Introduction to JAVASCRIPT

By

MSIT

Introduction to JavaScript

- JavaScript is the world's most popular programming language.
- JavaScript is the programming language of the Web.
- JavaScript is easy to learn.

First program

```
<!DOCTYPE html>
<html>
<body>
<h2>My First JavaScript</h2>
<button type="button"</pre>
onclick="document.getElementById('demo').innerHTML = Date()">
Click me to display Date and Time.</button>
</body>
</html>
```

My First JavaScript

Click me to display Date and Time.

Sun Apr 11 2021 21:12:01 GMT+0530 (India Standard Time)

What can JavaScript do?

JavaScript can change HTML content

JavaScript can change HTML attributes

JavaScript can change CSS style

JavaScript can hide HTML elements

JavaScript can show hidden HTML elements

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

<h2>What Can JavaScript Do?</h2>

id="demo">JavaScript can change HTML content.
<button type="button" onclick='document.getElementById("demo").innerHTML = "Hello JavaScript!"'>Click Me!</button>
</body>
</html>
```

What Can JavaScript Do?

Hello JavaScript!



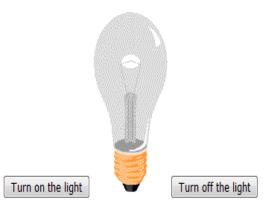
JavaScript can change HTML attribute values.

```
<!DOCTYPE html>
<html>
<body>
<h2>What Can JavaScript Do?</h2>
JavaScript can change HTML attribute values.
In this case JavaScript changes the value of the src (source) attribute of an
image.
<button onclick="document.getElementById('myImage').src='pic bulbon.gif'">Turn on
the light</button>
<img id="myImage" src="pic bulboff.gif" style="width:100px">
<button onclick="document.getElementById('myImage').src='pic bulboff.gif'">Turn
off the light</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can change HTML attribute values.

In this case JavaScript changes the value of the src (source) attribute of an image.



We can add the action to HTML dealing with simple buttons

```
<!DOCTYPE html>
                                                                                       What Can JavaScript Do?
<html>
<body>
                                                                                       JavaScript can change HTML attribute values.
<h2>What Can JavaScript Do?</h2>
                                                                                       In this case JavaScript changes the value of the src (source) attribute of an image.
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<button onclick="document.getElementById('myImage').src='pic bulboff.gif'">Turn
                                                                                        Turn on the light
                                                                                                                      Turn off the light
off the light</button>
</body>
</html>
```

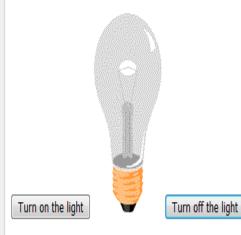
We can add the action to HTML dealing with simple buttons

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kbutton onclick="document.getElementById('myImage').src='pic bulboff.gif'">Turn
off the light</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can change HTML attribute values.

In this case JavaScript changes the value of the src (source) attribute of an image.



JavaScript can change the style of an HTML element.

```
<!DOCTYPE html>
                                                                                  What Can JavaScript Do?
<html>
<body>
                                                                                  JavaScript can change the style of an HTML element.
<h2>What Can JavaScript Do?</h2>
                                                                                   Click Me!
JavaScript can change the style of an HTML element.
<button type="button"</pre>
onclick="document.getElementById('demo').style.fontSize='35px'">Click
Me!</button>
</body>
</html>
```

JavaScript can change the style of an HTML element.

```
<!DOCTYPE html>
                                                                       What Can JavaScript Do?
<html>
<body>
<h2>What Can JavaScript Do?</h2>
                                                                       JavaScript can change the style of an HTML
JavaScript can change the style of an HTML element.
                                                                       element.
<button type="button"</pre>
onclick="document.getElementById('demo').style.fontSize='35px'">Click
Me!</button>
                                                                        Click Me!
</body>
</html>
```

JavaScript can hide HTML elements.

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

<h2>What Can JavaScript Do?</h2>

id="demo">JavaScript can hide HTML elements.
<button type="button"
onclick="document.getElementById('demo').style.display='none'">Click Me!</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can hide HTML elements.

Click Me!

JavaScript can hide HTML elements.

```
<!DOCTYPE html>
<html>
<body>
                                                                                    Click Me!
<h2>What Can JavaScript Do?</h2>
JavaScript can hide HTML elements.
<button type="button"</pre>
onclick="document.getElementById('demo').style.display='none'">Click Me!</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can show hidden HTML elements.

```
<!DOCTYPE html>
<html>
<body>
<h2>What Can JavaScript Do?</h2>
JavaScript can show hidden HTML elements.
Hello JavaScript!
<button type="button"
onclick="document.getElementById('demo').style.display='block'">Click
Me!</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can show hidden HTML elements.



JavaScript can **show** hidden HTML elements.

```
<!DOCTYPE html>
<html>
<body>
<h2>What Can JavaScript Do?</h2>
JavaScript can show hidden HTML elements.
Hello JavaScript!
<button type="button"</pre>
onclick="document.getElementById('demo').style.display='block'">Click
Me!</button>
</body>
</html>
```

What Can JavaScript Do?

JavaScript can show hidden HTML elements.

Hello JavaScript!

Click Me!

