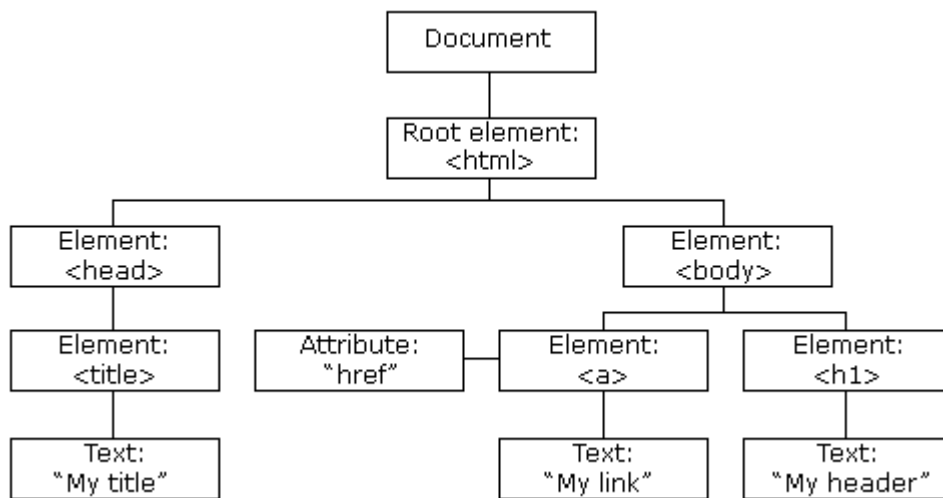# JavaScript HTML DOM(Document Object Model)

 JavaScript can access and change all the elements of an HTML document.

- JavaScript can change all the HTML elements in the page
- JavaScript can change all the HTML attributes in the page
- JavaScript can change all the CSS styles in the page
- JavaScript can remove existing HTML elements and attributes
- JavaScript can add new HTML elements and attributes
- JavaScript can react to all existing HTML events in the page
- JavaScript can create new HTML events in the page

DOM Methods

Method	Description
document.getElementById(*id*)	Find an element
document.getElementsByTagName(*name*)	Find elements b

document.getElementsByClassName(*name*)	Find elements b...

Property	Description
element.innerHTML = *new html content*	Change the inne...
element.*attribute* = *new value*	Change the attri...
element.style.*property* = *new style*	Change the style...
Method	**Description**
element.setAttribute*(attribute, value)*	Change the attri...

```
const element = document.getElementById("intro");

const element = document.getElementsByTagName("p");

const x = document.getElementsByClassName("intro");

const x = document.querySelector("");

const x = document.querySelectorAll("p.intro");
```

```
<a name="html">HTML Tutorial</a><br>

<a name="css">CSS Tutorial</a><br>

<a name="xml">XML Tutorial</a><br>
```

document.anchors.length;

document.body.innerHTML

document.forms.length

document.images.length

document.title

Changing HTML Content by **using the innerHTML property.**

syntax

document.getElementById(*id*).innerHTML = *new value*

```
const element = document.getElementById("id01");
element.innerHTML = "New Heading";
```

Changing the Value of an Attribute

document.getElementById(*id*).*attribute = new value*

```
document.getElementById("myImage").src = "landscape.jpg";
```

```
document.getElementById("demo").innerHTML = "Date : " + Date();
```

Changing HTML Style

document.getElementById(*id*).style.*property = new style*

```
document.getElementById("p2").style.color = "blue";
```

Property Name	Description	Example Values
color	Sets the text color	red, #ff0000, rgb(255,0,0)

Property Name	Description	Example Values
backgroundColor	Sets the background color	blue, #0000ff, rgba(0,0,255,0.5)
fontSize	Sets the size of the font	16px, 1.5em, 120%
fontFamily	Sets the font family	"Arial", "Times New Roman", sans-serif
textAlign	Aligns the text	left, center, right, justify
margin	Sets the margin on all sides	10px, 1em, auto
marginTop	Sets the top margin	5px, 2em
marginRight	Sets the right margin	5px, 2em
marginBottom	Sets the bottom margin	5px, 2em
marginLeft	Sets the left margin	5px, 2em
padding	Sets the padding on all sides	10px, 1em
paddingTop	Sets the top padding	5px, 2em
paddingRight	Sets the right padding	5px, 2em
paddingBottom	Sets the bottom padding	5px, 2em
paddingLeft	Sets the left padding	5px, 2em
border	Sets the border on all sides	1px solid black, 2px dashed red
borderTop	Sets the top border	1px solid black

Property Name	Description	Example Values
borderRight	Sets the right border	1px solid black
borderBottom	Sets the bottom border	1px solid black
borderLeft	Sets the left border	1px solid black
width	Sets the width of the element	100px, 50%, auto
height	Sets the height of the element	100px, 50%, auto
maxWidth	Sets the maximum width	500px, 100%
maxHeight	Sets the maximum height	500px, 100%
minWidth	Sets the minimum width	100px, 50%
minHeight	Sets the minimum height	100px, 50%
position	Specifies the positioning method	static, relative, absolute, fixed, sticky
top	Sets the top position	10px, 5%
right	Sets the right position	10px, 5%
bottom	Sets the bottom position	10px, 5%
left	Sets the left position	10px, 5%
zIndex	Sets the stack order	1, 100, 9999
display	Specifies the display behavior	block, inline, flex, grid, none

Property Name	Description	Example Values
float	Specifies how an element should float	left, right, none
clear	Specifies what elements can float beside	left, right, both, none
flex	Shorthand for flex-grow, flex-shrink, flex-basis	1, 0 1 auto
flexGrow	Defines the ability to grow	0, 1, 2
flexShrink	Defines the ability to shrink	0, 1, 2
flexBasis	Sets the initial main size	auto, 100px, 30%
justifyContent	Aligns items along the main axis	flex-start, center, space-between
alignItems	Aligns items along the cross axis	flex-start, center, stretch
gridTemplateColumns	Defines columns in a grid layout	100px 200px, 1fr 2fr
gridTemplateRows	Defines rows in a grid layout	100px 200px, 1fr 2fr
gridColumn	Specifies grid column start/end	1 / 3, span 2
gridRow	Specifies grid row start/end	1 / 3, span 2
opacity	Sets the opacity level	0, 0.5, 1

Property Name	Description	Example Values
visibility	Specifies visibility	visible, hidden, collapse
overflow	Specifies overflow behavior	visible, hidden, scroll, auto
boxShadow	Adds shadow to elements	10px 10px 5px grey
transition	Defines transition effects	all 0.3s ease, opacity 0.5s
transform	Applies 2D or 3D transformation	rotate(45deg), scale(1.5)

What is the difference between innerHTML, innerText and textContent?

1. In JavaScript, the innerHTML property returns HTML markup, or all text content of an element (including spacing and HTML tags).
2. The innerText property shows visible rendered text, or the text content of an element (without spacing, CSS hidden text and HTML tags).
3. The textContent property retrieves raw text, or the text content of an element (including spacing and CSS hidden text, but no HTML tags).