

Form Events

The MouseEvent Object:

The MouseEvent Object handles events that occur when the mouse interacts with the HTML document.

Event	Occurs When
<u>onclick</u>	A user clicks on an element
<u>ondblclick</u>	A user double-clicks on an element
<u>onmousedown</u>	A mouse button is pressed over an element
<u>onmouseenter</u>	The mouse pointer moves into an element
<u>onmouseleave</u>	The mouse pointer moves out of an element
<u>onmousemove</u>	The mouse pointer moves over an element
<u>onmouseout</u>	The mouse pointer moves out of an element
<u>onmouseover</u>	The mouse pointer moves onto an element
<u>onmouseup</u>	A mouse button is released over an element

onclick Event-[MouseEvent](#)

```
<html>
<body>
<h1>HTML DOM Events</h1>
<h2>The onclick Event</h2>
```

```
<p>The onclick event triggers a function when an element is clicked on.</p>
<p>Click to trigger a function that will output "Hello World":</p>
```

```
<button onclick="myFunction()">Click me</button>
```

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

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

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

HTML DOM Events

The onclick Event

The onclick event triggers a function when an element is clicked on.

Click to trigger a function that will output "Hello World":

Click me

HTML DOM Events

The onclick Event

The onclick event triggers a function when an element is clicked on.

Click to trigger a function that will output "Hello World":

Click me

Hello World

[Dbldclick-MouseEvent](#)

```
<html>
<body>
<h1>HTML DOM Events</h1>
<h2>The ondblclick Event</h2>

<p ondblclick="myFunction()">Double-click this paragraph to trigger
a function.</p>

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

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

</body>
</html>
```

HTML DOM Events

The ondblclick Event

Double-click this paragraph to trigger a function.

HTML DOM Events

The ondblclick Event

Double-click this paragraph to trigger a function.

Hello World

onmouseup -onmousedown Event

- The onmousedown event occurs when a user presses a mouse button over an HTML element.
- The onmouseup event occurs when a mouse button is released over an element.

<h2>The onmousedown Event</h2>

<p>Click the text below!</p>

<p id="myP" onmousedown="mouseDown()"

onmouseup="mouseUp()">

The mouseDown() function sets the color of this text to red.
The mouseUp() function sets the color of this text to blue.

</p>

<script>

```
function mouseDown() {  
  document.getElementById("myP").style.color = "red";  
}
```

```
function mouseUp() {  
  document.getElementById("myP").style.color = "blue";  
}
```

</script>

The onmousedown Event

Click the text below!

The mouseDown() function sets the color of this text to red. The mouseUp() function sets the color of this text to blue.

The onmousedown Event

Click the text below!

The mouseDown() function sets the color of this text to red. The mouseUp() function sets the color of this text to blue.

The onmousedown Event

Click the text below!

The mouseDown() function sets the color of this text to red. The mouseUp() function sets the color of this text to blue.

Onmouseenter- onmouseleave event

- The onmouseenter event occurs when the mouse pointer enters an element.
- The onmouseenter event is often used together with the onmouseleave event, which occurs when the mouse pointer leaves an element.

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

```
<h1>HTML DOM Events</h1>
```

```
<h2>The onmouseenter Event</h2>
```

```

```

<p>The function bigImg() is triggered when the user moves the mouse pointer onto the image.</p>

<p>The function normalImg() is triggered when the mouse pointer is moved out of the image.</p>

```
<script>
```

```
function bigImg(x) {  
  x.style.height = "64px";  
  x.style.width = "64px";  
}
```

```
function normalImg(x) {  
  x.style.height = "32px";  
  x.style.width = "32px";  
}
```

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

The onmouseenter Event



The function bigImg() is triggered when the user moves the mouse pointer onto the image.

The function normalImg() is triggered when the mouse pointer is moved out of the image.

The onmouseleave Event



The function bigImg() is triggered when the user moves the mouse pointer onto the image.

The function normalImg() is triggered when the mouse pointer is moved out of the image.

onmouseover -- onmouseout Event:

- The onmouseover event occurs when the mouse pointer enters an element.
- The onmouseover event is often used together with the onmouseout event, which occurs when the mouse pointer leaves the element.

