

M01 - Introduction

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Introduction to JavaScript

Introduction to JavaScript

1. Definition
2. Manual and Specifications
3. Code Editors
4. Developer Console

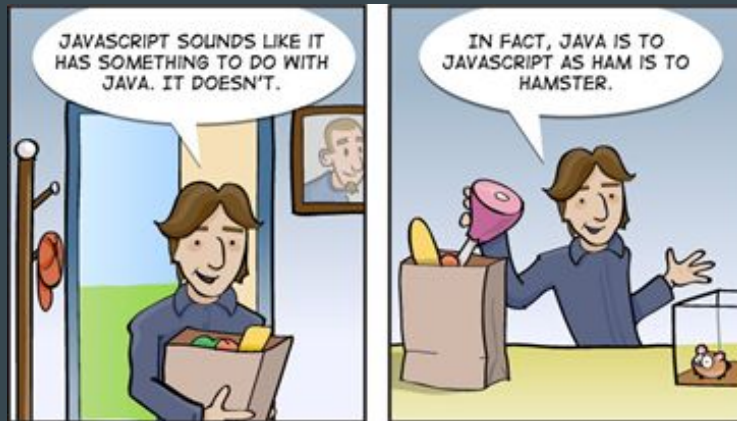
Introduction to JavaScript

1. Definition

Introduction to JavaScript

1. Definition

- Programming language
- Created by **Brendan Eich** (Netscape programmer) in 1995
- It started with the name Mocha, then LiveScript, and finally, **JavaScript**

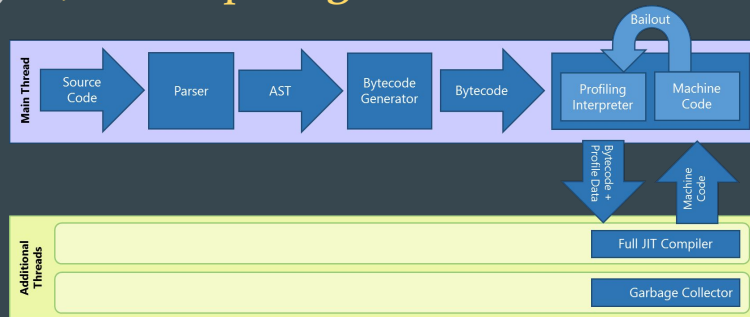


Introduction to JavaScript

1. Definition

- JavaScript was initially created as a browser-only language
- It is interpreted / compiled / executed by a **JavaScript engine**

- **V8** in Google Chrome and Opera
- **SpiderMonkey** in Mozilla Firefox
- **Chakra** in Microsoft Edge



- In addition to the browser, JS is used on other platforms with a **JavaScript engine**
- Example: **Node.js** has a V8 engine that compiles JS code to native machine code instead of interpreting it in real time

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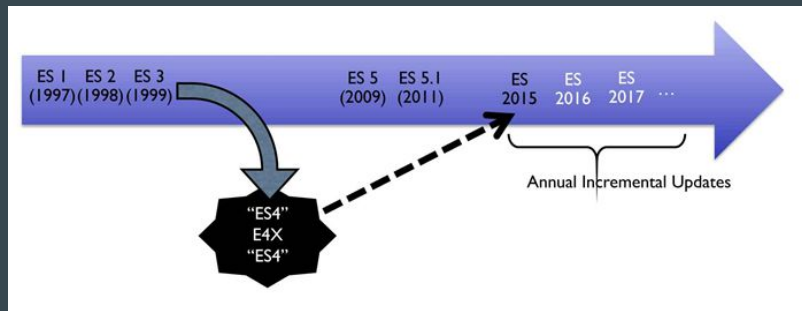
2. Specification and Manuals

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ECMAScript

2. Specification and Manuals

- ECMAScript
 - Name of the international standard that defines a scripting language specification
 - Developed by Technical Committee 39 (TC-39) of ECMA International
 - Issued as a Ecma-262 and ISO/IEC 16262
 - A new specification version is released every year
 - More important links:
 - [ECMA-262 specification](#)
 - [Latest specification draft](#)
 - [Active proposals \(all stages\)](#)



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2. Specification and Manuals

- ECMAScript
 - The specification gave rise to several implementations:
 - JavaScript
 - Jscript
 - ActionScript
 - These slides describe its implementation in JavaScript

The logo consists of the letters 'JS' in a bold, black, sans-serif font, centered on a bright yellow square background.

