

Web Design & Development (JavaScript-5)

Class-17 (04/2/21)

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JS HTML DOM

- o HTML DOM is a document object model (DOM) is constructed as a tree of objects
- o With the object model javaScript gets all power to create a dynamic HTML page:
 - o It can change all the HTML elements in a page
 - o It can change all the HTML attributes in a page
 - o It can change all the CSS styles in a page
 - o It can remove the HTML elements in a page

JS HTML DOM

- o With the object model javaScript gets all power to create a dynamic HTML page:
 - o It can remove the HTML attributes in a page
 - o It can add new HTML elements in a page
 - o It can add new HTML attributes in a page
 - o It can react to all HTML events in a page
 - o It can create new HTML events in a page

HTML DOM

- Here all HTML elements are objects
- As HTML DOM can be accessed by javaScript,
the following can happen:
 - property as a value can change e.g. changing
the content of an HTML element
 - Method as an action can be done e.g. adding
or deleting an HTML element

Finding HTML elements

`document.getElementById(id)`

`document.getElementsByTagName(name)`

`document.getElementsByClassName(name)`

Changing HTML elements

`element.innerHTML = new html content`

`element.attribute = new value`

`element.style.property = new style`

Using a method for changing the attribute values:

`element.setAttribute = (attribute, value)`

Adding and deleting elements

- o `document.createElement(element)`
- o `document.removeChild(element)`
- o `document.appendChild(element)`
- o `document.replaceChild(new,old)`
- o `document.write(text)`

Changing HTML content

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript can Change HTML</h2>
<p id="p1">Hello World!</p>
<script>
document.getElementById("p1").innerHTML = "New text!";
</script>
<p>The paragraph above was changed by a script.</p>
</body>
</html>
```

output

JavaScript can Change HTML

New text!

The paragraph above was changed by a script.

Another example

```
<!DOCTYPE html>
<html>
<body>
<h1 id="id01">Old Heading</h1>
<script>
var element = document.getElementById("id01");
element.innerHTML = "New Heading";
</script>
<p>JavaScript changed "Old Heading" to "New Heading".</p>
</body>
</html>
```

output

New Heading

JavaScript changed "Old Heading" to "New Heading".

Changing the value of attribute

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

<script>
document.getElementById("image").src = "landscape.jpg";
</script>
<p>The original image was smiley.gif, but the script
changed it to landscape.jpg</p>
</body>
</html>
```

output



The original image was smiley.gif, but the script changed it to landscape.jpg

Changing HTML styles

```
<!DOCTYPE html>
<html>
<body>
<p id="p1">Hello World!</p>
<p id="p2">Hello World!</p>
<script>
document.getElementById("p2").style.color = "blue";
document.getElementById("p2").style.fontFamily = "Arial";
document.getElementById("p2").style.fontSize = "larger";
</script>
<p>The paragraph above was changed by a script.</p>
</body>
</html>
```

output

Hello World!

Hello World!

The paragraph above was changed by a script.

Using a button

```
<!DOCTYPE html>
<html>
<body>
<h1 id="id1">My Heading 1</h1>
<button type="button"
onclick="document.getElementById('id1').style.col
r = 'red'">
Click Me!</button>
</body>
</html>
```

output

My Heading 1

Click Me!

On clicking

My Heading 1

Click Me!