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

```
<h2>The onmouseover Event</h2>
```

```

```

<p>The function bigImg() is triggered when the user moves the mouse pointer over the image.</p>

<p>The function normalImg() is triggered when the mouse pointer is moved out of the image.</p>

```
<script>
```

```
function bigImg(x) {
  x.style.height = "64px";
  x.style.width = "64px";
}
```

```
function normalImg(x) {
  x.style.height = "32px";
  x.style.width = "32px";
}
```

```
</script></body>
```

```
</html>
```

The onmouseover Event



The function bigImg() is triggered when the user moves the mouse pointer over the image.

The function normalImg() is triggered when the mouse pointer is moved out of the image.

The onmouseover Event



The function bigImg() is triggered when the user moves the mouse pointer over the image.

The function normalImg() is triggered when the mouse pointer is moved out of the image.

clientX and clientY Property

- The clientX property returns the horizontal client coordinate of the mouse pointer when a mouse event occurs.
- The clientX property is read-only.
- The client area is the current window.
- The clientY property returns the vertical client coordinate of the mouse pointer when a mouse event occurs.
- The clientY property is read-only.

Example:

```
<h2>The clientX and clientY Properties</h2>

<div style="border: 1px solid black;padding:8px" onmousemove="showCoords(event)" onmouseout="clearCoor()">

<p>Mouse over this box to display the horizontal and vertical coordinates of the mouse pointer.</p>
</div>

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

<script>
function showCoords(event) {
  let x = event.clientX;
  let y = event.clientY;
  let text = "X coords: " + x + ", Y coords: " + y;
  document.getElementById("demo").innerHTML = text;
}

function clearCoor() {
  document.getElementById("demo").innerHTML = "";
}
</script>
```

The clientX and clientY Properties

Mouse over this box to display the horizontal and vertical coordinates of the mouse pointer.

X coords: 329, Y coords: 82

onmousemove Event

The onmousemove event occurs when the pointer moves over an element.

```
<html>
<style>
div {
  width: 200px;
  height: 100px;
  border: 1px solid black;
}
</style>

<body>
<h1>HTML DOM Events</h1>
<h2>The onmousemove Event</h2>

<div onmousemove="myFunction(event)" onmouseout="clearCoor()"></div>

<p>Mouse over the rectangle above, and get the coordinates of your mouse pointer.</p>

<p>When the mouse is moved over the div, the p element will display the horizontal and vertical coordinates of your mouse pointer, whose values are returned from the clientX and clientY properties on the MouseEvent object.</p>
```

```
<p id="demo"></p>
<script>
function myFunction(e) {
  let x = e.clientX;
  let y = e.clientY;
  let coor = "Coordinates: (" + x + ", " + y + ")";
  document.getElementById("demo").innerHTML = coor;
}

function clearCoor() {
  document.getElementById("demo").innerHTML = "";
}
</script>
</body>
</html>
```

The onmousemove Event



Mouse over the rectangle above, and get the coordinates of your mouse pointer.

When the mouse is moved over the div, the p element will display the horizontal and vertical coordinates of your mouse pointer, whose values are returned from the clientX and clientY properties on the MouseEvent object.

Coordinates: (52,167)

The onmouseenter event is similar to the onmouseover event.

difference between onmousemove, onmouseenter and onmouseover

Example:

```
<html>
<style>
div {
  width: 150px;
  height: 100px;
  border: 1px solid black;
  margin: 10px;
  padding: 50px;
  text-align: center;
  background-color: lightgray;
}
</style>
<body>
<h1>HTML DOM Events</h1>
<h2>The onmouseenter Event</h2>
<p>This example demonstrates the difference between onmousemove, onmouseenter and onmouseover.</p>
```

Example continued..

```
<div onmousemove="myMoveFunction()">  
  <p>onmousemove</p>  
  <p id="demo1">Mouse over me!</p>  
</div>
```

```
<div onmouseenter="myEnterFunction()">  
  <p>onmouseenter</p>  
  <p id="demo2">Mouse over me!</p>  
</div>
```

```
<div onmouseover="myOverFunction()">  
  <p>onmouseover</p>  
  <p id="demo3">Mouse over me!</p>  
</div>
```

<p>The onmousemove event occurs every time the mouse pointer is moved over an element.</p>

<p>The mouseenter event only occurs when the mouse pointer enters an element. </p>

<p>The onmouseover event occurs when the mouse pointer enters an div element.</p>

