Lecture Activity

a. What is JavaScript?

JavaScript is one of the most popular used programming languages in the world. JavaScript is a high-level programming language for creating dynamic and interactive web pages. It allows developers to add behaviour and interactivity to web pages, such as responding to user input, dynamically updating content, and creating animations.

b. What can you do with JavaScript?

JavaScript can be used in browsers to build interactive web pages. Moreover, JavaScript can also be used to build: -

- Web or mobile applications
- Real-time networking applications like charts and video streaming services
- Command-line tools
- Games

c. Where does the JavaScript code run?

JavaScript was designed to run in browsers. Every browser has a JavaScript engine that can execute JavaScript code. For example, the JavaScript engines in Firefox and Chrome are SpiderMonkey and V8. In 2009, an engineer called Ryan Dahl took the open-source JavaScript engine in Chrome and embedded it inside a C++ program. The program is called Node. Node is a C++ program that includes Google's V8 JavaScript engine. We can execute the JavaScript code out of a browser. We can pass our JavaScript code to node for execution. With JavaScript, we can build the backend for our web and mobile applications. In a nutshell, JavaScript code can be run inside of a browser or in Node. Browsers and Node provide a runtime environment for JavaScript code.

d. Explain the difference between ECMAScript and JavaScript.

ECMAScript is a specification while JavaScript is a programming language. ECMAScript are like rules and guidelines while JavaScript is an implementation of the ECMAScript language standard and is typically used to enable programming access to computational objects.