

## Mouse Events

- onmouseover
- onmouseout
- onmousedown
- onmouseup
- onmousemove

Ex: onmouseover and onmouseout

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Events</title>
```

```
    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
  </head>
```

```
  <body class="container-fluid">
```

```
    <div class="mt-3">
```

```
      <marquee scrollamount="15" onmouseover="this.stop()"
onmouseout="this.start()">
```

```
        
```

```
        
```

```
        
```

```


</marquee>
</div>
</body>
</html>
```

Ex: onmousedown & onmouseup

```
<!DOCTYPE html>
<html>
  <head>
    <title>Events</title>
    <link rel="stylesheet"
href="../../node_modules/bootstrap/dist/css/bootstrap.css">
    <script>
      function ShowOffer(){
document.getElementById("pic").src="../../assets/offerbox.png";
      }
      function HideOffer(){
        document.getElementById("pic").src="../../assets/giftbox.png";
      }
    </script>
  </head>
  <body class="container-fluid">
```

```
<div class="mt-3">

  

</div>

</body>

</html>
```

Ex: onmousemove

```
<!DOCTYPE html>

<html>

  <head>

    <title>Events</title>

    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">

    <script>

      function Animate(e) {

        var pic = document.getElementById("pic");

        pic.style.position="fixed";

        pic.style.left = e.clientX + "px";

        pic.style.top = e.clientY + "px";

      }

    </script>

  </head>

  <body class="container-fluid" onmousemove="Animate(event)">
```

```
<div style="height: 1000px;">

</div>



</body>

</html>
```

## Key Events

- onkeyup
- onkeydown
- onkeypress

### *Event Properties:*

- keyCode
- charCode
- shiftKey
- ctrlKey
- altKey
- which

Ex:

```
<!DOCTYPE html>

<html>

  <head>

    <title>Events</title>

    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
<link rel="stylesheet" href="../node_modules/bootstrap-  
icons/font/bootstrap-icons.css">
```

```
<script>
```

```
function VerifyCaps(e){
```

```
    var msg = document.getElementById("msg");
```

```
    if(e.keyCode>=65 && e.keyCode<=90) {
```

```
        msg.style.display = "block";
```

```
    } else {
```

```
        msg.style.display = "none";
```

```
    }
```

```
}
```

```
var users = [
```

```
    {UserName: 'john'},
```

```
    {UserName: 'john12'},
```

```
    {UserName: 'john_nit'},
```

```
    {UserName: 'david'}]
```

```
;
```

```
function VerifyUser(){
```

```
    var username =
```

```
document.getElementById("txtName").value;
```

```
    var userMsg = document.getElementById("userMsg");
```

```
    for(var user of users) {
```

```
        if(user.UserName==username) {
```

```
            userMsg.innerHTML = "User Name Taken - Try  
Another";
```

```

        userMsg.className= "text-danger";
        break;
    } else {
        userMsg.innerHTML = "User Name Available";
        userMsg.className = "text-success";
    }
}
}
</script>
</head>
<body class="container-fluid">
    <fieldset>
        <legend>User Name</legend>
        <input type="text" onkeyup="VerifyUser()" class="form-
control" id="txtName">
        <div id="userMsg">
        </div>
        <legend>Password</legend>
        <input type="password" onkeypress="VerifyCaps(event)"
class="form-control" id="txtPwd">
        <div class="text-warning" id="msg" style="display: none;">
            <span class="bi bi-exclamation-triangle"></span>
            Warning : Caps is ON
        </div>

```

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

## Miscellaneous Events

- onclick
- ondblclick
- oncontextmenu
- onchange
- onblur
- onfocus
- oncut
- oncopy
- onpaste
- onsubmit
- onreset
- onload
- onselect
- onselectstart

## Ex: Double Click, Right Click, Select

```
<!DOCTYPE html>
<html>
  <head>
    <title>Events</title>
    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
<link rel="stylesheet" href="../node_modules/bootstrap-
icons/font/bootstrap-icons.css">

<script>

    function OpenImage() {
        window.open('../assets/shirt.jpg','Shirt','width=500
height=400');
    }

    function DisableRight() {
        document.oncontextmenu = function(){
            alert("Right Click Not Allowed");
            return false;
        }
    }

</script>

</head>

<body class="container-fluid" oncontextmenu="DisableRight()"
onselect="return false" onselectstart="return false">

    <div class="mt-4">

        <h2>Right Click Disabled on this page.</h2>

        

    </div>

</body>

</html>
```



Ex: cut, copy, paste

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Events</title>
```

```
    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
    <link rel="stylesheet" href="../node_modules/bootstrap-
icons/font/bootstrap-icons.css">
```

```
    <script>
```

```
  </script>
```

```
</head>
```

```
<body class="container-fluid">
```

```
  <div class="mt-4">
```

```
    <h3>Your Comments</h3>
```

```
    <textarea rows="5" cols="60" oncopy="alert('Copied to
Clipboard')" onpaste="alert('Inserted from Clipboard')"
oncut="alert('Removed and Copied to Clipboard')">
```

```
  </textarea>
```

```
</div>
```

```
</body>
```

```
</html>
```

## Onblur, onfocus

- Actions to perform when element gets focus or blur.

