JavaScript

Module 6

MODULE OVERVIEW

- What can JavaScript do?
- JavaScript syntax
- Where to put JavaScript
- JavaScript walkthrough

What Can JavaScript Do?

JavaScript is a powerful scripting language with many uses:

- Change HTML content and attributes
- Change the CSS of elements
- Submit HTML Forms
- Create interactive features
- Validate data before submit
- Call server-side functionality without re-loading the entire page: AJAX

The JavaScript Language

JavaScript is a case-sensitive programming language made up of:

- Variables defined using the var keyword: **var x = 5;**

- Fixed literal values: **42**

- Comments**: // var y = 6;**

- Expressions: **2 + 2**

- Statements that end with semicolons: **var z = x + y;**

- Keywords: **if...else, return, switch, var, for** etc

- Functions

```javascript
function myFunction() {
    document.getElementById("demo").innerHTML =
"Hello from a function.";
}
```

Where to Put JavaScript

JavaScript is enclosed in **<script>** tags within your webpage

You can put your scripts:

- As an event response within an attribute of one of your HTML tags
- In the <head> section of your HTML page
- At the end of the <body> section of your HTML page
- As an external file with a **.js** extension

JavaScript in An Attribute

```html
<!DOCTYPE html>
<html>
<body>

<h2>What Can JavaScript Do?</h2>

<p id="demo">JavaScript can change HTML content.</p>

<button type="button" onclick="document.getElementById('demo').innerHTML =
'Hello JavaScript!'">Click Me!</button>

</body>
</html>
```

JavaScript in the <head>

```html
<!DOCTYPE html>
<html><head>
<script>
function myFunction() {
    document.getElementById("demo").innerHTML =

"Hello from JavaScript in the head section. ";
}
</script>
</head>

<body>

<h1>A Web Page</h1>
<p id="demo">A Paragraph</p>
<button type="button" onclick="myFunction()">Try it</button>

</body>
</html>
```

JavaScript in the <BODY>

```html
<!DOCTYPE html>
<html>
<body>

<h1>A Web Page</h1>
<p id="demo">A Paragraph</p>
<button type="button" onclick="myFunction()">Try it</button>

<script>
function myFunction() {
    document.getElementById("demo").innerHTML = "Hello from JavaScript in the body
section.";
}
</script>

</body>
</html>
```
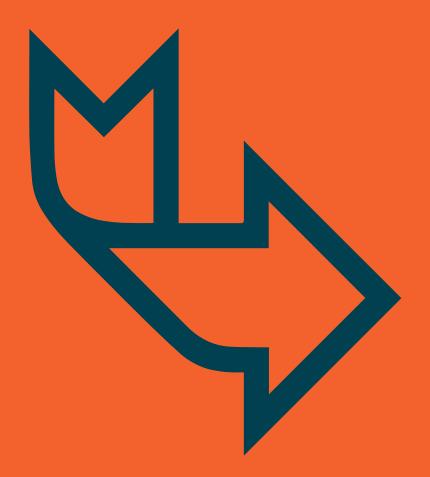
External JavaScript Files

```
function myFunction() {
    document.getElementById("demo").innerHTML =

"Hello from an external JavaScript file.";
}
```

`myScript.js`

```html
<!DOCTYPE html>
<html>
<body>
<p id="demo">A Paragraph.</p>

<button type="button" onclick="myFunction()">Try
it</button>

<script src="myScript.js"></script>

</body>
</html>
```

Activity:
Instructor Walkthrough

Your instructor will walk you through some JavaScript activities.

Any questions?

RESOURCES

JavaScript Tutorial

https://www.w3schools.com/js/default.asp

The HTML DOM Document Object

https://developer.mozilla.org/en-US/docs/Web/API/Document_Object_Model

https://www.w3schools.com/jsref/dom_obj_document.asp