

DOCUMENT OBJECT MODEL-DOM

When a web page is loaded, the browser creates a Document Object Model of the page. With the HTML DOM, 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

FINDING HTML ELEMENTS -DOM

●●● index.html

```
4    <p id="MyId"></p>
5    <script>
6    document.getElementById("MyId").innerHTML = "Learn Confidently";
7    </script>
```

●●● index.html

```
4    <p class="MyClass"></p>
5    <script>
6    document.getElementsByClassName("MyClass")[0].innerHTML = "Learn Confidently";
7    </script>
```

FINDING HTML ELEMENTS -DOM

● ● ● index.html

```
4      <p></p>
5      <script>
6      document.getElementsByTagName("p")[0].innerHTML = "Learn Confidently";
7      </script>
```

● ● ● index.html

```
4      <p name="MyName"></p>
5      <script>
6      document.getElementsByName("MyName")[0].innerHTML = "Learn Confidently";
7      </script>
```

HTML DOM DOCUMENT

- Display all name value pairs of cookies in a document
- Display the domain name of the server that loaded the document
- Display the date and time the document was last modified
- Display the title of a document
- Display the full URL of a document
- Replace the content of a document
- Open a new window, and add some content
- Display the number of elements with a specific tag name

HTML DOM DOCUMENT

● ● ● index.html

```
4  <p id="demo">Click the button to display the cookies associated with this document.</p>
5  <button onclick="myFunction()">Try it</button>
6
7  <script>
8      function myFunction() {
9          document.getElementById("demo").innerHTML =
10             "Cookies associated with this document: " + document.cookie;
11      }
12 </script>
```

HTML DOM DOCUMENT

● ● ● index.html

```
4   <button onclick="myFunction()">Try it</button>
5   <p id="demo"></p>
6   <script>
7       function myFunction() {
8           document.getElementById("demo").innerHTML = document.domain;
9       }
10  </script>
```

HTML DOM DOCUMENT

●●● index.html

```
4 <p>This document was last modified <span id="demo"></span>.</p>  
5 <script>  
6     document.getElementById("demo").innerHTML = document.lastModified;  
7 </script>
```

HTML DOM DOCUMENT

index.html

```
1  <html>
2    <head>
3      <title>Learn Confidently</title>
4    </head>
5  <body>
6
7    <p id="demo"></p>
8    <script>
9      document.getElementById("demo").innerHTML =
10      "The title of this document is: " + document.title;
11    </script>
12
13  </body>
14 </html>
```


HTML DOM DOCUMENT

●●● index.html

```
7    <p>The full URL of this document is: <br><span id="demo"></span>.</p>
8    <script>
9        document.getElementById("demo").innerHTML = document.URL
10   </script>
```

HTML DOM DOCUMENT

● ● ● index.html

```
7   <p id="demo">Click the button to replace this document with new content.</p>
8   <button onclick="myFunction()">Try it</button>
9   <script>
10      function myFunction() {
11          document.open("text/html","replace");
12          document.write("<h2>Learning about the HTML DOM is fun!</h2>");
13          document.close();
14      }
15  </script>
```

HTML DOM DOCUMENT

● ● ● index.html

```
7   <p>Click the button to open a new window and add some content.</p>
8   <button onclick="myFunction()">Try it</button>
9
10  <script>
11      function myFunction() {
12          var w = window.open();
13          w.document.open();
14          w.document.write("<h2>Hello World!</h2>");
15          w.document.close();
16      }
17  </script>
```

HTML DOM DOCUMENT

● ● ● index.html

```
7    <p></p>
8    <p></p>
9    <p></p>
10   <p id="demo"></p>
11   <input type="button" onclick="getElements()" value="How many elements tag p?">
12   <script>
13       function getElements() {
14           var x = document.getElementsByTagName("p");
15           document.getElementById("demo").innerHTML = x.length;
16       }
17   </script>
```

HTML DOM FINDING FORM INPUT VALUE

● ● ● index.html

```
7   <input id="num1"/><br>
8   <input id="num2"/><br>
9   <button onclick="AddTwo()">Add</button>
10  <script>
11      function AddTwo() {
12          var x = document.getElementById("num1").value;
13          var y = document.getElementById("num2").value;
14          var z=parseFloat(x)+parseFloat(y);
15          alert(z);
16      }
17  </script>
```


