COMP 2015 – INTRODUCTION TO JAVASCRIPT & JQUERY

LESSON 4

CREATING DOM ELEMENTS

▸ Image the HTML object as a box. The body box contains multiple smaller boxes in it, which in turn, contain their own boxes.

```
<body> <!— all rendered elements exist under 1 body. —>
 <h1>Title</h1> <!— This h1 contains text. —>
 <p>Paragraph</p> <!— This paragraph also contains text. —>
 <div> <!— This div contains an image —>
   <img src=""beautiful_image.jpg />
 </div>
</body>
```

CREATING DOM ELEMENTS

▸ Use document.createElement() to create an element.

▸ The parameter is a string, representing the tag that you want to create.

▸ the return value is a DOM element, which you have seen before.

```
<script>
 var myButton = document.createElement('button');
 var myImage = document.createElement('img');
 var my paragraph = document.createElement('p');
</script>
```

CREATING DOM ELEMENTS

▸ Looks familiar?

```
var myButton = document.createElement('button');
myButton.style.backgroundColor = 'red';
myButton.onclick = function() {
  this.style.backgroundColor = 'blue';
  alert('Clicked!');
}
```

CREATING DOM ELEMENTS

▸ Where on the page will my new element be displayed?
It is up to us to specify.

```
var body = document.getElementsByTagName('body')[0];
var myButton = document.createElement('button');
body.appendChild(myButton); // myButton will be added as the last element in body
```

CREATING DOM ELEMENTS

▸ We can create a whole hierarchy of elements too:

```
var body = document.getElementsByTagName('body')[0];
var myButton = document.createElement('button');
var myContainer = document.createElement('div');
myContainer.appendChild(myButton);
body.appendChild(myContainer);

// This will create a button inside of a div, inside of the body element.
```

CREATING TEXT NODES

▸ When it comes to creating text content, we can use document.createTextNode();

```
var body = document.getElementsByTagName('body')[0];
var myHeading = document.createElement('h1');
var myTitle = document.createTextNode('I have no idea what I am doing!');
myHeading.append(myTitle);
body.appendChild(myHeading);
```

DOM MANIPULATION

▸ We have already learned how to find elements in the document, change their attributes and styling.

▸ Now we can also create them. DOM manipulation does not end there though. There are a lot more things you can do, such as deleting elements in a page, iterating through child nodes, parent nodes, siblings etc.

▸ Most JavaScript developers do not know all of the methods by heart, but they are aware of most. When you need to use a specific functionality, Google is your best friend!