Example continued..

```
<script>
```

```
let x = 0;
```

```
let y = 0;
```

```
let z = 0;
```

```
function myMoveFunction() {
```

```
  document.getElementById("demo1").innerHTML = z+=1;
```

```
}
```

```
function myEnterFunction() {
```

```
  document.getElementById("demo2").innerHTML = x+=1;
```

```
}
```

```
function myOverFunction() {
```

```
  document.getElementById("demo3").innerHTML = y+=1;
```

```
}
```

```
</script>
```

```
</body>
```

```
</html>
```

OUTPUT

The onmouseenter Event

This example demonstrates the difference between onmousemove, onmouseenter and onmouseover.

onmousemove

41

onmouseenter

4

onmouseover

10

The onmousemove event occurs every time the mouse pointer is moved over an element.

The mouseenter event only occurs when the mouse pointer enters an element.

The onmouseover event occurs when the mouse pointer enters an div element.

Keyboard Events:

1. onkeydown Event

The onkeydown event occurs when the user presses a key on the keyboard.

```
<html>
<body>
<h2>The onkeydown Event</h2>

<p>Press a key in the input field:</p>

<input type="text" onkeydown="myFunction()">

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

<script>
function myFunction() {
  document.getElementById("demo").innerHTML =
  "You pressed a key inside the input field";
}
</script>
</body>
</html>
```

The onkeydown Event

Press a key in the input field:

The onkeydown Event

Press a key in the input field:

You pressed a key inside the input field

Warning

The **onkeypress** event is **deprecated**.

It is not fired for all keys (like ALT, CTRL, SHIFT, ESC) in all browsers.

To detect if the user presses a key, always use the **onkeydown** event. It works for all keys.

onkeyup Event

The onkeyup event occurs when the user releases a key on the keyboard.

```
<html><body>
<h2>The keyup Event</h2>
```

```
<p>A function is triggered when the user releases a key in the input field.</p>
<p>The function transforms the input field to upper case:</p>
```

```
Enter your name: <input type="text" id="fname" onkeyup="myFunction()">
```

```
<script>
function myFunction() {
  let x = document.getElementById("fname");
  x.value = x.value.toUpperCase();
}
</script></body></html>
```

The keyup Event

A function is triggered when the user releases a key in the input field.

The function transforms the input field to upper case:

Enter your name:

The keyup Event

A function is triggered when the user releases a key in the input field.

The function transforms the input field to upper case:

Enter your name:

FocusEvent

The FocusEvent Object handles events that occur when elements gets or loses focus.

onblur Event

- The onblur event occurs when an HTML element loses focus.
- The onblur event is often used on input fields.
- The onblur event is often used with form validation (when the user leaves a form field).

```
<html>
<body>
<h1>HTML DOM Events</h1>
<h2>The blur Event</h2>
```

Enter your name: <input type="text" id="fname" onblur="myFunction()">

<p>When you leave the input field, a function is triggered which transforms the input text to upper case.</p>

```
<script>
function myFunction() {
  let x = document.getElementById("fname");
  x.value = x.value.toUpperCase();
}
```

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

onfocus Event:

- The onfocus event occurs when an element gets focus.
- The onfocus event is often used on input fields.

```
<html>
<body>
<h1>HTML DOM Events</h1>
<h2>The focus Event</h2>

Enter your name: <input type="text" onfocus="myFunction(this)">

<p>When the input field gets focus, a function changes the background-color.</p>

<script>
function myFunction(x) {
  x.style.background = "yellow";
}
</script>

</body>
</html>
```

Load Events:

