**1. Getting Started**

**1) What is JavaScript**:

JavaScript often abbreviated as JS, is a high-level, interpreted programming language that conforms to the ECMAScript specification. It is a language that is also characterized as dynamic, weakly typed, prototype-based and multi-paradigm.

As a multi-paradigm language, JavaScript supports event-driven, functional, and imperative (including object-oriented and prototype-based) programming styles. It has an API for working with text, arrays, dates, regular expressions, and basic manipulation of the DOM, but the language itself does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

By learning JavaScript, we can be a

1. Front-end Developer
2. Back-end Developer
3. Full-stack Developer

Now a days by using JavaScript we can do

1. Web/Mobile app.
2. Real-time networking application
3. Command-line Tools
4. Games

**Where does JavaScript code run**:

JavaScript was originally designed to run only in browser. Every browser has a JavaScript engine for execute JavaScript code. For example, Firefox JavaScript engine name is SpiderMonkey and Chrome JavaScript engine name is V8.

In 2009 “Ryan Dahl” took the opensource JavaScript engine from Chrome and embedded it inside a C++ program. He called that program “Node”. Node is a C++ program that include Google Chrome V8 JavaScript engine. Now with this we can run JavaScript code outside of a browser.

Browsers and Node provided a runtime environment for JavaScript code.

**What is the difference between JavaScript, JScript & ECMAScript**:

JavaScript is the original name when the language was developed by Netscape.

JScript is Microsoft's name of their own implementation.

ECMAScript is the name of the language standard developed by ECMA, from the original JavaScript implementation.

So, it's just one language, with different implementations.

**2) Setting up the Development Environment**:

1. Code Editor: Visual Studio Code
2. Environment: NodeJS
3. Install package : Live Server

**3) Add JavaScript in Browser**:

We can add JavaScript in "head" section or "body" section. But the best practice is adding JavaScript at the end of all existing element in body section. There are two reasons for that.

1. If we put JavaScript in the head section, we might have a lot of JavaScript code it may make our browser busy to parsing and executing JavaScript code and would not be able to render the content of the page. This will create a bad user experience.
2. By placing JavaScript at the bottom, our style, content, and media could download more quickly giving the perception of improved performance.

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