

Events in JavaScript

When the user manipulates a page events may be occurred. Events are fired inside the browser window, and tend to be attached to a specific item that resides in it which may be a single element, set of elements, the HTML document loaded in the current tab, or the entire browser window. JavaScript's interaction with HTML is handled through events. Events are occurred whenever a page is loaded (page load event), the user clicks a button (button click event) or events are occurred on pressing any key, closing a window, resizing a window, etc. Some more types of events may occur on:

- hovering the cursor over a certain element.
- web page finishing loading.
- A form being submitted.
- A video being played, or paused, or finishing play.
- An error occurring.

The occurrence of these events may be used by the Programmers and to execute responses coded in JavaScript like cause buttons to close windows, messages to be displayed to users, data to be validated, or any other type of response.

Events are a part of the DOM (Document Object Model) Level 3 and every HTML element contains a set of events which may trigger a block of JavaScript Code written for that specific purpose, i.e. JavaScript can "**react**" on these events and allows executing the code when events are detected.

The most common Events are

Event	Description
onchange	An HTML element has been changed
onclick	The user clicks an HTML element (button, image etc)
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

Other Events

- **Input Events**

onblur - When a user leaves an input field

onchange - When a user changes the content of an input field

onchange - When a user selects a dropdown value

onfocus - When an input field gets focus

onselect - When input text is selected

onsubmit - When a user clicks the submit button

onreset - When a user clicks the reset button

onkeydown - When a user is pressing/holding down a key

onkeypress - When a user is pressing/holding down a key

onkeyup - When the user releases a key

onkeyup - When the user releases a key

- **Mouse Events**

onmouseover/onmouseout - When the mouse passes over an element

onmousedown/onmouseup - When pressing/releasing a mouse button

onmousedown - When mouse is clicked: Alert which element

onmousedown - When mouse is clicked: Alert which button

onmousemove/onmouseout - When moving the mouse pointer over/out of an image

onmouseover/onmouseout - When moving the mouse over/out of an image

onmouseover an image map

- **Click Events**

onclick - When button is clicked

ondblclick - When a text is double-clicked

- **Load Events**

onload - When the page has been loaded

onload - When an image has been loaded

onerror - When an error occurs when loading an image

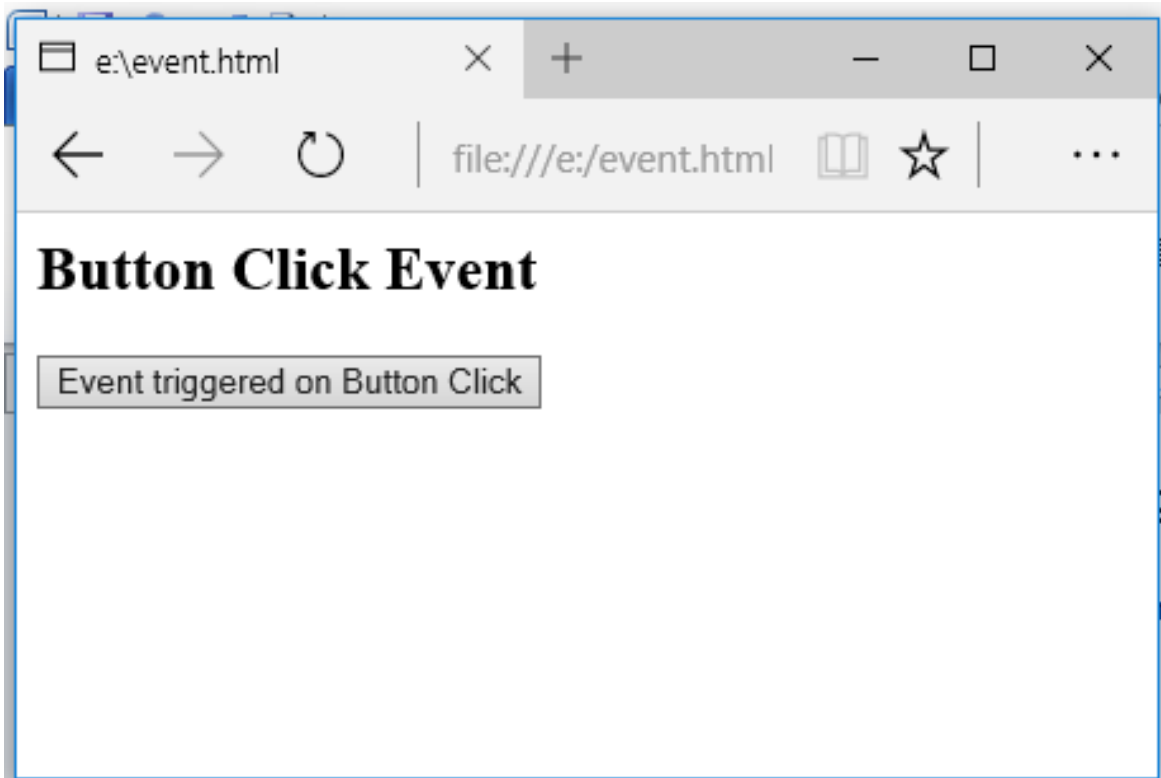
onunload - When the browser closes the document

