DWA_02.8 Knowledge Check_DWA2

---

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

ES5, ES6, ES2015 are the names of different editions of the ECMAScript scripting language specifications documentation, ECMA-262. This is the standard rules and guidelines that a scripting language is expected to conform to be considered ECMA compliant and it is updated annually by the TC39 committee. There is a difference between the ES5 and ES6 editions because they were released in different years but the ES6 and ES2015 are the same edition but named by year or by edition number, so then ES5 can also be referred to as ES2009.

---

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

JScript is a scripting language that was created by Microsoft for its web browser, Internet Explorer. ActionScript is considered to have been a JavaScript knock-off language and was created by Macromedia, initially designed specifically to be used for web animation then later acquired by Adobe. ECMAScript, also referred to as ECMA-262, is the scripting language specifications that include the rules, guidelines and details that a scripting language must observe to be considered ECMAScript compliant.

JScript and ActionScript are scripting languages just like JavaScript and they were created around the same time to compete with JavaScript, which was used by the Netscape navigator browser only. ECMAScript was started to standardise JS language so that more browsers would be able to use the same scripting language so that developers don’t have to recreate their programs in different languages to accommodate different browsers. The ECMAScript editions are released so that JS engine creators can update their engines to allow the latest version of JS to be able to run on their browser efficiently.

---

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

ECMAScript data types specifications:
The undefined data type - This type has exactly one value, called undefined, and any value that has not been assigned a value has the value undefined.
The Null type - The Null type has exactly one value, called null.

You can find this specification in the ES2021 edition of the ECMAScript documentation.

---

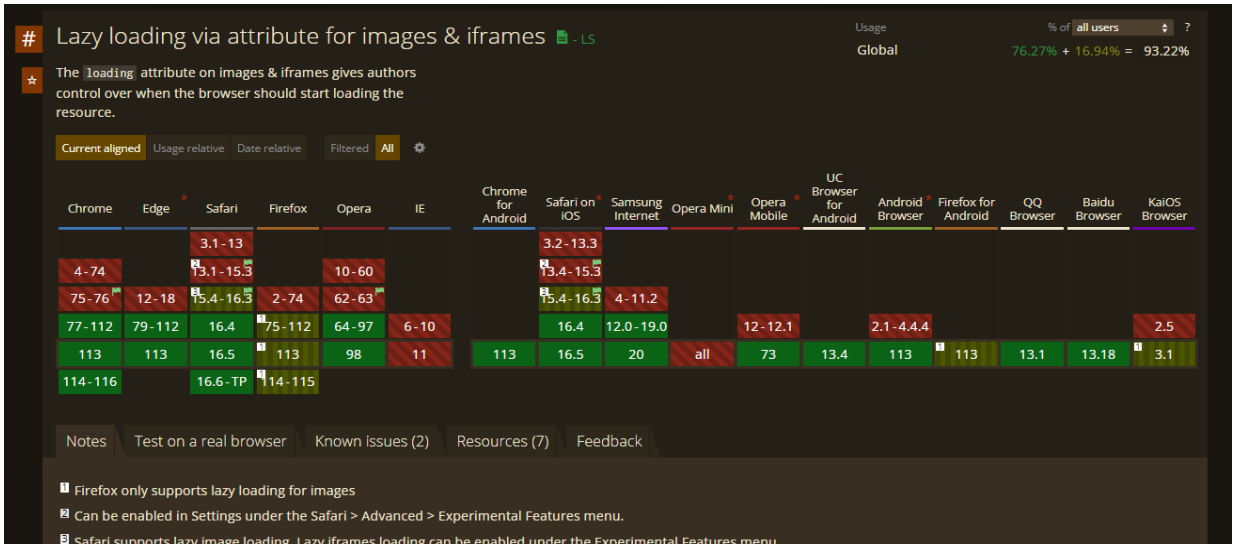
4. What are v8, SpiderMonkey, Chakra and Tamarin? Do they run JavaScript differently?

These are four well-known JavaScript compilers, also called JavaScript engines by the browsers that use them. v8 is the compiler used by Google Chrome web browser and Node.js for JavaScript backend runtime environment. SpiderMonkey is the compiler used by Mozilla Firefox. Chakra is used by older versions of Microsoft Edge and Tamarin is a discontinued compiler that was used in Adobe Flash. The engines do run JavaScript differently which can affect the performance and browser compatibility. They each were originally created with their own specific optimizations and features and those can affect the execution speeds and performance, and capabilities of the engine.

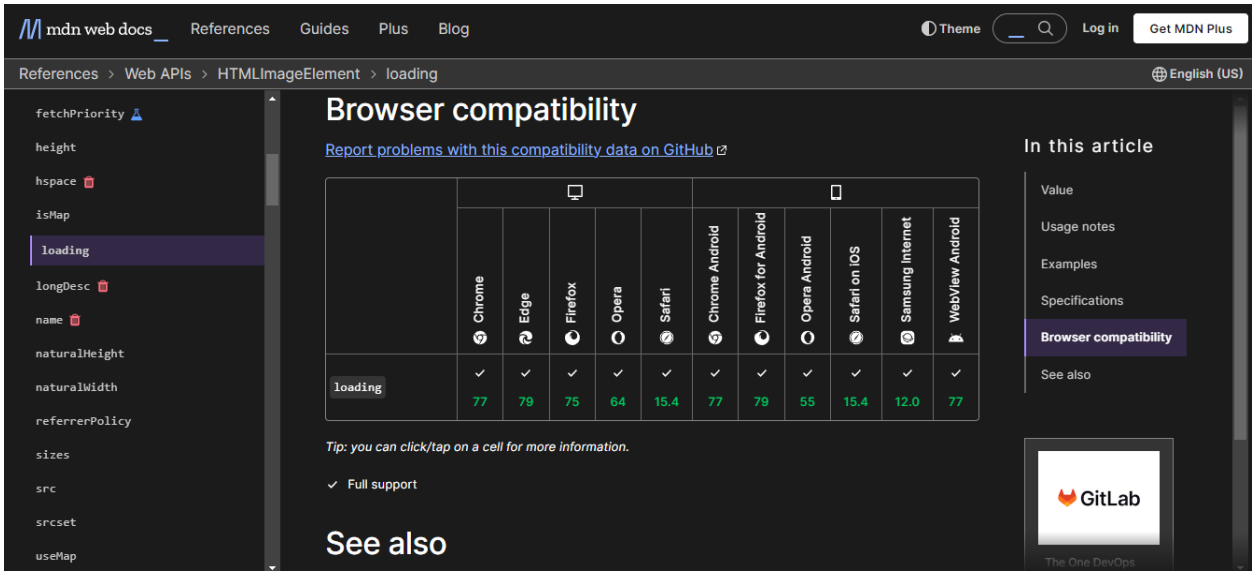
---

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

The ‘lazy’ value of the loading property for <img> and <iframe> tags to give the page developer control over when the browser should start loading the image or video. On **caniuse.com**, you can see all the versions of the different browsers form when they didn’t support the function to the version that does. On MDN, it shows you the compatibility of the function with the current versions of the browsers.



Results for the browser compatibility of lazy loading function on https://caniuse.com/loading-lazy-attr.



Results for the browser compatibility of lazy loading function on **https://developer.mozilla.org/en-US/docs/Web/API/HTMLImageElement/loading#browser_compatibility**
