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?

These are different versions of JavaScript, Since Javascript is an ECMA standard and its original name is ECMAScript, therefore the names of versions of Javascript are abbreviated to ES...1,2,3. After 2016 versions are named by year .

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

Jscript is a reverse engineered version of JavaScript developed by Microsoft

ActionScript is an object-oriented programming language originally developed by Macromedia Inc. A "knock-off" of JavaScript.

ECMAScript is a standard for how scripting should work in all browsers, it is defined as a general purpose, cross-platform programming language. What was previously known as JavaScript and JScript were unified into a single standardised language.

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

The specification is a collection of documents describing how JavaScript and its variants should work in the context of JavaScript and its variants.

An example of a JavaScript specification is the ECMAScript specification. ECMAScript is the standard scripting language that JavaScript is based on. It defines the syntax, semantics, and behaviour of JavaScript.

You can find the ECMAScript specification on the official website of Ecma International, the organisation responsible for standardising ECMAScript.

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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, which are responsible for executing JavaScript code. Each of these engines is used by different web browsers or platforms and may have variations in their implementation of JavaScript.

1. V8: V8 is the JavaScript engine developed by Google for their Chrome browser. It is written in C++ and is known for its high-performance execution of JavaScript. V8 is also used by other browsers like Opera and Vivaldi. It compiles JavaScript code into highly optimised machine code, utilising techniques like just-in-time (JIT) compilation.

2. SpiderMonkey: SpiderMonkey is the JavaScript engine developed by Mozilla for their Firefox browser. It was one of the first JavaScript engines created and is written in C++. SpiderMonkey also includes various optimization techniques like JIT compilation and has evolved over the years to improve performance and support new JavaScript features.

3. Chakra: Chakra was the JavaScript engine developed by Microsoft for their Edge browser (now replaced by the Chromium-based Edge). Chakra was written in C++ and was known for its fast execution and optimizations. However, the original Chakra engine is no longer actively developed, and the new Edge browser uses the V8 engine, similar to Chrome.

4. Tamarin: Tamarin was a JavaScript engine developed by Adobe Systems. It was designed specifically for executing JavaScript and ActionScript (used in Adobe Flash). Tamarin utilised just-in-time (JIT) compilation techniques and had support for

high-performance features like trace-based optimization. However, Adobe discontinued active development of Tamarin in 2011.

While these JavaScript engines all execute JavaScript code, there can be variations in their implementation, performance optimizations, and support for certain features. Each engine may have its own strengths and trade-offs, and browser developers choose an engine that suits their specific needs and goals.

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