



Java EE Web Development

Lesson 3 - Javascript - Part 1



JavaScript Can Change HTML Content

One of many JavaScript HTML methods is `getElementById()`.

The example below "finds" an HTML element (with `id="demo"`), and changes the element content (`innerHTML`) to "Hello JavaScript":

```
document.getElementById("demo").innerHTML = "Hello JavaScript";
```

JavaScript Can Change HTML Styles (CSS)

Changing the style of an HTML element, is a variant of changing an HTML attribute:

```
document.getElementById("demo").style.fontSize = "35px";
```

JavaScript Can Hide/Show HTML Elements

Hiding HTML elements can be done by changing the `display` style:

```
document.getElementById("demo").style.display = "none";  
document.getElementById("demo").style.display = "block";
```

The <script> Tag

In HTML, JavaScript code is inserted between `<script>` and `</script>` tags.

```
<script>  
document.getElementById("demo").innerHTML = "My First JavaScript";  
</script>
```

JavaScript in <head>

In this example, a JavaScript `function` is placed in the `<head>` section of an HTML page.

The function is invoked (called) when a button is clicked:

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {
    document.getElementById("demo").innerHTML = "Paragraph changed.";
}
</script>
</head>
<body>

<h2>Demo JavaScript in Head</h2>

<p id="demo">A Paragraph</p>

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

</body>

</html>
```

External JavaScript

Scripts can also be placed in external files:

Scripts can also be placed in external files:

```
function myFunction() {
    document.getElementById("demo").innerHTML = "Paragraph changed.";
}
```

External scripts are practical when the same code is used in many different web pages.

JavaScript files have the file extension `.js`.

To use an external script, put the name of the script file in the `src` (source) attribute of a `<script>` tag:

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

External JavaScript Advantages

Placing scripts in external files has some advantages:

- It separates HTML and code
- It makes HTML and JavaScript easier to read and maintain
- Cached JavaScript files can speed up page loads

To add several script files to one page - use several script tags:

```
<script src="myScript1.js"></script>
<script src="myScript2.js"></script>
```

alert

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

<h1>My First Web Page</h1>
<p>My first paragraph.</p>

<script>
alert(5 + 6);
</script>

</body>
</html>
```

console.log()

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

<script>
console.log(5 + 6);
</script>

</body>
</html>
```

JavaScript Variables

```
var x = 5;
var y = 6;
var z = x + y;
```

The Assignment Operator

```
x = x + 5
```

JavaScript if else and else if

Conditional Statements

Very often when you write code, you want to perform different actions for different decisions.

You can use conditional statements in your code to do this.

In JavaScript we have the following conditional statements:

- Use `if` to specify a block of code to be executed, if a specified condition is true

- Use `else` to specify a block of code to be executed, if the same condition is false
- Use `else if` to specify a new condition to test, if the first condition is false
- Use `switch` to specify many alternative blocks of code to be executed

Syntax

```
if (condition) {  
    // block of code to be executed if the condition is true  
}
```

Example

```
if (hour < 18) {  
    greeting = "Good day";  
}
```

The else Statement

Use the `else` statement to specify a block of code to be executed if the condition is false.

```
if (condition) {  
    // block of code to be executed if the condition is true  
} else {  
    // block of code to be executed if the condition is false  
}
```

Example

```
if (hour < 18) {  
    greeting = "Good day";  
} else {  
    greeting = "Good evening";  
}
```

The else if Statement

Use the `else if` statement to specify a new condition if the first condition is false.

```
if (condition1) {  
    // block of code to be executed if condition1 is true  
} else if (condition2) {  
    // block of code to be executed if the condition1 is false and  
    condition2 is true  
} else {  
    // block of code to be executed if the condition1 is false and  
    condition2 is false  
}
```

Example

```
if (time < 10) {  
    greeting = "Good morning";  
} else if (time < 20) {  
    greeting = "Good day";  
} else {  
    greeting = "Good evening";  
}
```