



# FORMATION FULL STACK

החוכה, משרד העבודה  
החברתיים והשיחתיים



## JAVASCRIPT – CHAPTER 2 Document Manipulation

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{web}

WebSchool 63345ac4766ff22536714e8

Built-in JavaScript OBJECTS

document

Document Object Model

Refers to the HTML page you're in

# Document Object Model

## Properties

```
document.title; // Returns title in tab  
document.title = "Meir Sabbah"; // changes it  
document.URL; // Returns the URL string  
document.images; // Returns array of images  
document.links; // Returns array of links
```

# Document Object Model

## Methods

```
document.getElementById("myDiv");  
document.getElementsByClassName("left");  
document.getElementsByTagName("h1");  
document.getElementsByName("firstName");
```

Only `getElementById()` returns single element.  
All others return an array

```
document.getElementsByTagName("body")[0];
```

# Document Object Model

## Methods

```
document.querySelector("div");  
document.querySelectorAll(".left");
```

Uses CSS selectors!

```
document.querySelector("div");
```

Returns first item matching query

```
document.querySelectorAll(".left");
```

Returns all items matching query, in an array



## Index.html

```
<html>
<head>
</head>
<body>
  <h1 class="left">
    welcome to JavaScript!
  </h1>
  <div class="left" id="myDiv">
    The best programming language.
  </div>
  <div class="left">
    Check it out!!
  </div>
  <input class="left" name="firstName">

  <script src="js/main.js"> </script>
</body>
</html>
```

## Index.html

```
var div = document.getElementById("myDiv");  
var div = document.querySelector("#myDiv");
```

```
<h1 class="left">  
  welcome to JavaScript!  
</h1>  
<div class="left" id="myDiv">  
  The best programming language.  
</div>  
<div class="left">  
  Check it out!!  
</div>  
<input class="left" name="firstName">  
  
<script src="js/main.js"> </script>
```

```
var div = document.getElementsByClassName("left");  
var div = document.querySelectorAll(".left");
```

```
<h1 class="left">  
  welcome to JavaScript!  
</h1>  
<div class="left" id="myDiv">  
  The best programming language!  
</div>  
<div class="left">  
  Check it out!!  
</div>  
<input class="left" name="firstName">  
  
<script src="js/main.js"> </script>
```



```
var div = document.getElementsByTagName("div");  
var div = document.querySelectorAll("div");
```

```
<h1 class="left">  
  welcome to JavaScript!  
</h1>  
<div class="left" id="myDiv">  
  The best programming language.  
</div>  
<div class="left">  
  Check it out!!  
</div>  
<input class="left" name="firstName">  
  
<script src="js/main.js"> </script>
```

```
var div = document.getElementsByTagName("firstName");
```

```
<h1 class="left">  
  welcome to JavaScript!  
</h1>  
<div class="left" id="myDiv">  
  The best programming language!  
</div>  
<div class="left">  
  Check it out!!  
</div>  
<input class="left" name="firstName">  
  
<script src="js/main.js"> </script>
```

```
<div class="left" id="myDiv" style="color:blue">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.className; // returns "left"
```

```
<div class="new" id="myDiv" style="color:blue">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.className = "new"; // switches to "new"
```

```
<div class="new left" id="myDiv" style="color:blue">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.className; // returns "new left"  
div.classList; // returns ["new","left"]
```

```
<div class="new left forms" id="myDiv" style="color:blue">  
    The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.classList.add("forms"); // adds to list  
div.className += " forms"; // other option
```

```
<div class="left forms" id="myDiv" style="color:blue">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.style; // returns huuuge CSS object  
div.style.color; // returns "blue"
```

```
<div class="left forms" id="myDiv" style="color:blue">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.style.padding = "20px"; // sets the CSS
```



```
<div class="left forms" id="myDiv" style="color:blue; padding:20px">  
  The best programming language.  
</div>
```

```
var div = document.getElementById("myDiv");  
div.style.padding = "20px"; // sets the CSS
```

## EXERCISE # 6

- ▶ **HTML:** Create a div with some text.
- ▶ **INPUT :** Prompt for a color. Once clicking OK, turn the text's color what got typed.
- ▶ **BONUS:** Make it all in one statement.

## EXERCISE # 6

HTML ► צרו div עם טקסט.

קלט ► על ידי PROMPT בקש צבע. לאחר לחיצה על אישור, להפוך את צבע של הטקסט למה שהקלדת.

# Solution:

```
var div = document.getElementById("myDiv");  
var newColor = prompt().toLowerCase();  
div.style.color = newColor;
```

# Quotes

- " " - Double Quotes
- ' ' - Single Quotes
- ` ` - Back Ticks

# Quotes

```
var text = "JavaScript is the BEST";
```

```
var text = 'JavaScript is the BEST';
```

Same == Same !

