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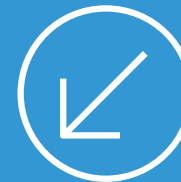
TechEd

New Zealand 2012



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JavaScript: Not Your Mother's Scripting Language

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JavaScript === Key Skill Set for Today

```
function fibonacci(number) {  
    if (number <= 1) {  
        return number;  
    } else {  
        return fibonacci(number-1) + fibonacci(number-2);  
    }  
}
```

HTML5

Content

CSS3

Presentation



JavaScript

Behavior

JavaScript Beyond the Web



Phone**Gap**

node**JS**

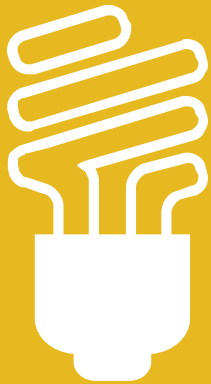


"In JavaScript, there is a beautiful, elegant, highly-expressive language that is buried under a steaming pile of good intentions and blunders"

⌚ *Douglas Crockford, Javascript: The Good Parts*

JavaScript Continues to Innovate

```
fibonacci = (n) ->  
  if n < 2  
    return n  
  else  
    return fibonacci (n-1) + fibonacci (n-2)
```

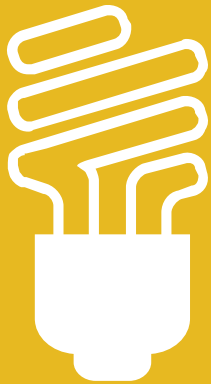


My Old Friend JavaScript!

Type Handling Rules

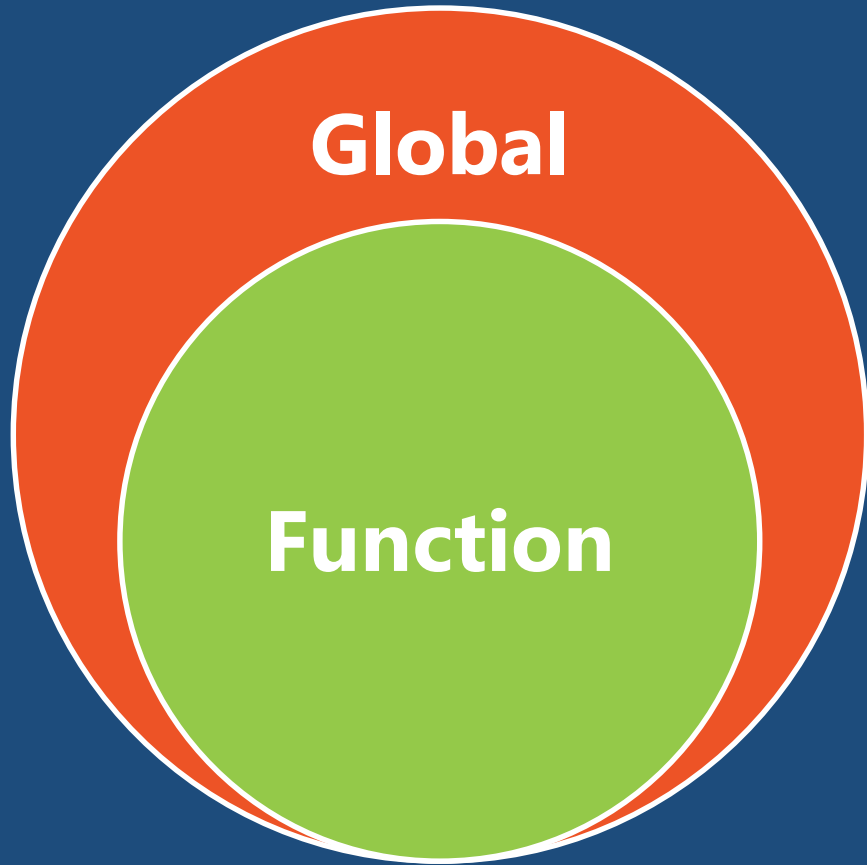
Type(x)	Type(y)	Result
x and y are the same type		Follow Strict Equality (===) Algorithm
null	Undefined	true
Undefined	Null	true
Number	String	x == toNumber(y)
String	Number	toNumber(x) == y
Boolean	(any)	toNumber(x) == y
(any)	Boolean	x == toNumber(y)
String or Number	Object	x == toPrimitive(y)
Object	String or Number	toPrimitive(x) == y
otherwise...		false

Source: <http://javascriptweblog.wordpress.com/2011/02/07/truth-equality-and-javascript/>



How Objects Function (or how Functions Object)