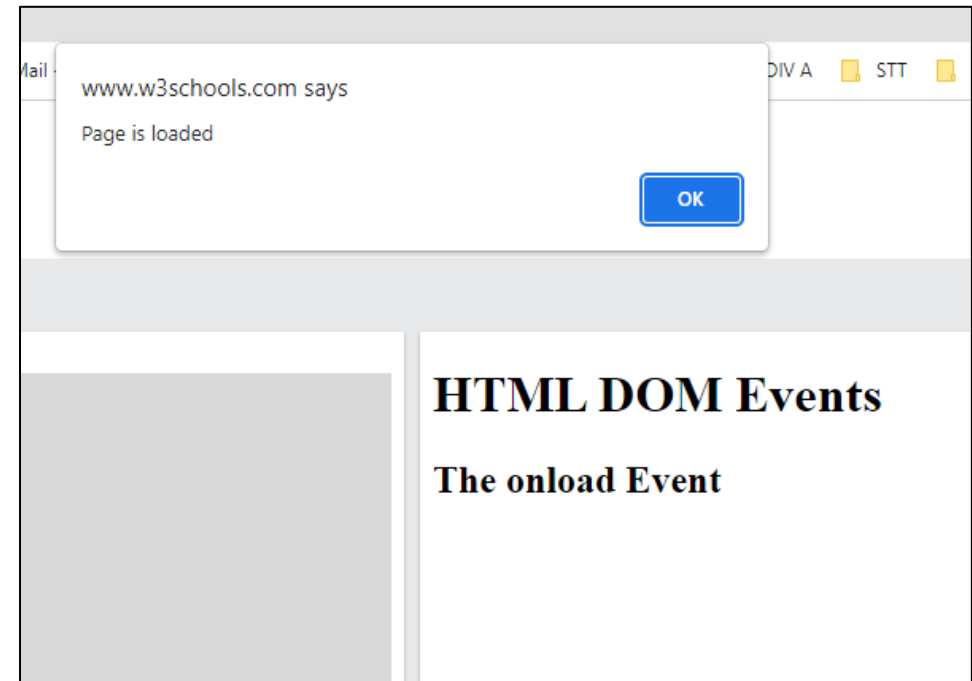
Onload Events:

- The onload event occurs when an object has been loaded.
- onload is most often used within the <body> element to execute a script once a web page has completely loaded all content (including images, script files, CSS files, etc.).
- The onload event can be used to check the visitor's browser type and browser version, and load the proper version of the web page based on the information.
- The onload event can also be used to deal with cookies

```
<html>
<body onload="myFunction()">
<h1>HTML DOM Events</h1>
<h2>The onload Event</h2>

<script>
function myFunction() {
  alert("Page is loaded");
}
</script>

</body>
</html>
```



Onunload event:

- The unload event occurs once a page has unloaded (or the browser window has been closed).
- unload occurs when the user navigates away from the page (by clicking on a link, submitting a form, closing the browser window, etc.).
- When a user tries to load a page but it is unsuccessful, the page remains unloaded, and a JavaScript unload event is triggered. The possibility exists that the unload event will also happen if the browsers have been closed while the page is loaded.
- When a user goes away from a page while selecting, submitting, clicking, and leaving the browser window, the unload event typically enters the unload state. Additionally, this incident happens when a user is trying to load a url or web browser and accesses data while it is loaded.

```
<html>
<body onload="myFunction()">

<h1>Welcome to my Home Page</h1>

<p>Close this window or press F5 to reload the page.</p>
<p><strong>Note:</strong> Due to different browser
settings, this event may not always work as expected.</p>

<script>
function myFunction() {
  alert("Thank you for visiting W3Schools!");
}
</script>

</body>
</html>
```

