

Ecossistema JS

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“There sure are lot of languages”

Jenn Schiffer

Functions are first-class citizens, syntax resembles Java, inheritance is prototypal, and (+"") equals zero.



Brendan Eich @1995

10 dias

Em 20 anos a linguagem mais popular



Além do JS

DOM

NodeJS

asm.js

ES5

“use strict”

ES6 / 2015

- Promises
- Generators
- Proxies
- Reflect
- Arrow Functions
- Rest Parameters
- Default Parameters
- Spread Operator
- Template Strings
- Class

ES7+

- async
- SIMD
- async generators
- typed objects
- ...

Exemplos

...

TC39

Standard ECMA-262

ECMAScript[®] 2015 Language Specification

6th edition (June 2015)

<http://www.ecma-international.org/publications/standards/Ecma-262.htm>

Processo

<http://tc39.github.io/process-document/>

0. Strawman

- ideias

1. Proposal

- Apresentar caso
- Descrição do formato
- Identificar potenciais desafios
 - Champion
 - Exemplos
 - API de alto nível

2. Draft

Descrever precisamente a sintaxe e semântica utilizando o idioma formal da especificação.

- Texto inicial da especificação

3. Candidate

Indica que outros ajustes precisam de feedback de implementações e usuários.

- Especificação completa
- Só mudanças críticas

4. Finished

Indica que a adição está pronta para inclusão como um padrão formal do ECMAScript.

- 2 implementações compatíveis
- Testes de aceitação (**Test262**)

Spec != Implementação

Feature name	Compilers/polyfills							Desktop browsers										Servers/runtimes									
	67%	59%	71%	31%	18%	52%	17%	7%	17%	66%	65%	67%	69%	70%	48%	56%	56%	8%	18%	64%	9%	8%	17%	44%	58%		
	Current browser	Traceur	Babel + core-js ^[1]	Closure	JSX ^[2]	Type-Script + core-js	es6-shim	IE 10	IE 11	Edge ^[3]	FF 38 ESR	FF 40	FF 41	FF 42	CH 44, OP 31 ^[4]	CH 45, OP 32 ^[4]	CH 46, OP 33 ^[4]	SF 6.1, SF 7	SF 7.1, SF 8	WK	KQ 4.14 ^[5]	PJS	Node ^[6]	io.js ^[6]	Echo JS		
Optimisation																											
• proper tail calls (tail call optimisation)	0/2	0/2	1/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2
Syntax																											
• default function parameters	3/6	3/6	5/6	4/6	0/6	4/6	0/6	0/6	0/6	0/6	3/6	3/6	3/6	3/6	0/6	0/6	0/6	0/6	0/6	6/6	0/6	0/6	0/6	0/6	0/6	0/6	3/6
• rest parameters	4/5	4/5	4/5	2/5	3/5	3/5	0/5	0/5	0/5	5/5	4/5	4/5	4/5	4/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	0/5	2/5
• spread (...) operator	15/15	15/15	13/15	3/15	2/15	4/15	0/15	0/15	0/15	12/15	15/15	15/15	15/15	15/15	0/15	0/15	0/15	0/15	5/15	9/15	0/15	0/15	0/15	0/15	0/15	13/15	
• object literal extensions	6/6	6/6	6/6	4/6	5/6	6/6	0/6	0/6	0/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6	6/6	0/6	1/6	5/6	0/6	0/6	0/6	6/6	4/6		
• for...of loops	7/9	9/9	9/9	6/9	2/9	3/9	0/9	0/9	0/9	6/9	7/9	7/9	7/9	7/9	7/9	7/9	7/9	0/9	2/9	8/9	0/9	0/9	7/9	7/9	6/9		
• octal and binary literals	4/4	2/4	4/4	2/4	0/4	4/4	2/4	0/4	0/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	4/4	0/4	0/4	4/4	0/4	0/4	0/4	4/4	4/4		
• template strings	5/5	4/5	4/5	3/5	4/5	3/5	0/5	0/5	0/5	4/5	5/5	5/5	5/5	5/5	5/5	5/5	5/5	0/5	0/5	5/5	0/5	0/5	0/5	5/5	5/5		
• RegExp "y" and "u" flags	2/4	2/4	2/4	0/4	0/4	0/4	0/4	0/4	0/4	2/4	2/4	2/4	2/4	2/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	0/4	2/4	
• destructuring	27/36	30/36	33/36	20/36	15/36	25/36	0/36	0/36	0/36	0/36	27/36	27/36	28/36	28/36	0/36	0/36	0/36	0/36	18/36	32/36	0/36	0/36	0/36	0/36	16/36		
• Unicode code point escapes	1/2	1/2	1/2	1/2	0/2	1/2	0/2	0/2	0/2	2/2	0/2	1/2	1/2	1/2	2/2	2/2	2/2	0/2	0/2	2/2	0/2	0/2	0/2	1/2	1/2		
• new.target	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	0/2	2/2	2/2	0/2	0/2	0/2	0/2	0/2	1/2	0/2	0/2	0/2	0/2	0/2		
Bindings																											
• const	8/8	6/8	6/8	6/8	0/8	8/8	0/8	0/8	8/8	8/8	8/8	8/8	8/8	8/8	5/8	5/8	5/8	1/8	1/8	8/8	2/8	1/8	1/8	5/8	6/8		
• let	0/10	8/10	8/10	8/10	0/10	8/10	0/10	0/10	8/10	8/10	0/10	0/10	0/10	0/10	5/10	5/10	5/10	0/10	0/10	10/10	0/10	0/10	0/10	5/10	10/10		
• block-level function declaration^[14]	No	Yes	Yes	Yes	No	No	No	No	Yes	Yes	No	No	No	No	Yes	Yes	Yes	No	No	No	No	No	Flag	Yes	No		
Functions																											
• arrow functions	9/12	10/12	9/12	9/12	7/12	8/12	0/12	0/12	0/12	9/12	8/12	9/12	10/12	10/12	0/12	9/12	9/12	0/12	0/12	8/12	0/12	0/12	0/12	0/12	7/12		
• class	0/23	16/23	19/23	9/23	15/23	15/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	0/23	20/23	0/23	0/23	0/23	0/23	16/23		
• super	0/7	6/7	6/7	4/7	6/7	5/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	0/7	7/7	0/7	0/7	0/7	0/7	6/7		
• generators	20/25	22/25	22/25	16/25	0/25	0/25	0/25	0/25	0/25	0/25	20/25	20/25	20/25	20/25	19/25	19/25	19/25	0/25	0/25	0/25	0/25	0/25	0/25	19/25	13/25		

Test262

Para cada detalhe da especificação, testes de aceitação são escritos para confirmar implementação.

Resultados do Test262



Babel

Babel is a JavaScript compiler.

Use next generation JavaScript, today.

Grab yourself a copy of *Exploring ES6* today!

Star 8,961

TypeScript



<http://www.typescriptlang.org/>

Stage 2 QA

JS Hint

Referências

<https://github.com/addyosmani/es6-tools>

<http://exploringjs.com/>

Mundo Real

- EmberJS 2.0
- Angular 2
- Bootstrap 4

<https://github.com/sindresorhus/esnext-showcase>

<http://blog.getbootstrap.com/2015/08/19/bootstrap-4-alpha/>



Obrigado!

@leobalter