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Events</title>
```

```
    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
    <link rel="stylesheet" href="../node_modules/bootstrap-
icons/font/bootstrap-icons.css">
```

```
    <script>
```

```
      function ShowMessage(){
```

```
        document.getElementById("msg").style.display = "block";
```

```
      }
```

```
      function HideMessage(){
```

```
        document.getElementById("msg").style.display = "none";
```

```
        var txtName = document.getElementById("txtName").value;
```

```
        document.getElementById("txtName").value =
txtName.toUpperCase();
```

```
        document.getElementById("txtEmail").focus();
```

```
      }
```

```
    </script>
```

```
  </head>
```

```

<body class="container-fluid">
  <div class="mt-4">
    <fieldset>
      <legend>User Name</legend>
      <input type="text" onfocus="ShowMessage()"
onblur="HideMessage()" class="form-control" id="txtName">
      <div id="msg" style="display: none;">
        Name in Block Letters Only
      </div>
      <legend>Password</legend>
      <input type="password" id="txtPwd" class="form-control">
      <legend>Email</legend>
      <input type="email" id="txtEmail" class="form-control">
    </fieldset>
  </div>
</body>
</html>

```

### Onsubmit and onreset

- Events defined for **<form>** element.
- These events execute only for submit and reset button
  - <button> submit
  - <button type="submit">
  - <button type="reset">

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Events</title>
```

```
    <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
```

```
    <link rel="stylesheet" href="../node_modules/bootstrap-
icons/font/bootstrap-icons.css">
```

```
  <script>
```

```
    function PostData(){
```

```
      var data = {
```

```
        UserName:
```

```
document.getElementById("UserName").value,
```

```
        Password: document.getElementById("Password").value,
```

```
        Email: document.getElementById("Email").value,
```

```
        City: document.getElementById("lstCities").value
```

```
      };
```

```
      console.log(JSON.stringify(data));
```

```
      document.write("Form Data Submitted..");
```

```
    }
```

```
    function ResetForm(){
```

```
      alert("Form Will Reset");
```

```
    }
```

```
    function CityChanged(){
```

```
        document.getElementById("frmRegister").submit();
        PostData();
    }
</script>
</head>
<body class="container-fluid">
    <div class="mt-4">
        <form onsubmit="PostData()" onreset="ResetForm()"
id="frmRegister">
            <dl>
                <dt>User Name</dt>
                <dd><input type="text" id="UserName"></dd>
                <dt>Password</dt>
                <dd><input type="password" id="Password"></dd>
                <dt>Email</dt>
                <dd><input type="email" id="Email"></dd>
                <dt>Select City</dt>
                <dd>
                    <select id="lstCities" onchange="CityChanged()">
                        <option>Delhi</option>
                        <option>Hyd</option>
                        <option>Chennai</option>
                    </select>
                </dd>
            </dl>
        </form>
    </div>
</body>
</html>
```

```
        </dl>
        <button>Register</button>
        <button type="reset">Reset</button>
    </form>
</div>
</body>
</html>
```

## **Touch Events**

Ontouchstart

Ontouchend

Ontouchmove

Ontouchcancel

event.touches[0].clientX

event.touches[0].clientY

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Touch Event</title>
```

```
    <script>
```

```
      function ShoeTouched(){
```

```
        document.write(`
            Name: 'Nike Casuals' <br>
            Price: 5600.66 <br>
            Stock: Available
        `);
    }

    function ShirtTouched(){
        document.write(`
            Name: 'Shirt' <br>
            Price: 1600.66 <br>
            Stock: Available
        `);
    }
</script>
</head>
<body>
    <p>Touch Product Image</p>
    <div>
        
        
    </div>
</body>
```

```
</html>
```

Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Touch Event</title>
```

```
    <script>
```

```
      function MoveImage(e){
```

```
        var imgShirt = document.getElementById("imgShirt");
```

```
        imgShirt.style.position = "fixed";
```

```
        imgShirt.style.left = e.touches[0].clientX + "px";
```

```
        imgShirt.style.top = e.touches[0].clientY + "px";
```

```
      }
```

```
    </script>
```

```
  </head>
```

```
  <body ontouchmove="MoveImage(event)">
```

```
    
```

```
  </body>
```

```
</html>
```



