DWA_02.8 Knowledge Check_DWA2

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1. What do ES5, ES6 and ES2015 mean - and what are the differences between them?

S5, ES6 (or ES2015) are different versions of the ECMAScript standard, which is the official specification for JavaScript.

ES5 (ECMAScript 5): ES5 was released in 2009 and introduced significant updates and improvements to JavaScript.

ES6, also known as ECMAScript 2015, was a major update to the ECMAScript standard released in 2015. It brought numerous new features and syntax enhancements to JavaScript, making the language more powerful and expressive

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2. What are JScript, ActionScript and ECMAScript - and how do they relate to JavaScript?

JScript, ActionScript, and ECMAScript are all programming languages that are closely related to JavaScript. Here's a brief explanation of each of them and how they relate to JavaScript:

- JScript is a scripting language developed by Microsoft. It was introduced in the mid-1990s as Microsoft's dialect of ECMAScript. JScript was primarily used for client-side scripting in Internet Explorer.JScript is very similar to JavaScript, but it had some proprietary extensions and variations that made it incompatible with other JavaScript implementations.

- ActionScript is a scripting language developed by Macromedia (later acquired by Adobe Systems). It was primarily used for creating interactive and multimedia-rich applications in Adobe Flash. ActionScript is based on ECMAScript and shares many similarities with JavaScript. However, ActionScript had some additional features specific to the Flash platform, such as support for timeline-based animations and integration with Flash's graphical capabilities.

- ECMAScript is a standardized scripting language specification. It defines the syntax, semantics, and behavior of scripting languages like JavaScript. JavaScript is the most popular implementation of ECMAScript and is often used as a synonym for it. ECMAScript provides the foundation for JavaScript and other scripting languages to be implemented consistently across different platforms and environments. The ECMAScript specification is maintained by the Ecma International standards organization.

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3. What is an example of a JavaScript specification - and where can you find it?

An example of a JavaScript specification is the ECMAScript specification.

You can find the ECMAScript specification online on the official website of Ecma International, the organization responsible for maintaining the ECMAScript standard. The website provides access to the ECMAScript specifications in PDF format. Here is the link to the website:

https://www.ecma-international.org/publications-and-standards/standards/ecma-262/

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4. What are v8, SpiderMonkey, Chakra and Tamarin? Do they run JavaScript differently?

V8, SpiderMonkey, Chakra, and Tamarin are all JavaScript engines. Each method is used by different web browsers to execute JavaScript code. They are responsible for interpreting and executing JavaScript code efficiently. While they all serve the same purpose, there are some differences in their implementations and performance characteristics:

1. V8 is the JavaScript engine developed by Google for the Chrome web browser. It is known for its high performance and is also used in other applications like Node.js. V8 uses just-in-time (JIT) compilation techniques, which involve dynamically translating JavaScript code into machine code at runtime for improved performance.

2. SpiderMonkey is the JavaScript engine developed by Mozilla and used in the Firefox web browser. It was one of the first JavaScript engines ever created. Like V8, SpiderMonkey also utilizes JIT compilation techniques to optimize the execution of JavaScript code.

3. Chakra was the JavaScript engine developed by Microsoft for the Internet Explorer and Microsoft Edge web browsers. However, Microsoft Edge has since transitioned to using Chromium as its underlying engine, which means it now uses V8. Chakra was known for its performance and innovative features like the ChakraCore library, which allowed embedding the engine in other applications.

4. Tamarin is a JavaScript engine developed by Adobe Systems. It was designed specifically for the Adobe Flash Player and its ActionScript language, which is based on ECMAScript (the standard on which JavaScript is based). Tamarin uses just-in-time compilation and other optimization techniques to execute ActionScript code efficiently.

