DWA_02.8 Knowledge Check_DWA2

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

ES5 and ES6 are the fifth and sixth versions of ECMAScript, ECMAScript being a scripting language specification that defines the features and behaviour of languages like JavaScript.

- ES5(ECMASript 5) also called ES2009(ECMAScript 2009)
- ES6(ECMASript 6) also called ES2015(ECMAScript 2015)

ES5, the fifth edition of ECMAScript released in December 2009, introduced several important features and improvements to the JavaScript language such as strict mode, JSON support, native array manipulation methods and more.

ES6 or ES2015, the sixth edition of ECMAScript released in June 2015, represents a major update to the language introducing new features and syntax improvements such as syntax enhancements, block scope variables, modules, classes, built-in methods and more.

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

- ECMAScript is a scripting language standard that provides guidelines and specifications for scripting languages. JavaScript, JScript, and ActionScript are all implementations of the ECMAScript standard. It serves as the foundation for languages like JavaScript and JScript. ECMAScript defines the syntax, behaviour, semantics and core features of the languages.
- JScript is the scripting language developed by Microsoft. It was initially created as Microsoft's implementation of the ECMAScript standard. JScript shares many similarities with JavaScript, including its syntax and core features. It was primarily used in Internet Explorer for client-side scripting on Windows-based systems. JScript can be considered a variant of JavaScript tailored for the Microsoft ecosystem.
- ActionScript is a scripting language primarily used for developing interactive content and applications in Adobe Flash and Adobe AIR platforms. It is an object-oriented language derived from ECMAScript, specifically based on ECMAScript 4 (ES4).

ActionScript provides additional features and capabilities for working with multimedia, animation, and user interactions within the Flash environment. ActionScript was widely used for web-based interactive content before the decline of Flash and the rise of HTML5, which provides native support for multimedia and interactivity without requiring a separate plugin.

- JavaScript is the most popular implementation of the ECMAScript Standard and is widely used for client-side and server-side scripting in web development. The core features of Javascript are based on the ECMAScript standard, but Javascript also has other additional features that are not in the ECMA specifications/standard.

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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 this extract from the very first specification created by ECMA explaining how single-line commenting should work:

Because a single-line comment can contain any character except a "LineTerminator" character, and because of the general rule that a token is always as long as possible, a single-line comment always consists of all characters from the "//" marker to the end of the line. However, the "LineTerminator" at the end of the line is not considered to be part of the single-line comment; it is recognized separately by the lexical grammar and becomes part of the stream of input elements for the syntactic grammar. This point is very important because it implies that the presence or absence of single-line comments does not affect the process of automatic semicolon insertion.

This specification could be found in section 7.8.2 of ECMA 262: 1st Edition (1997).

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

V8, SpiderMonkey, Chakra and Tamarin are some of the most well-known JavaScript compilers. These are tools that convert JavaScript code into a more efficient form to improve its performance when executed by a browser or JavaScript runtime environment. In short, these compilers help make JavaScript code faster and more efficient.

They run JavaScript differently by either optimising the code while it is running (Just-in-Time compilers) or before it is executed (Ahead-of-Time compilers).

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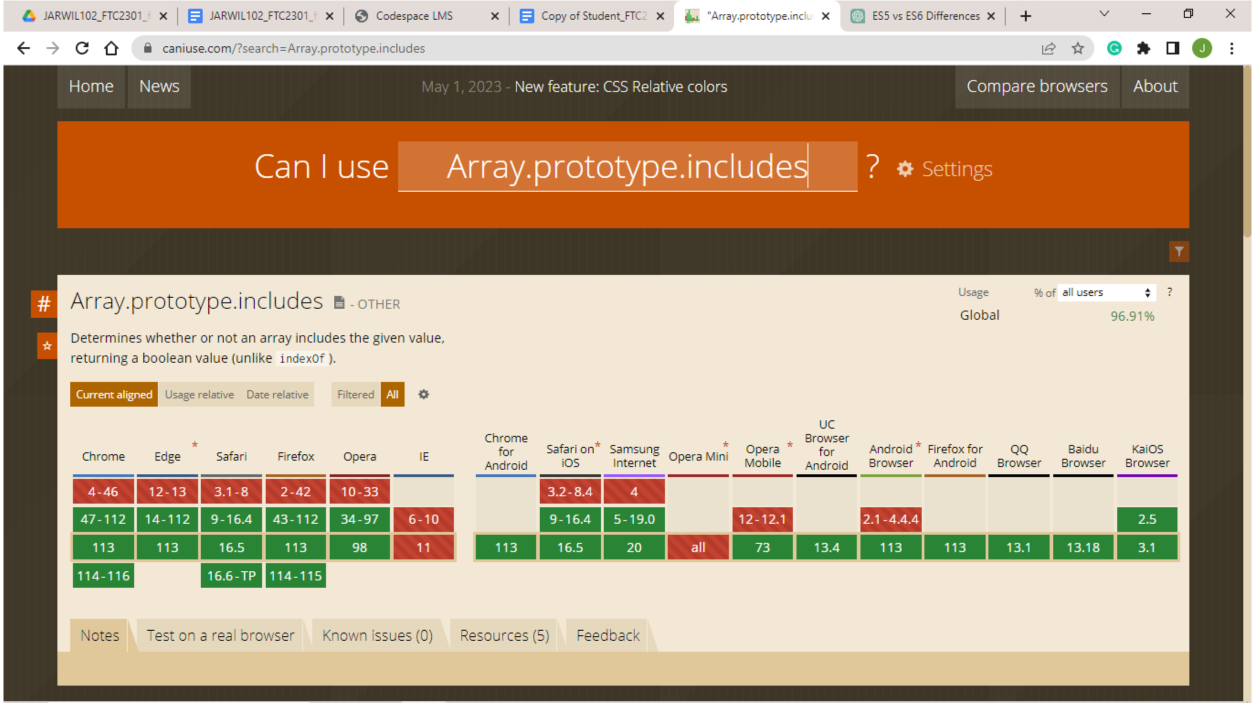
5. Show a practical example using caniuse.com and the MDN compatibility table.



Can I use Array.prototype.includes ?

Array.prototype.includes - OTHER

Usage: Global 96.91%

Determines whether or not an array includes the given value, returning a boolean value (unlike `indexOf`).

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
4-46	12-13	3.1-8	2-42	10-33			3.2-8.4	4								
47-112	14-112	9-16.4	43-112	34-97	6-10		9-16.4	5-19.0		12-12.1		2.1-4.4.4				2.5
113	113	16.5	113	98	11	113	16.5	20	all	73	13.4	113	113	13.1	13.18	3.1
114-116		16.6-TP	114-115													