onresize - When the browser window is resized

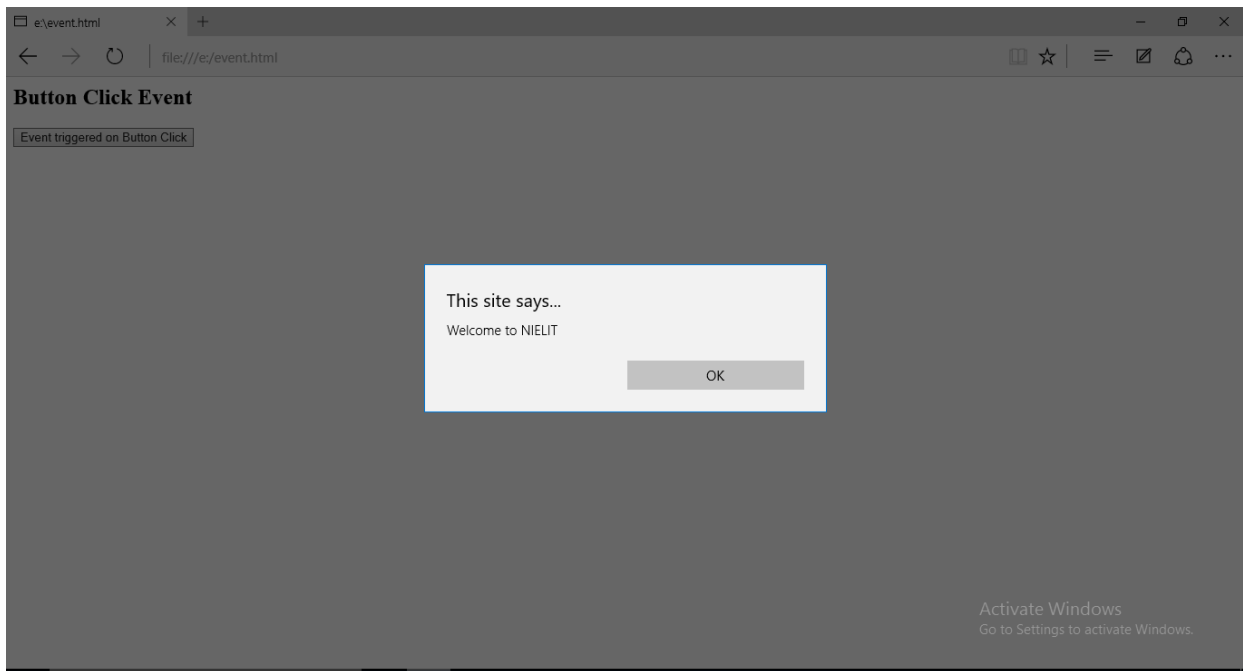
Examples of Various Events

1. **onclick events:** This is a mouse event and provokes the code written if the user clicks on the element it is bound to.

```
<html>
<head>
  <script>
    function hiNIELIT() {
      alert('Welcome to NIELIT');
    }
  </script>
</head>
<body>
<h2> Button Click Event</h2>
  <button type="button" onclick="hiNIELIT()">Event triggered on Button Click</button>
</body>
</html>
```