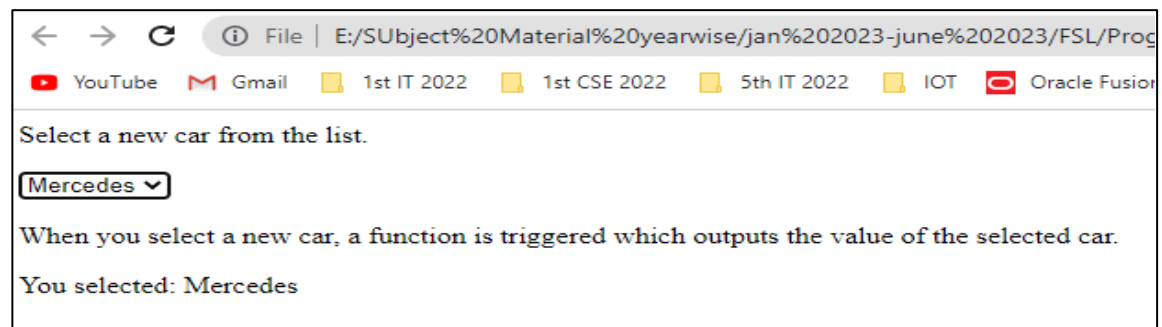
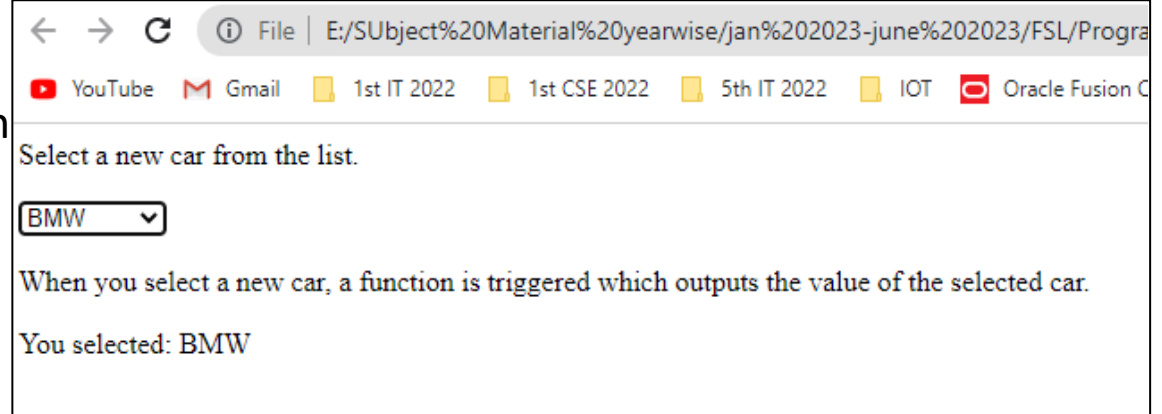
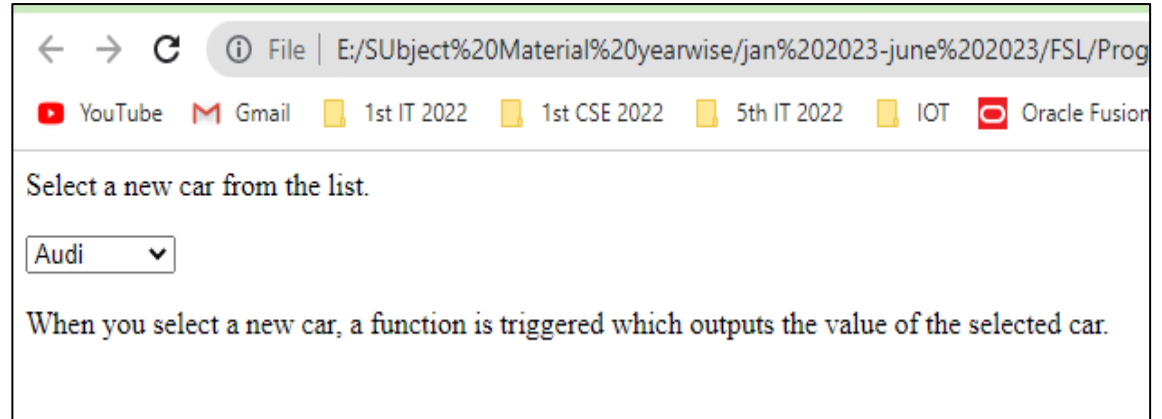
Note: Due to different browser settings, this event may not always work as expected.

Other Events:

onchange Event

The onchange event occurs when the value of an HTML element is changed.

