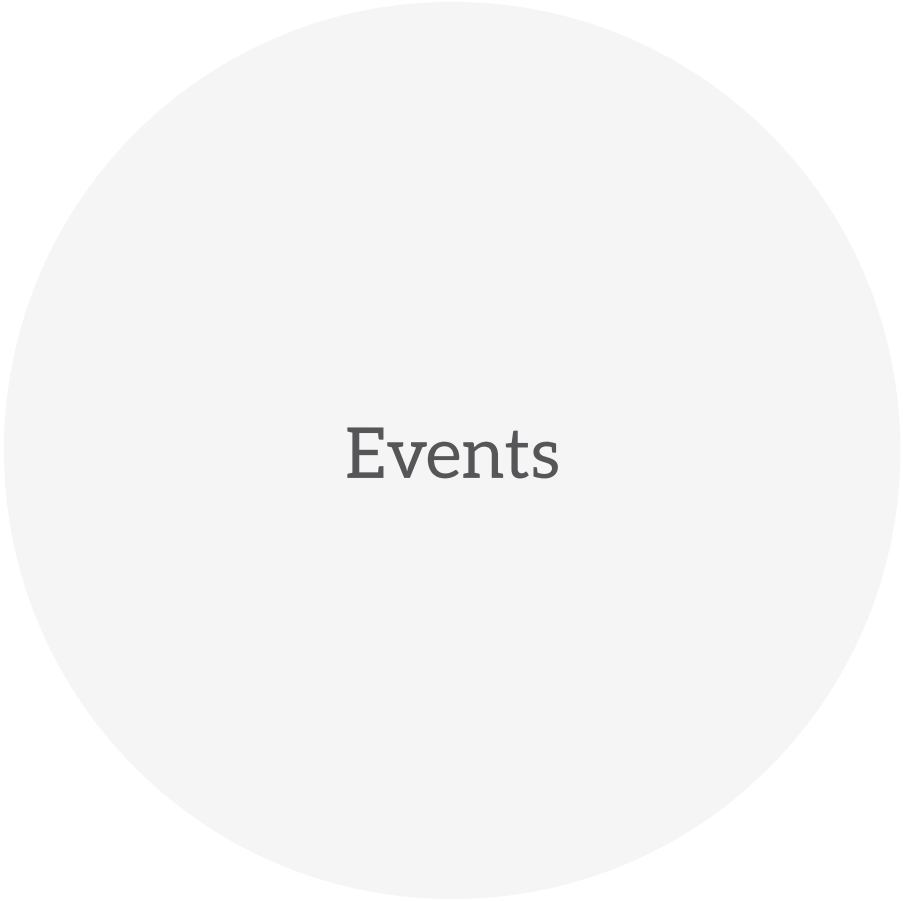
```
$('h1').css('color', 'red')

$('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 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

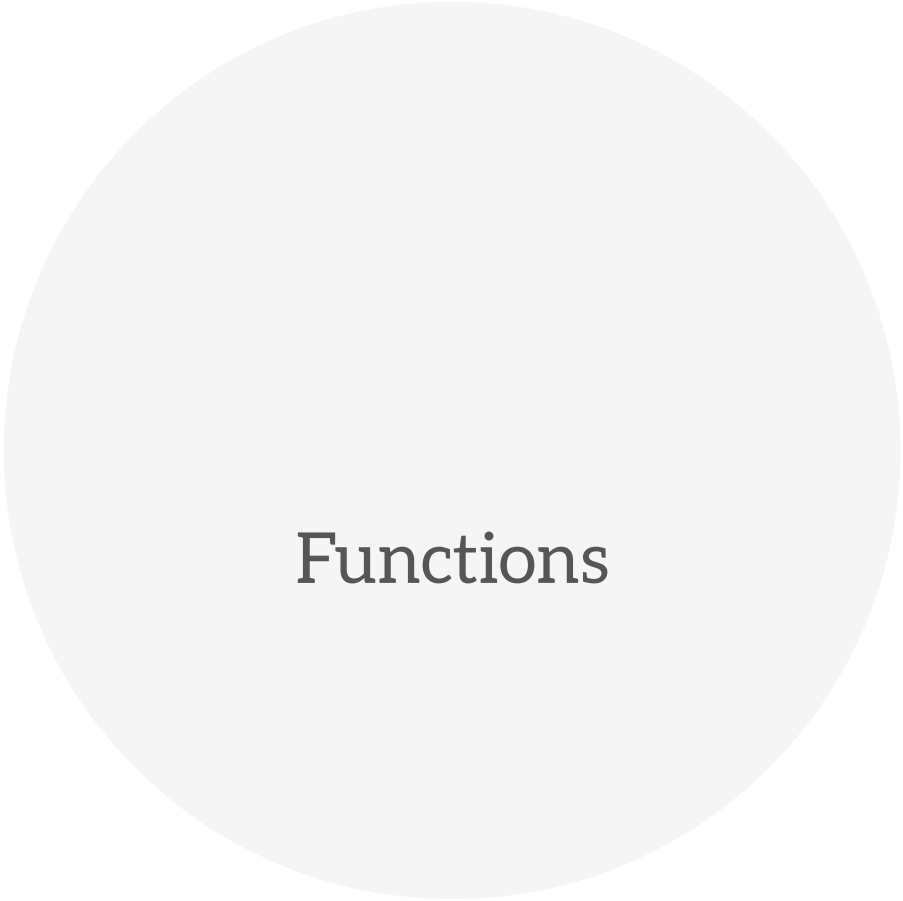
```
$('form').on('submit', <do another thing>);
```

Events are ...

pressing a key in a certain area

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

JavaScript



Functions 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 can ...

take arguments

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