Where to Insert JavaScript JavaScript in Head

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {
 document.getElementById("demo").innerHTML = "Paragraph changed.";
</script>
</head>
<body>
<h2>JavaScript in Head</h2>
A Paragraph.
<button type="button" onclick="myFunction()">Try it</button>
</body>
</html>
```

JavaScript in Head

A Paragraph.

Try it

Where to Insert JavaScript JavaScript in Head

```
<!DOCTYPE html>
<html>
<head>
<script>
function myFunction() {
   document.getElementById("demo").innerHTML = "Paragraph changed.";
}
</script>
</head>
<body>
<h2>JavaScript in Head</h2>

cp id="demo">A Paragraph.
<button type="button" onclick="myFunction()">Try it</button>
</body>
</html>
```

JavaScript in Head

Paragraph changed.

Try it

JavaScript in Body

JavaScript in Body

Paragraph changed.

Try it

My First Web Page My First Paragraph.

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript in Body</h2>
A Paragraph.
<button type="button" onclick="myFunction()">Try it</button>
<script>
function myFunction() {
 document.getElementById("demo").innerHTML = "Paragraph changed.";
</script>
</body>
</html>
```

JavaScript in Body

Paragraph changed.



External JavaScript

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

<h2>External JavaScript</h2>

id="demo">A Paragraph.
<button type="button" onclick="myFunction()">Try it</button>

(myFunction is stored in an external file called "myScript.js")
<script src="myScript.js"></script>
</body>
</html>
```

External JavaScript

A Paragraph.



(myFunction is stored in an external file called "myScript.js")

External JavaScript Paragraph changed.

```
<!DOCTYPE html>
<html>
<body>
<h2>External JavaScript</h2>
A Paragraph.
<button type="button" onclick="myFunction()">Try it</button>
(myFunction is stored in an external file called "myScript.js")
<script src="myScript.js"></script>
</body>
</html>
```

External JavaScript

Paragraph changed.



(myFunction is stored in an external file called "myScript.js")

JavaScript Output-alert box

```
<!DOCTYPE html>
                                                                                              Veb Page
<html>
<body>
                                                                               11
<h2>My First Web Page</h2>
My first paragraph.
                                                                                     0K
<script>
window.alert(5 + 6);
</script>
</body>
</html>
```

Then select "Console" in the debugger menu.

```
<!DOCTYPE html>
 <html>
 <body>
 <h2>Activate Debugging</h2>
 F12 on your keybord will activate debugging.
 Then select "Console" in the debugger menu.
 Then click Run again.
 <script>
 console.log(5 + 6);
 </script>
 </body>
 </html>
☐ Inspector ☐ Console ☐ Debugger ↑ Network {} Style Editor ☐ Performance ☐ Memory ☐ Storage ★ Accessibility  Application
                                                                                                                                                       999+ □ □ ·
    Filter Output
                                                                                                                      Errors (193) Warnings Logs Info Debug
                                                                                                                                                        CSS XHR Request
   11
                                                                                                                                                            tryit.asp:12
   11
                                                                                                                                                            tryit.asp:12
                                                                                                                                                            tryit.asp:12
  11
```

JavaScript Statements

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Statements</h2>
A <b>JavaScript program</b> is a list of <b>statements</b> to be executed by a
computer.
<script>
var x, y, z; // Declare 3 variables
x = 5; // Assign the value 5 to x
y = 6; // Assign the value 6 to y
z = x + y; // Assign the sum of x and y to z
document.getElementById("demo").innerHTML =
"The value of z is " + z + ".";
</script>
</body>
</html>
```

JavaScript Statements

A JavaScript program is a list of statements to be executed by a computer.

The value of z is 11.

JavaScript Numbers

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Numbers</h2>
Number can be written with or without decimals.
<script>
document.getElementById("demo").innerHTML = 10.50;
</script>
</body>
</html>
```

JavaScript Numbers

Number can be written with or without decimals.

10.5

JavaScript Strings

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Strings</h2>
Strings can be written with double or single quotes.
<script>
document.getElementById("demo").innerHTML = 'John Doe';
</script>
</body>
</html>
```

JavaScript Strings

Strings can be written with double or single quotes.

John Doe

JavaScript Operators

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Operators</h2>
\JavaScript uses arithmetic operators to compute values (just like)
algebra).
<script>
document.getElementById("demo").innerHTML = (5 + 6) * 10;
</script>
</body>
</html>
```

JavaScript Operators

JavaScript uses arithmetic operators to compute values (just like algebra).

Assigning JavaScript Values

```
<!DOCTYPE html>
<html>
<body>
<h2>Assigning JavaScript Values</h2>
In JavaScript the = operator is used to assign values to variables.
<script>
var x, y;
x = 5;
y = 6;
document.getElementById("demo").innerHTML = x + y;
</script>
</body>
</html>
```

Assigning JavaScript Values

In JavaScript the = operator is used to assign values to variables.

JavaScript Expressions

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

<h2>JavaScript Expressions</h2>

Expressions compute to values.

<script>
document.getElementById("demo").innerHTML = 5 * 10;
</script>
</body>
</html>
```

JavaScript Expressions

Expressions compute to values.

JavaScript Expressions

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Expressions</h2>
Expressions compute to values.
<script>
document.getElementById("demo").innerHTML = "John" + " " + "Doe";
</script>
</body>
</html>
```

JavaScript Expressions

Expressions compute to values.

John Doe

JavaScript Comments are NOT Executed

```
<!DOCTYPE html>
<html>
<body>
<h2>JavaScript Comments are NOT Executed</h2>
<script>
var x;
x = 5;
// x = 6; I will not be executed
document.getElementById("demo").innerHTML = x;
</script>
</body>
</html>
```

JavaScript Comments are NOT Executed

```
<!DOCTYPE html>
<html>
<body>
Click the button to display the domain name of the server that loaded this
document.
<button onclick="myFunction()">Try it</button>
<script>
function myFunction() {
 document.getElementById("demo").innerHTML = document.domain;
</script>
</body>
</html>
```

Click the button to display the domain name of the server that loaded this document.

Try it

www.w3schools.com

The End

Practice more examples