JavaScript - DOM Events

The DOM events are actions that can be performed on HTML elements. When an event occurs, it triggers a JavaScript function. This function can then be used to change the HTML element or perform other actions.

Here are some examples of DOM events:

Click − This event occurs when a user clicks on an HTML element.

Load − This event occurs when an HTML element is loaded.

Change − This event occurs when the value of an HTML element is changed.

Submit − This event occurs when an HTML form is submitted.

You can use the event handlers or addEventListener() method to listen to and react to the DOM events. The addEventListener() method takes two arguments: the name of the event and the function that you want to be called when the event occurs.

The DOM events are also referred as Document Object Model events. It is used to interact with the DOM elements and manipulate the DOM elements from JavaScript when any event occurs.

Let's look at the below examples of DOM events.

The onclick Event Type

This is the most frequently used event type which occurs when a user clicks the left button of his mouse. You can put your validation, warning etc., against this event type.

Example

Try the following example.

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```html
<html>
<head>
   <script>
      function sayHello() {
         alert("Hello World")
      }
```

```
    </script>
  </head>
  <body>
    <p>Click the following button and see result</p>
    <form>
      <input type = "button" onclick = "sayHello()" value = "Say Hello" />
    </form>
  </body>
</html>
```

The ondblclick Event Type

We use the 'ondblclick' event handler in the code below with the element. When users double click the button, it calls the changeColor() function.

In the changeColor() function, we change the color of the text. So, the code will change the text's color when the user double-clicks the button.

Example

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```
<html>
<body>
  <h2 id = "text"> Hi Users! </h2>
  <button ondblclick="changeColor()"> Double click me! </button>
  <script>
    function changeColor() {
      document.getElementById("text").style.color = "red";
    }
  </script>
</body>
</html>
```

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The onkeydown Event Type

We used the 'keydown' event in the code below with the <input> element. Whenever the user will press any key, it will call the customizeInput() function.

In the customizeInput() function, we change the background color of the input and the input text to red.

Example

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```html
<html>
<body>
   <p> Enter charater/s by pressing any key  </p>
   <input type = "text" onkeydown = "customizeInput()">
   <script>
      function customizeInput() {
         var ele = document.getElementsByTagName("INPUT")[0];
         ele.style.backgroundColor = "yellow";
         ele.style.color = "red";
      }
   </script>
</body>
```

The onmouseenter and onmouseleave Events

In the code below, we use the 'onmouseenter' and 'onmouseleave' event handlers to add a hover effect on the <div> element.

When the mouse pointer enters the <div> element, it calls the changeRed() function to change the text color to red, and when the mouse pointer leaves the <div> element, it calls the changeBlack() function to change the text color to black again.

Example

Open Compiler

```html
<html>
<body>
   <div id = "text" style = "font-size: 20px;" onmouseenter = "changeRed()" onm
   <script>
      function changeRed() {
         document.getElementById("text").style.color = "red";
      }
```

```
        function changeBlack() {
            document.getElementById("text").style.color = "black";
        }
    </script>
  </body>
  </html>
```

HTML 5 Standard DOM Events

The standard HTML 5 events are listed here for your reference. Here script indicates a Javascript function to be executed against that event.

Attribute	Value	Description
Offline	script	Triggers when the document goes offline
Onabort	script	Triggers on an abort event
onafterprint	script	Triggers after the document is printed
onbeforeonload	script	Triggers before the document loads
onbeforeprint	script	Triggers before the document is printed
onblur	script	Triggers when the window loses focus
oncanplay	script	Triggers when media can start play, but might has to stop for buffering
oncanplaythrough	script	Triggers when media can be played to the end, without stopping for buffering
onchange	script	Triggers when an element changes
onclick	script	Triggers on a mouse click
oncontextmenu	script	Triggers when a context menu is triggered
ondblclick	script	Triggers on a mouse double-click
ondrag	script	Triggers when an element is dragged
ondragend	script	Triggers at the end of a drag operation
ondragenter	script	Triggers when an element has been dragged to a valid drop target

ondragleave	script	Triggers when an element is being dragged over a valid drop target
ondragover	script	Triggers at the start of a drag operation
ondragstart	script	Triggers at the start of a drag operation
ondrop	script	Triggers when dragged element is being dropped
ondurationchange	script	Triggers when the length of the media is changed
onemptied	script	Triggers when a media resource element suddenly becomes empty.
onended	script	Triggers when media has reach the end
onerror	script	Triggers when an error occur
onfocus	script	Triggers when the window gets focus
onformchange	script	Triggers when a form changes
onforminput	script	Triggers when a form gets user input
onhaschange	script	Triggers when the document has change
oninput	script	Triggers when an element gets user input
oninvalid	script	Triggers when an element is invalid
onkeydown	script	Triggers when a key is pressed
onkeypress	script	Triggers when a key is pressed and released
onkeyup	script	Triggers when a key is released
onload	script	Triggers when the document loads
onloadeddata	script	Triggers when media data is loaded
onloadedmetadata	script	Triggers when the duration and other media data of a media element is loaded
onloadstart	script	Triggers when the browser starts to load the media data
onmessage	script	Triggers when the message is triggered
onmousedown	script	Triggers when a mouse button is pressed

onmousemove	script	Triggers when the mouse pointer moves
onmouseout	script	Triggers when the mouse pointer moves out of an element
onmouseover	script	Triggers when the mouse pointer moves over an element
onmouseup	script	Triggers when a mouse button is released
onmousewheel	script	Triggers when the mouse wheel is being rotated
onoffline	script	Triggers when the document goes offline
onoine	script	Triggers when the document comes online
ononline	script	Triggers when the document comes online
onpagehide	script	Triggers when the window is hidden
onpageshow	script	Triggers when the window becomes visible
onpause	script	Triggers when media data is paused
onplay	script	Triggers when media data is going to start playing
onplaying	script	Triggers when media data has start playing
onpopstate	script	Triggers when the window's history changes
onprogress	script	Triggers when the browser is fetching the media data
onratechange	script	Triggers when the media data's playing rate has changed
onreadystatechange	script	Triggers when the ready-state changes
onredo	script	Triggers when the document performs a redo
onresize	script	Triggers when the window is resized
onscroll	script	Triggers when an element's scrollbar is being scrolled
onseeked	script	Triggers when a media element's seeking attribute is no longer true, and the seeking has ended
onseeking	script	Triggers when a media element's seeking attribute is true, and the seeking has begun
onselect	script	Triggers when an element is selected

onstalled	script	Triggers when there is an error in fetching media data
onstorage	script	Triggers when a document loads
onsubmit	script	Triggers when a form is submitted
onsuspend	script	Triggers when the browser has been fetching media data, but stopped before the entire media file was fetched
ontimeupdate	script	Triggers when media changes its playing position
onundo	script	Triggers when a document performs an undo
onunload	script	Triggers when the user leaves the document
onvolumechange	script	Triggers when media changes the volume, also when volume is set to "mute"
onwaiting	script	Triggers when media has stopped playing, but is expected to resume