

DWA_02.8 Knowledge Check_DWA2

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

They are all names for versions of the ECMAScript (ES) language specification. The difference between these versions are as follow:

- ES5 or ECMAScript 5, was released in 2009. It's the fifth major version of the ECMAScript language specification.
 - ES6 or ECMAScript 6, was released in 2015. It's the sixth version of the ECMAScript language specification.
 - ES2015 is the synonym of ES6.
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2. What are JScript, ActionScript and ECMAScript - and how do they relate to JavaScript?

- ECMAScript is a programming language that's used to create web pages and applications and it's the foundation of JavaScript.
 - JScript is a Microsoft scripting language that's based on the ECMAScript specification, which is also the basis for JavaScript.
 - ActionScript is a programming language that's also based on the ECMAScript specification. It was originally developed for use with Adobe Flash and was used to create animations and applications.
- They are all related to JavaScript.
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3. What is an example of a JavaScript specification - and where can you find it?

A JavaScript specification is a document that defines the language's syntax and behavior. For example, ECMAScript Language Specification defines the syntax behavior of ECMAScript, which is the foundation of JavaScript. ECMAScript specifications can be found at ecma-international.org. The latest version of the ECMAScript specification is ECMAScript 2020, also known as ES2020 or ES12.

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

They are JavaScript engines. They are programs that run JavaScript code, and they all execute the code in slightly different ways.

- V8 is Google's JavaScript engine. It's used in the Chrome and Chromium web browsers, and it's also used by Node.js.

- SpiderMonkey is Mozilla's JavaScript engine. It's used in the Firefox web browsers.

- Chakra is Microsoft's JavaScript engine. It's used in the Edge and Internet Explorer web browsers.

- Tamarin is a little different from other JavaScript engines, because it uses a just-in-time (JIT) compilation method to execute JavaScript code. JIT compilation is a technique where the code is compiled to native machine code as it is executed. This allows Tamarin to execute the code very quickly, because it doesn't have to interpret the code each time it's run. Instead, the code is only compiled once and then executed many times. This makes Tamarin faster than other engines that interpret the code each time it's executed.

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