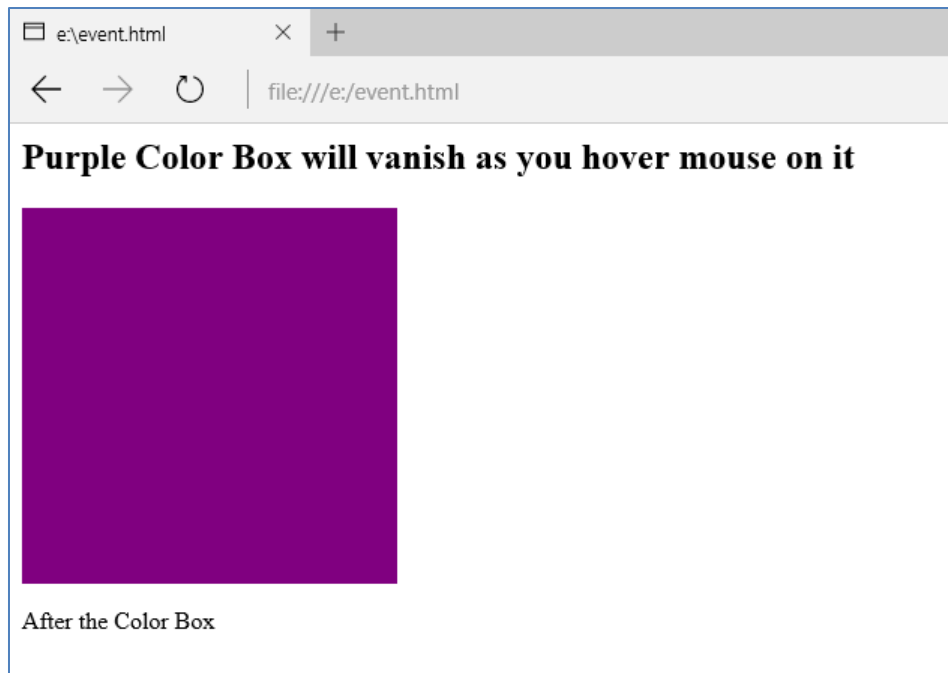


Once we click the button, an alert window will be displayed.

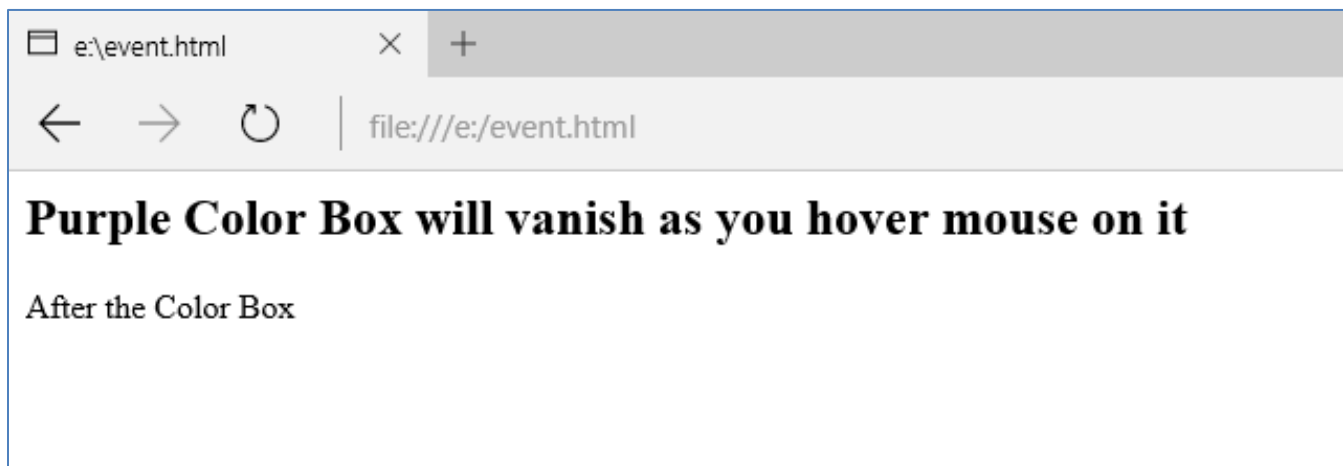


2. **onmouseover event:** This event corresponds to hovering the mouse pointer over the element as well as its children, to which it is bound to.

```
<html>
  <head>
    <script>
      function mousehov() {
        var e = document.getElementById('hover');
        e.style.display = 'none';
      }
    </script>
  </head>
  <body>
    <h2> Purple Color Box will vanish as you hover mouse on it </h2>
    <div id="hover" onmouseover="mousehov()"
      style="background-color:purple;height:250px;width:250px;">
    </div>
    <p> After the Color Box</p>
  </body>
</html>
```



As the mouse is hover the color box, it vanishes



Assignment

1. What are events? Where they are used.
2. Give example showing different types of events.