# Quotes - Escaping

```
var text = '"JavaScript" is the BEST';
```

Use the single quote to include a double quote in your string

```
var text = "'JavaScript' is the BEST";
```

Use the double quote to include a single quote in your string

# Quotes

```
var text = "JavaScript is the BEST programming  
language in the world";
```

```
var text = `JavaScript is the BEST programming  
language in the world`;
```

These backticks allow you to skip lines  
and keep a long string into one single  
variable



```
<div class="left forms" id="myDiv" style="color:blue; padding:20px">  
  JavaScript:  
  <p>The best programming language.</p>  
</div>
```

```
var div = document.getElementById("myDiv");  
div.innerText; // returns:  
"JavaScript: The best programming language."
```

```
<div class="left forms" id="myDiv" style="color:blue; padding:20px">  
  JavaScript:  
  <p>The best programming language.</p>  
</div>
```

```
var div = document.getElementById("myDiv");  
div.innerHTML; // returns:  
"JavaScript: <p>The best programming language.</p>"
```

```
var div = document.getElementById("myDiv");  
div.innerHTML = `JavaScript, the <u>BEST</u>  
programming language!`;
```

Your browser will display:

JavaScript, the BEST programming language!

# Template Literals

```
var main = document.getElementById("main");  
var people = ["Steve", "Bob", "Tim", "Frank"];  
  
main.innerHTML = `

${people[0]} is friends with  
    ${people[1]}, ${people[2]}, and ${people[3]}  
    </div>  
`;  
;


```

Only works with backticks!

```
var div = document.getElementById("myDiv");  
div.innerText = `JavaScript, the <u>BEST</u>  
programming language!`;
```

Your browser will display:

JavaScript, the <u>BEST</u> programming language!

# Events

An **event** is anything - absolutely anything that happens when the user interacts with the page using his mouse or keyboard

These **events** can be used as triggers to fire functions in your script

Common examples of events are:  
click, double-click, right-click, drag, hover, type, swipe, etc.

# Events

In HTML:

```
<div class="" id="myDiv" style="display:block">
  I'm a Div!
</div>
<button onmouseover="toggleDisplay()">Hover over me!</button>
```

```
var div = document.getElementById("myDiv");
```

```
function toggleDisplay() {
  if (div.style.display == "block") {
    div.style.display = "none";
  } else {
    div.style.display = "block";
  }
}
```

# Events

## In JavaScript:

```
<div class="" id="myDiv">  
    I'm a Div!  
</div>  
<button onmouseover="toggleDisplay()">Hover over me!</button>
```

```
var div = document.getElementById("myDiv");  
div.addEventListener("click", changeColor);
```

```
function changeColor() {  
    if (div.style.backgroundColor == "yellow") {  
        div.style.backgroundColor = "red";  
    } else {  
        div.style.backgroundColor = "yellow";  
    }  
}
```



# Inputs

```
<input type="email" id="email">  
<input type="password" id="password">  
<button onclick="submit()">Submit</button>
```

```
function submit() {  
    var email = document.getElementById("email");  
    var emailValue = email.value;  
    var password = document.getElementById("password");  
    var passwordValue = password.value;  
    alert("Email: " + emailValue + "\n" + "Password: " +  
    passwordValue);  
}
```

# Inputs

```
<input type="text" oninput="print()" id="text">  
<p id="paragraph"></p>
```

```
var text = document.getElementById("text");  
var paragraph = document.getElementById("paragraph");
```

```
function print() {  
    paragraph.innerHTML = text.value;  
}
```

## EXERCISE # 7

### HTML:

Create a "main" container div with two inputs for username and password and a submit button.

### JS :

- ▶ Create a "users" array of three (or more) objects. Each object should contain three properties. One for the user's first name, one for his username, and one for his password.
- ▶ When calling the function, verify that the info entered matches the object's values. If it doesn't match, alert wrong info.
- ▶ If info matches, clear the container div and replace it with an H1 that says: "Welcome" and the user's first name.

## EXERCISE # 7

HTML:

צרו div "main" ראשי עם שתי INPUT עבור שם משתמש וסיסמה וכפתור SUBMIT.

JS :

▶ צרו ARRAY "משתמשים" של שלושה (או יותר) אובייקטים. לכל אובייקט יש שלושה מאפיינים. אחד עבור השם הפרטי של המשתמש, אחד עבור שם המשתמש שלו, ואחד עבור הסיסמה שלו.

▶ בעת קריאה לפונקציה (ע"י לחיצת SUBMIT), ודא שהמידע שהוזן מתאים לאחד מהמשתמשים. אם לא מתאים, ALERT ששגוי.

▶ אם יש התאמה, שה- div "main" ראשי יתרוקן, ויקבל H1 שבו כתוב: "WELCOME" ואת השם הפרטי של המשתמש.