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

Functions can …

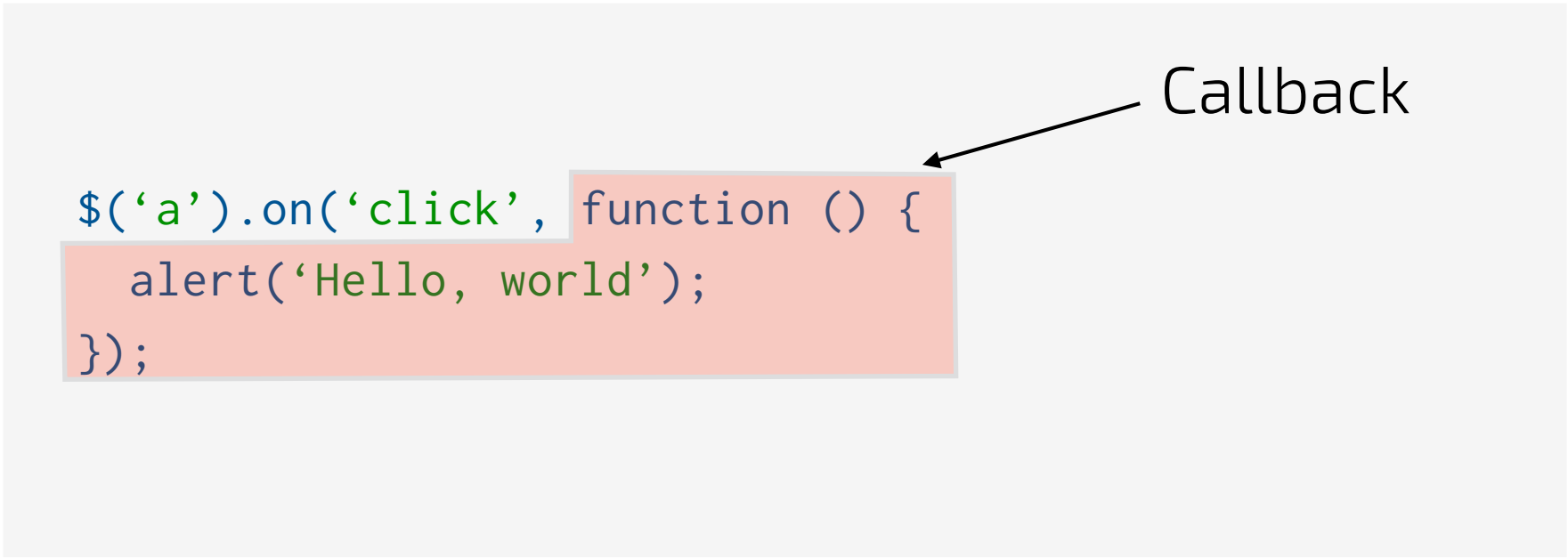
return results

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

```
hello(‘world’)
=> Hello, world
```

Callbacks are …

functions called when an event triggers



Exercise 2

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

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

JavaScript

Conditionals

Conditionals

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

Variables are ...