Ex:

```
<!DOCTYPE html>
```

```
<html>
```

```
  <head>
```

```
    <title>Touch Event</title>
```

```
    <script>
```

```
      function Unlock(e){
```

```
        var btnUnlock = document.getElementById("btnUnlock");
```

```
        btnUnlock.style.position = "fixed";
```

```
        btnUnlock.style.left = e.touches[0].clientX + "px";
```

```
        if(Math.round(e.touches[0].clientX)>200) {
```

```
          document.write(
```

```
            ,
```

```
            
```

```
            ,
```

```
          );
```

```
        }
```

```
      }
```

```
    </script>
```

```
  </head>
```

```
  <body ontouchmove="Unlock(event)">
```

```
    <span id="btnUnlock" style="width: 200px; background-color:
    slategrey; color:white; padding: 10px;">Unlock >> </span>
```

```
  </body>
```

</html>

## Timer Events

setTimeout()

clearTimeout()

setInterval()

clearInterval()

Ex:

<!DOCTYPE html>

<html>

  <head>

    <script>

```
      function ShowTime(){
        var now = new Date();
        document.getElementById("msg").innerHTML =
now.toLocaleTimeString();
      }
      var time;
      function bodyload(){
        time = setInterval(ShowTime,1000);
      }
      function StartClick(){
```

```

        bodyload();
    }
    function StopClick(){
        clearInterval(time);
    }
</script>
</head>
<body onload="bodyload()">
    <h1 align="center" id="msg"></h1>
    <div align="center">
        <button onclick="StartClick()">Start</button>
        <button onclick="StopClick()">Stop</button>
    </div>
</body>
</html>

```

Ex: Slide Show

```

<!DOCTYPE html>
<html>
    <head>
        <link rel="stylesheet"
href="../node_modules/bootstrap/dist/css/bootstrap.css">
        <link rel="stylesheet" href="../node_modules/bootstrap-
icons/font/bootstrap-icons.css">

```

```
<script>
    var products = [
        {Name: "JBL Speaker", Photo: "../assets/speaker.jpg"},
        {Name: "EarPods", Photo: "../assets/earpods.jpg"},
        {Name: "Nike Casuals", Photo: "../assets/shoe.jpg"},
        {Name: "Lee Cooper Boot", Photo: "../assets/shoe1.jpg"},
        {Name: "Shirt", Photo: "../assets/shirt.jpg"},
        {Name: "Jeans", Photo: "../assets/jeans.jpg"},
    ]

    function GetProduct(index) {
        document.getElementById("lblName").innerHTML =
products[index].Name;

        document.getElementById("pic").src =
products[index].Photo;
    }

    function bodyload() {
        GetProduct(0);
    }

    var count = 0;

    function SlideShow(){
        count++;

        GetProduct(count);
    }

    var show;
```

```

function StartClick(){
    show = setInterval(SlideShow,5000);
    document.getElementById("lblStatus").innerHTML = "Slide
Show - Started";
}
function PauseClick(){
    clearInterval(show);
    document.getElementById("lblStatus").innerHTML = "Slide
Show - Paused";
}
</script>
</head>
<body class="container-fluid" onload="bodyload()">
<div class="card mt-3">
<div class="card-header text-center">
<h2 id="lblName"></h2>
<p id="lblStatus"></p>
</div>
<div class="card-body text-center">
<img width="80%" id="pic" height="350">
</div>
<div class="card-footer text-center">
<button class="btn btn-success" onclick="StartClick()">
<span class="bi bi-play-btn-fill"></span>

```

```
</button>
<button class="btn btn-danger" onclick="PauseClick()">
  <span class="bi bi-pause-btn-fill"></span>
</button>
</div>
</div>
</body>
</html>
```

## Browser Objects

- Browser objects provide set of properties and methods that are used to control the browser window and the page in window.
- JavaScript browser objects
  - Document
  - Navigator
  - Location
  - History
  - window

## Window Object

- It provides the properties and methods to control browser window like
  - open()
  - close()
  - print()

Syntax:

```
window.open()
```

window.close()

window.print()

## **Navigator Object**

- It provides set of properties and methods that are used to access information about browser like
  - Versions
  - Family
  - Plugins supported
  - MIME types supported
  - Language
  - Cookies enabled or not.
- Navigator Properties Methods
  - appName : Browser Family Name
  - appVersion : Browser Version
  - userAgent : Information about the platforms supported
  - language : Information about language used in browser
  - cookieEnabled : Returns cookie status.
  - plugins[] : Returns all plugins installed in browser.
  - mimeTypes[] : Returns all MIME types supported.

Ex:

```
<script>
```

```
function f1(){  
    var mimeTypes = navigator.mimeTypes;  
    for(var item of mimeTypes) {  
        document.write(item.type + "<br>");  
    }  
}
```

```
    }  
  }  
  f1();  
</script>
```



