

JAVASCRIPT TOPIC 1

InfoTech 37
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What is Javascript?

- ❑ popular programming language in the world
- ❑ language for HTML
- ❑ language for the web
- ❑ language for the computer, servers, laptops, tablets, smart phones, and more.



What is Javascript?

- ❑ can change the HTML Elements
- ❑ can manipulate the DOM (change the HTML contents)

Example:

```
document.getElementById("demo").innerHTML = "Hello JavaScript";
```



Demo 1

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

    <h1>My First JavaScript</h1>

    <p>JavaScript can change the content of an HTML element:</p>

    <button type="button" onclick="myFunction()">Click Me!</button>

    <p id="demo">This is a demonstration.</p>

    <script>
    function myFunction() {
      document.getElementById("demo").innerHTML = "Hello JavaScript!";
    }
    </script>

  </body>
</html>
```

The method `document.getElementById()` is one of many methods in the HTML DOM.



You Can Use JS To

- ☐ Change HTML elements
- ☐ Delete HTML elements
- ☐ Create new HTML elements
- ☐ Copy and clone HTML elements
- ☐ And much more ...
- ☐ There are several chapters, about the HTML DOM, later in this tutorial.



Javascript Can Change HTML Attributes

This example changes the value of the source attribute (src) of an HTML <image> element:

The Light bulb

Click the light bulb to turn on/off the light



Demo 2

```
<!DOCTYPE html>
<html>
  <body>
    <script>
      function changelImage() {
        var image = document.getElementById('myImage');
        if (image.src.match("bulbon")) {
          image.src = "./imagecopy1234567890/test.gif";
        } else {
          image.src = "./imagecopy1234567890/test.gif";
        }
      }
    </script>
```

```
    
```

```
    <p>Click the light bulb to turn on/off the light</p>
```

```
  </body>
</html>
```

With JavaScript,
you can change
almost any HTML
attribute.



JavaScript Can Change HTML Styles (CSS)

Changing the style of an HTML element, is a variant of changing an HTML attribute.

Example

```
document.getElementById("demo").style.fontSize = "25px";
```



Demo 3

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

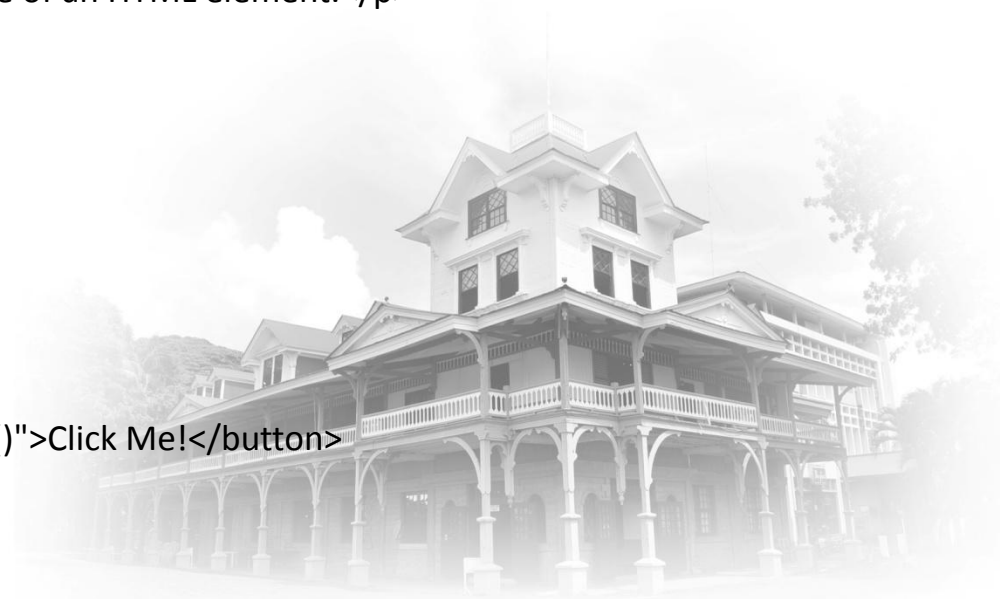
    <h1>My First JavaScript</h1>

    <p id="demo">JavaScript can change the style of an HTML element.</p>

    <script>
      function myFunction() {
        var x = document.getElementById("demo");
        x.style.fontSize = "25px";
        x.style.color = "red";
      }
    </script>

    <button type="button" onclick="myFunction()">Click Me!</button>

  </body>
</html>
```



You can change almost any CSS values

JavaScript Can Validate Data

JavaScript is often used to validate input:

Please input a number between 1 and 10



Demo 4

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

    <p>Please input a number between 1 and 10:</p>

    <input id="numb" type="text">

    <button type="button" onclick="myFunction()">Submit</button>

    <p id="demo"></p>

    <script>
    function myFunction() {
    var x, text;

    //Get the value of input field with id="numb"

    x = document.getElementById("numb").value;

    // If x is Not a Number or less than one or greater than 10

    if (isNaN(x) || x < 1 || x > 10) {
    text = "Input not valid";
    } else {
    text = "Input OK";
    }
    document.getElementById("demo").innerHTML = text;
    }
    </script>

  </body>
</html>
```



Did You Know?

- ❑ JavaScript and Java are two completely different languages, both in concept and design.
- ❑ JavaScript was invented by Brendan Eich, to be used in Netscape (a no longer existing browser) in 1995, and was adopted by the ECMA standard association in 1997.
- ❑ ECMA-262 is the official name. ECMAScript 5 (version 1.8.5 - July 2010) is the latest standard.