DOM HTML CSS MANUPULATION

● ● ● index.html

```
7   <h1 id="MyId">Learn Confidently</h1>
8   <button onclick="CSSClassManipulation()">Manipulate</button>
9   <script>
10      function CSSClassManipulation() {
11          var x = document.getElementById("MyId")
12          x.classList.add('text-primary')
13      }
14  </script>
```

DOM HTML CSS MANUPULATION

● ● ● index.html

```
7   <h1 class="text-primary" id="MyId">Learn Confidently</h1>
8   <button onclick="CSSClassManipulation()">Manipulate</button>
9   <script>
10      function CSSClassManipulation() {
11          var x = document.getElementById("MyId")
12          x.classList.remove('text-primary')
13      }
14  </script>
```

DOM CREATE ELEMENT APPEND ELEMENT

● ● ● index.html

```
7   <ol id="MyList"></ol>
8   <input id="Item"/>
9   <button onclick="AppendElement()">Append</button>
10  <script>
11      function AppendElement() {
12          var Item = document.getElementById("Item").value;
13          var MyList = document.getElementById("MyList");
14          let li = document.createElement("li");
15          li.innerHTML=Item;
16          MyList.appendChild(li)
17      }
18  </script>
```

DOM CHANGING ATTRIBUTE VALUE

● ● ● index.html

```
7   
8   <button onclick="ChangeSrc()">Change Image Src</button>
9   <script>
10      function ChangeSrc() {
11          var image = document.getElementById("image")
12          image.src="https://cdn.rabbil.com/photos/images/2022/11/04/whyChoose.png"
13
14      }
15  </script>
```

DOM QUERY SELECTOR

index.html

```
7   <h1>H1</h1>
8   <h2 id="MyId">H2</h2>
9   <h3 class="MyClass">H3</h3>
10  <h4 name="MyName">H4</h4>
11  <input placeholder="..." />
12  <button onclick="Change()">Change</button>
13
14  <script>
15      function Change() {
16          document.querySelector("h1").innerHTML='Hello H1'
17          document.querySelector("#MyId").innerHTML='Hello H2'
18          document.querySelector('.MyClass').innerHTML='Hello H3'
19          document.querySelector('h4[name="MyName"]').innerHTML='Hello H4'
20          document.querySelector('input').placeholder='New Placeholder'
21      }
22  </script>
```


AJAX

AJAX is a developer's dream, because you can:

- Update a web page without reloading the page
- Request data from a server - after the page has loaded
- Receive data from a server - after the page has loaded
- Send data to a server - in the background

AJAX PACKAGES

- The XMLHttpRequest object build in with javascript
- Fetch API supported by modern browser's
- Axios package
- JQuery Ajax
- Superagent

AJAX FETCH API GET REQUEST

index.html

```
8   <button onclick="FetchGetData()">Fetch Get Data</button>
9
10  <script>
11      function FetchGetData() {
12
13          var url="https://crud.teamrabbil.com/api/v1/ReadProduct"
14          var requestOptions = {method: 'GET'};
15
16          fetch(url, requestOptions)
17              .then(response => response.json())
18              .then(result => console.log(result))
19              .catch(error => console.log('error', error));
20
21      }
22  </script>
```

AJAX FETCH API POST REQUEST

index.html

```
8   <button onclick="FetchPostData()">Fetch Post Data</button>
9
10  <script>
11      function FetchPostData() {
12
13          var url="https://crud.teamrabbil.com/api/v1/CreateProduct"
14
15          var data={ Img:"A",ProductCode:"B",ProductName:"C",Qty:"D",TotalPrice:"E",UnitPrice:"F"}
16          var requestOptions = {
17              method: 'POST',
18              headers: {'Accept': 'application/json','Content-Type': 'application/json'},
19              body: JSON.stringify(data)
20          };
21
22          fetch(url, requestOptions)
23              .then(response => response.json())
24              .then(result => console.log(result))
25              .catch(error => console.log('error', error));
26      }
27  </script>
```