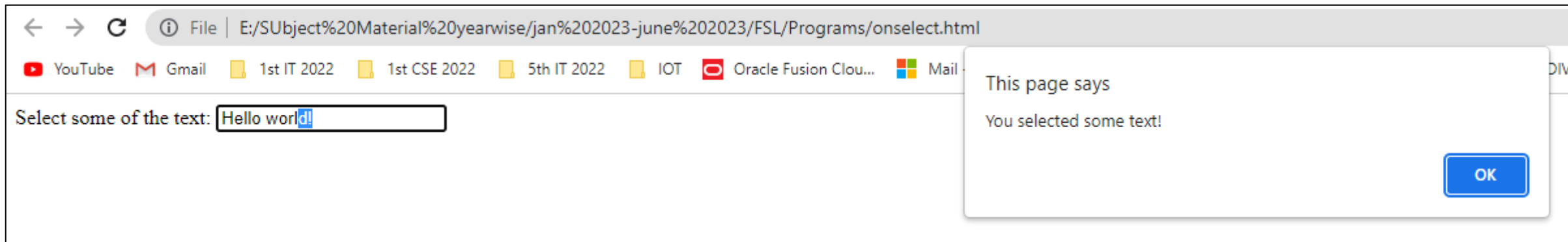
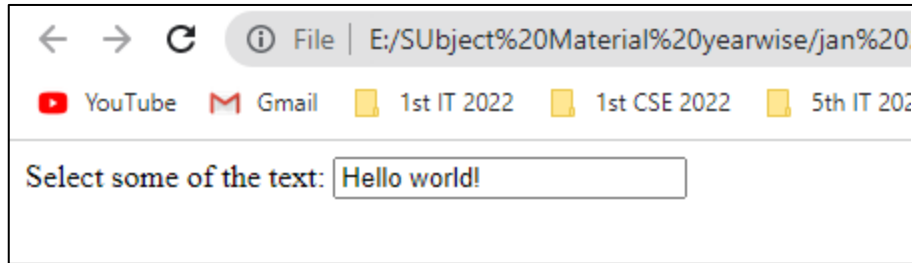
```
<html>
<body>
<p>Select a new car from the list.</p>
<select id="mySelect" onchange="myFunction()">
  <option value="Audi">Audi</option>
  <option value="BMW">BMW</option>
  <option value="Mercedes">Mercedes</option>
  <option value="Volvo">Volvo</option>
</select>
<p>When you select a new car, a function is triggered which
outputs the value of the selected car.</p>
<p id="demo"></p>
<script>
function myFunction() {
  var x = document.getElementById("mySelect").value;
  document.getElementById("demo").innerHTML = "You
                                  selected: " + x;
}
</script>
</body>
</html>
```



onselect Event

- The onselect event occurs after some text has been selected in an element.
- The onselect event is mostly used on `<input type="text">` or `<textarea>` elements.

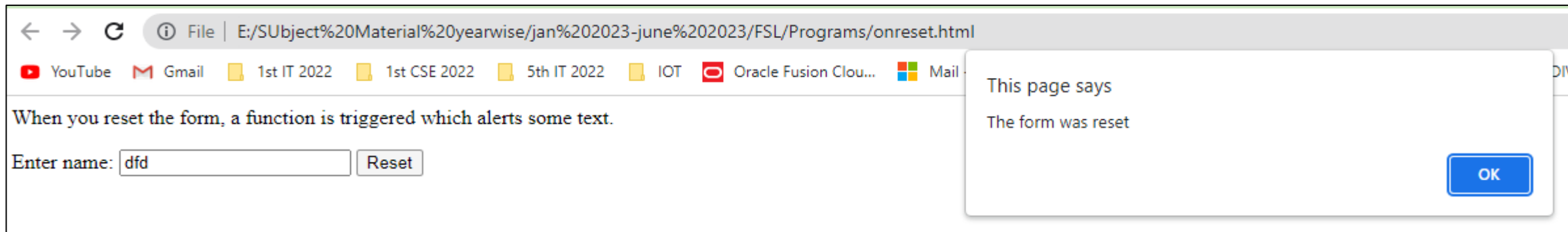
```
<html>
<body>
Select some of the text: <input type="text" value="Hello world!" onselect="myFunction()">
<script>
function myFunction() {
  alert("You selected some text!");
}
</script>
</body>
</html>
```



onreset Event

The onreset event occurs when a form is reset.

```
<html>
<body>
<p>When you reset the form, a function is triggered which alerts some text.</p>
<form onreset="myFunction()">
  Enter name: <input type="text">
  <input type="reset">
</form>
<script>
function myFunction() {
  alert("The form was reset");
}
</script>
</body>
</html>
```



Changing text of labels

```
<html><head><title>
  How to change the text of a label using JavaScript ?
</title></head>
<body style="text-align:center;">
  <h1 style="color:green;">GeeksforGeeks</h1>
  <h4>Click on the button to change the text of a label</h4>
  <label id = "GFG">Welcome to GeeksforGeeks</label>
  <br>
  <button onclick="myGeeks()">Click Here!</button>
<script>
  function myGeeks()
  {
    var x = document.getElementById("GFG");
    if (x.innerHTML === "Welcome to GeeksforGeeks")
    {
      x.innerHTML = "A computer science portal for geeks";
    }
    else
    {
      x.innerHTML = "Welcome to GeeksforGeeks";
    }
  }
</script>
</body></html>
```

GeeksforGeeks

Click on the button to change the text of a label

Welcome to GeeksforGeeks

Click Here!

GeeksforGeeks

Click on the button to change the text of a label

A computer science portal for geeks

Click Here!