**Section 3 - Quiz**

**Engines Quiz**

**Kudos, you know about JavaScript engines!**

Taking a step back, a programming language that consists of words is useless for a computer, right? We need 'something' to convert these words and characters into electrical inputs, or 0's and 1's - into something the machine can understand.

And this is why every browser and machine needs to have a program (a ***JavaScript engine***) which executes JavaScript code.  The first JavaScript engines were mere interpreters, but all relevant modern engines use just-in-time compilation for improved performance. JavaScript engines are developed by web browser vendors, and every web browser today has one.

But enough said.

Try your hand at these few questions to see whether you have grasped the basic concepts around what an engine does and why they are important.

Good luck.

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Question 1:

In JavaScript, what are the programs (or set of instructions) called that we write?

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**Applets**

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**Scripts**

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**Applications**

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Answer: B - JavaScript is a "scripting" language that allows you to implement many things on web pages. But what does it mean that JavaScript is a “scripting” language? Well, I like to think of a scripting language as code that runs “as it is” through an interpreter without going through a compilation process. This includes languages like Perl, Python, PHP and also JavaScript (browser version). In other words, a scripting language is basically a language that doesn't stand by itself; it "scripts" another application in order to execute (in the case of JavaScript, the browser).

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Question 2:

What is a JavaScript Engine?

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**It is a virtual machine that we access in order to write our JavaScript code**

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**It is a JavaScript library / framework that we use in order to write more efficient code**

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**When all is said and done, the basic job of a JavaScript Engine is to take the JavaScript code that you have written and convert it to fast, optimized code that can be interpreted by a Browser (like Safari or Chrome) or even embedded into an application.**

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Answer: C

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Question 3:

Why are there so many different JavaScript Engines?

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**Each JavaScript engine implements a version of ECMAScript, which means that as ECMAScript evolves, so do JavaScript engines. Another reason why there are so many different engines is each one is designed to work with a different web browser, headless browser, or runtime server.**

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**There are many Engines because they are so easy and cheap to develop**

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**Each Engine runs a different programming language, which is why you need so many**

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Answer: A

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Question 4:

What are some of the well known Engines?

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**V7 is the most popular Engine, followed by MonkeySpider and JasmineJump**

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**Each major Browser has its own engine. Mozilla Firefox has Spidermonkey, Microsoft Edge has Chakra/ChakraCore and Apple Safari names its engine JavaScriptCore. Google Chrome uses V8, which is also the engine of Node.js.**

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**There is only one Engine, V8**

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Answer: B - The release of V8 in 2008 marked a pivotal moment in the history of engines. V8 replaced the browser’s relatively slow interpretation of JavaScript, with something super fast. They did this by combining compiling and interpreting (detail is not important, just understand that a massive improvement was made with the introduction of V8).

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Question 5:

What is true about the V8 Engine?

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**It was built by Mozilla, and is the most well known Engine in the market**

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**It was built by Google, was written in C# and turns your JavaScript code into Bytecode before translating your JavaScript code into machine code**

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**It was built by Google, and written in C++. It is Open Source, meaning you and I have access to the code for free.**

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Answer: C