Controlling Scope



- ⌚ By default, everything is in global scope
 - ⌚ Known as “window” in browsers
- ⌚ Functions control scope not braces
- ⌚ Module pattern helps keep the global scope “clean”

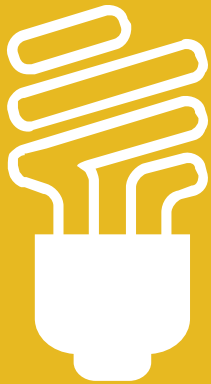
```
// global scope

(function () {
    // function scope
})();
```

Document Object Model in the Real World

- ⌚ Cross-browser interop focus over past few years
 - ⌚ Web Standards Project ACID tests
 - ⌚ ECMAScript Test Suite
- ⌚ Quirks make it difficult to rely on direct DOM interaction
- ⌚ Libraries like jQuery, Prototype, Dojo, MooTools fill the gaps





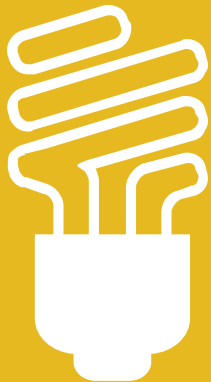
How jQuery Saved My Marriage

... and other wonderful things a good library can do for you.

Testing JavaScript

- ④ Tool to learn the language behaviour
- ④ Verify your expectations of the code
 - ④ Positive + Negative + Fault Tests
- ④ Test Frameworks: QUnit, Jasmine, Jarvis, jfUnit
- ④ Mocking Framework: Sinon.JS, JSMockito
- ④ Test Drivers: JustCode, Test Swarm, JSTestDriver





The Proof is in the Test

Yes Timmy, you can indeed learn from testing your JavaScript.

Evolution Continues...

ECMAScript 6 compatibility table

Flattr

9

by kangax

Please note that *some of these tests* represent **existence**, not functionality or full conformance.

Feature name		Current browser	IE 10	Firefox 11, 12	Firefox 13	Chrome <19	Chrome 19*	Safari 5.1	WebKit	Opera 12	Rhino 1.7
let		No	No	Yes	Yes	No	Yes	No	No	No	No
const		Yes	No	No	No	Yes	Yes	No	No	No	No
default function params		No	No	No	No	No	No	No	No	No	No
rest parameters		No	No	No	No	No	No	No	No	No	No
spread (...) operator		No	No	No	No	No	No	No	No	No	No
is / isnt egal operators		No	No	No	No	No	No	No	No	No	No
Pragmas		No	No	No	No	No	No	No	No	No	No
Modules		No	No	No	No	No	No	No	No	No	No
For..of loops		No	No	No	Yes	No	No	No	No	No	No
Array comprehensions		No	No	No	Yes	No	No	No	No	No	No
Generator expressions		No	No	No	Yes	No	No	No	No	No	No
Iterators		No	No	No	No	No	No	No	No	No	No
Generators (yield)		No	No	Yes	Yes	No	No	No	No	No	No
Typeof null is null		No	No	No	No	No	Yes	No	No	No	No
Quasi-Literals		No	No	No	No	No	No	No	No	No	No
RegExp "y" flag		No	No	Yes	Yes	No	No	No	No	No	No
Maps		No	No	No	Yes	No	Yes	No	No	No	No
Sets		No	No	No	Yes	No	Yes	No	No	No	No
WeakMaps		No	No	Yes	Yes	No	Yes	No	No	No	No
Proxies		No	No	No	No	No	No	No	No	No	No
Structs (binary data storage)		No	No	No	No	No	No	No	No	No	No

Source: <http://kangax.github.com/es5-compat-table/es6/>

Resources

- ④ Eloquent JavaScript
bit.ly/eloquentjs
- ④ Secrets of a JavaScript Ninja
colinb.me/ninjajs
- ④ Learning JavaScript Design Patterns
colinb.me/learnjspatterns
- ④ JavaScript Best Practices
colinb.me/jsbestpractices
- ④ QUnit
qunitjs.com
- ④ Web Essentials
colinb.me/vswebext
- ④ Web Workbench
bit.ly/webworkbench
- ④ JustCode
telerik.com/justcode

Related Content

- ④ DEV305: Enjoy A Cup Of CoffeeScript
- ④ AZR204: Node.js and Windows Azure
- ④ APP204: From Web to Windows - Windows 8 Apps with HTML/CSS/JavaScript
- ④ APP302: Building great Windows 8 Apps with HTML and WinJS
- ④ APP304: Using PhoneGap to Write Once, Look Metro and Run On All Mobiles
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