**JavaScript**

**Part-4**

* HTML events are **"things"** that happen to HTML elements.
* When JavaScript is used in HTML pages, JavaScript can **"react"** on these events.
* JavaScript lets you execute code when events are detected.
* HTML allows event handler attributes, **with JavaScript code**, to be added to HTML elements.

With single quotes:

<element event=**'*some JavaScript*'**>

With double quotes:

<element event=**"*some JavaScript*"**>

* In the following example, an onclick attribute (with code), is added to a <button> element:

### **Example**

<button onclick="document.getElementById('demo').innerHTML = Date()">The time is?</button>

## **Common HTML Events**

Here is a list of some common HTML events:

|  |  |
| --- | --- |
| **Event** | **Description** |
| onchange | An HTML element has been changed |
| onclick | The user clicks an HTML element |
| onmouseover | The user moves the mouse over an HTML element |
| onmouseout | The user moves the mouse away from an HTML element |
| onkeydown | The user pushes a keyboard key |
| onload | The browser has finished loading the page |

# JavaScript String Methods

## **String Length**

The length property returns the length of a string:

### **Example**

var txt = "ABCDEFGHIJKLMNOPQRSTUVWXYZ";  
var sln = txt.length;

## **Finding a String in a String**

The indexOf() method returns the index of (the position of) the first occurrence of a specified text in a string:

### **Example**

var str = "Please locate where 'locate' occurs!";  
var pos = str.indexOf("locate");

## **Extracting String Parts**

There are 3 methods for extracting a part of a string:

* slice(start, end)
* substring(start, end)
* substr(start, length)

## **The slice() Method**

slice() extracts a part of a string and returns the extracted part in a new string.

The method takes 2 parameters: the start position, and the end position (end not included).

This example slices out a portion of a string from position 7 to position 12 (13-1):

### **Example**

var str = "Apple, Banana, Kiwi";  
var res = str.slice(7, 13);

The result of res will be:

Banana

[Try it Yourself »](https://www.w3schools.com/js/tryit.asp?filename=tryjs_string_slice)

Remember: JavaScript counts positions from zero. First position is 0.

If a parameter is negative, the position is counted from the end of the string.

This example slices out a portion of a string from position -12 to position -6:

### **Example**

var str = "Apple, Banana, Kiwi";  
var res = str.slice(-12, -6);

The result of res will be:

Banana

## **Replacing String Content**

The replace() method replaces a specified value with another value in a string:

### **Example**

str = "Please visit Microsoft!";  
var n = str.replace("Microsoft", "W3Schools");

## **Converting to Upper and Lower Case**

A string is converted to upper case with toUpperCase():

### **Example**

var text1 = "Hello World!";       // String  
var text2 = text1.toUpperCase();  // text2 is text1 converted to upper

## **The concat() Method**

concat() joins two or more strings:

### **Example**

var text1 = "Hello";  
var text2 = "World";  
var text3 = text1.concat(" ", text2);