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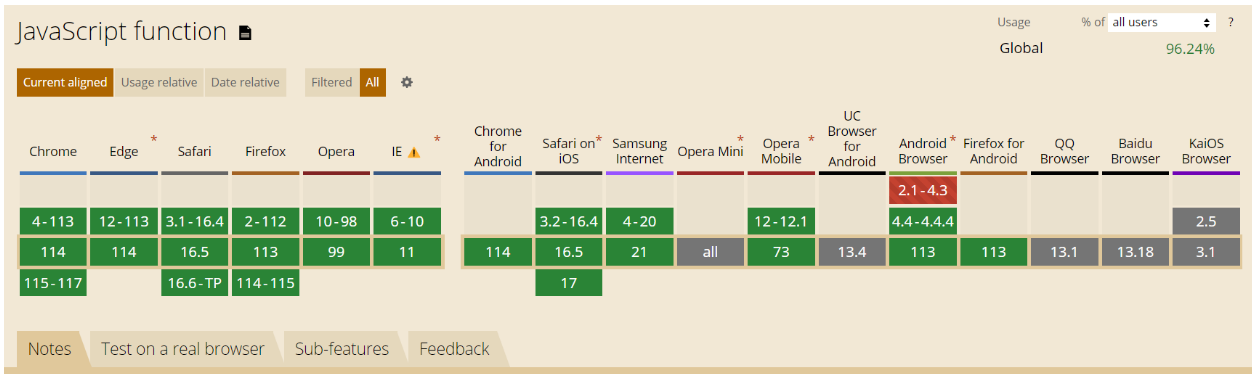
5. Show a practical example using caniuse.com and the MDN compatibility table.



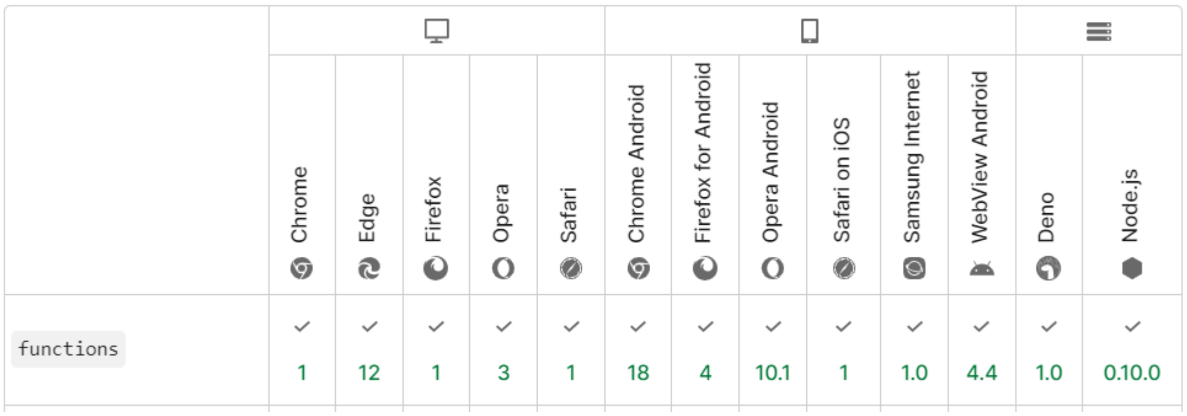
JavaScript function

Usage % of all users ?
Global 96.24%

Current aligned | Usage relative | Date relative | Filtered | All

Chrome	Edge	Safari	Firefox	Opera	IE	Chrome for Android	Safari on iOS	Samsung Internet	Opera Mini	Opera Mobile	UC Browser for Android	Android Browser	Firefox for Android	QQ Browser	Baidu Browser	KaiOS Browser
												2.1 - 4.3				
4 - 113	12 - 113	3.1 - 16.4	2 - 112	10 - 98	6 - 10		3.2 - 16.4	4 - 20		12 - 12.1		4.4 - 4.4.4				2.5
114	114	16.5	113	99	11	114	16.5	21	all	73	13.4	113	113	13.1	13.18	3.1
115 - 117		16.6 - TP	114 - 115				17									

Notes | Test on a real browser | Sub-features | Feedback



	Chrome	Edge	Firefox	Opera	Safari	Chrome Android	Firefox for Android	Opera Android	Safari on iOS	Samsung Internet	WebView Android	Deno	Node.js
`functions`	✓ 1	✓ 12	✓ 1	✓ 3	✓ 1	✓ 18	✓ 4	✓ 10.1	✓ 1	✓ 1.0	✓ 4.4	✓ 1.0	✓ 0.10.0

By using both caniuse.com and the MDN compatibility table, you can get a comprehensive overview of the browser compatibility for JavaScript functions. This allows you to make informed decisions about using certain features or applying fallback solutions if needed. You can gather reliable information about the browser support for JavaScript functions and make informed decisions when using them in your projects.