Introduction to JavaScript

2. Specification and Manuals

- Manuals
 - MDN (Mozilla) JavaScript Reference
 - Main manual with examples and other information
 - Link: <https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference>
 - Hint: just type in Google “MDN [term]”
 - W3Schools
 - A great pedagogical view on the JavaScript reference
 - Link: <https://www.w3schools.com/js/default.asp>



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2. Specification and Manuals

- Compatibility tables
 - JavaScript is a developing language, new features get added regularly.
 - To see their support among browser-based and other engines, see:
 - <http://caniuse.com> - per-feature tables of support
 - <https://kangax.github.io/compat-table> - table with language features/engines

CSS3 Transforms  - wd

Method of transforming an element including rotating, scaling, etc.

U.K. 87.42%
unprefixed: 36.66%
Global 85.59%
unprefixed: 40.93%

Current aligned Usage relative Show all

IE	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Chrome for Android
		31						
		33						
		34						
8		35	5.1				4.1	
9		36	6.1		6.1		4.3	
10	30	37	7	23	7.1	7	4.4	36
11	31	38	8	24	8		4.4.3	
	32	39		25				
	33	40						
	34							

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3. Code Editors

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3. Code Editors

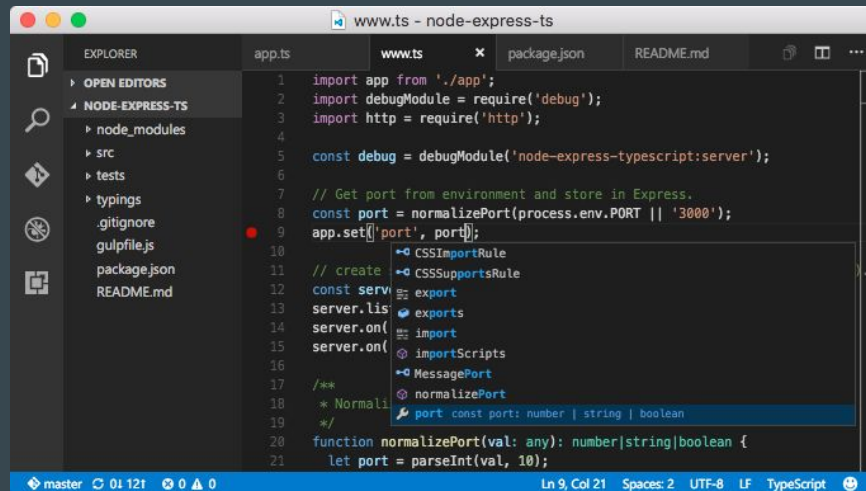
- To edit JavaScript code you should use a specialized editor:
 - WebStorm
 - Visual Studio Code
 - Sublime Text
- IDEs:
 - Cloud9: <https://c9.io/login>
 - CodeSandbox: <https://codesandbox.io/>
 - Playcode: <https://playcode.io>
- Playgrounds:
 - CodePen: <https://codepen.io>
 - Jsfiddle: <https://jsfiddle.net/>
 - Jsbin: <https://jsbin.com>



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3. Code Editors

- We will use Visual Studio Code
- Available in all OS's
- Download: <https://code.visualstudio.com/>

A screenshot of the Visual Studio Code editor interface. The Explorer sidebar on the left shows a project structure with folders like 'node_modules', 'src', 'tests', and 'typings', and files like '.gitignore', 'gulpfile.js', 'package.json', and 'README.md'. The main editor area displays a file named 'app.ts' with TypeScript code for a web server. The code includes imports for 'app', 'debugModule', and 'http', a debug configuration, and a function to normalize a port. A tooltip is visible over the 'port' variable, showing its type as 'number | string | boolean'. The status bar at the bottom indicates the current file is 'app.ts' on line 9, column 21, with 2 spaces, UTF-8 encoding, and LF line endings.

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4. Developer Console

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4. Developer Console

- The authoring and Web debugging tools assist in development and allow us to see errors, execute commands, examine variables, etc.
- Included in all browsers
- For example, in Chrome we have the **Chrome DevTools**
 - Authoring and Web debugging toolset built into Google Chrome
 - Link: <https://developers.google.com/web/tools/chrome-devtools/>
 - Access: use keyboard shortcut **Ctrl+Shift+I** (Windows) or **Cmd+Opt+I** (Mac)

