14.1 Lesson Summary - Intro to JavaScript

JavaScript is arguably the most versatile programming language. When you incorporate JavaScript into your webpages the user's browser will run the JavaScript code. JavaScript integrates directly with HTML and can dynamically edit your HTML or be configured to run after a specified user action like clicking on an HTML element. JavaScript allows your webpage to be more interactive and dynamic. JavaScript also drives beautiful, web based, interactive data visualizations.

Concept: JavaScript can be incorporated into your HTML **inline**. JavaScript's ***console.log*** method is similar to Python's *print* function. *console.log* will display text in your web browser's console. To add inline JavaScript to your HTML you could use the following code:

*<script type="text/javascript">*

*console.log("I am inline JavaScript!")*

*</script>*

Like CSS the JavaScript you'll use in your webpages is most often stored in separate JavaScript files. If your JavaScript will immediately change your webpage's HTML it should be added to the end of the HTML *body*. Otherwise references to your JavaScript files should be placed at the end of your HTML *head* element. For example:

*<script type="text/javascript" src="app.js"></script>*

* Activity: 01-Ins\_JavaScript

Concept: To declare a **variable** in JavaScript you must use a keyword to indicate that it is a variable, for instance *var*. JavaScript, like Python, does not require you to specify the type of your variable and you can assign a value to your variable in the same line it's declared. You should end your line of code with a semicolon in JavaScript. To declare an integer variable, you could use the following code:

*var firstVar = 12;*

* Activity: 02-Evr\_Python\_to\_JavaScript
* Suppl link: <https://www.w3schools.com/js/js_variables.asp>

Concept: To declare an **if-then** statement in JavaScript you can use the following code:

*if (myVar == 17) {*

*console.log("myVar is equal to 17");*

*}*

* Activity: 02-Evr\_Python\_to\_JavaScript, 03-Par\_Loan\_Approver

Concept: To store a series of data in JavaScript you can use an **array**. JavaScript arrays are similar to Python Lists. To create a new array variable and then print the first element in this array you could use the following code:

*var lettersArray = ["a", "b", "c", "d"];*

*var firstLetter = lettersArray[0];*

*console.log(firstLetter);*

* Activity: 04-Evr\_JavaScript\_Arrays

Concept: To create a **for loop** to access the contents of an array in JavaScript you could use the following code:

var lettersArray = ["a", "b", "c", "d"];

for (var i = 0; i < students.length; i++) {

console.log(students[i]);

}

* Activity: 05-Ins\_Loops, 06-Stu\_Movie\_Scores

Concept: **Functions** are ideal for occasions when you find yourself repeating a number of lines of code or you wish to reorganize your code. To write a function in JavaScript you can use the following code:

*function addition(a, b) {*

*return a + b;*

*}*

*console.log(addition(44, 50));*

* Activity: 07-Ins\_Functions, 08-Stu\_Stats\_Functions