a place to store values that can change

```
var value = 1;
```

```
value
=> 1
```

Functions can …

also be attached to variables

```
var hello = function (name) {
  return ‘Hello, ’ + name;
}
```

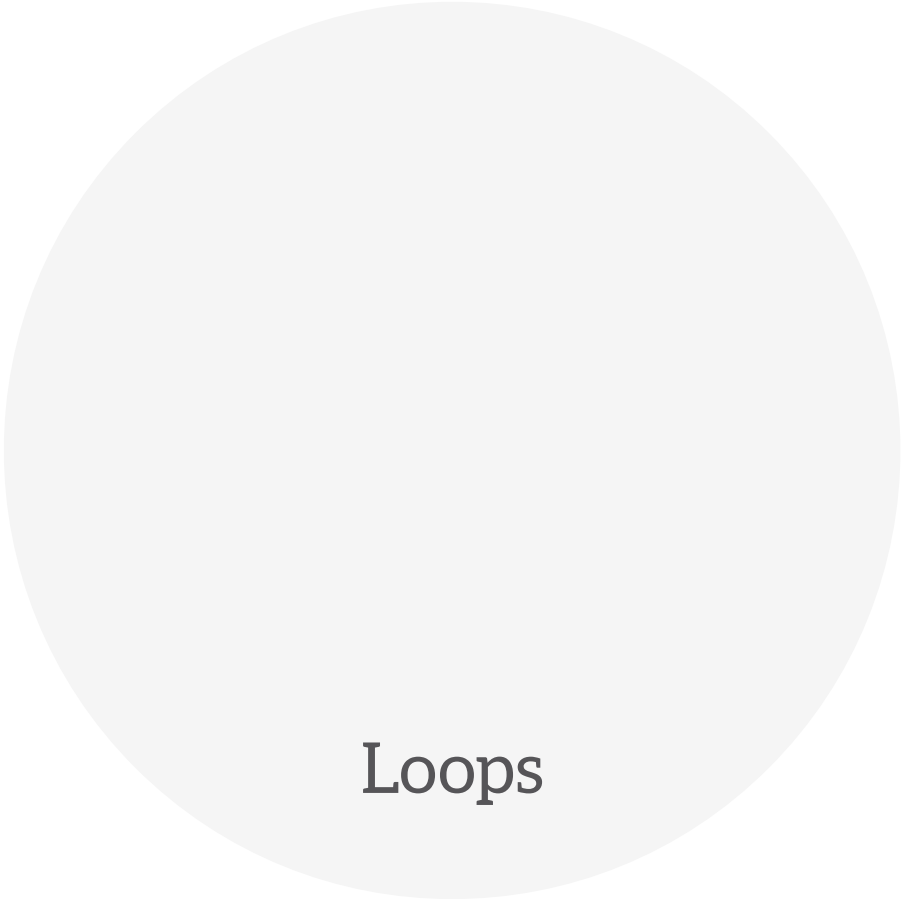
```
hello(‘world’)
=> Hello, world
```

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 (i.e. value < 10)
   B. outputs “Greater than or equal to 10” otherwise (i.e. value >= 10)

JavaScript



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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Functions

Conditionals

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