

What Are Events in JavaScript?

An **event** in JavaScript is an action that happens in the browser. JavaScript can *listen* for these actions and respond to them.

Examples of events:

- Clicking a button
- Moving the mouse
- Typing on the keyboard
- Scrolling the page
- Loading the webpage
- Submitting a form

Events allow you to make web pages **interactive**.

How to Use Events in JavaScript

JavaScript provides **three main ways** to handle events.

1. Inline Event Handling (HTML attribute)

Writing the event directly inside the HTML element.

```
<button onclick="alert('Button clicked')">Click Me</button>
```

Simple, but not recommended for big projects.

2. Using JavaScript Property

Assigning a function to an event property.

```
<button id="btn">Click Here</button>

<script>
document.getElementById("btn").onclick = function () {
    alert("Button was clicked");
};
</script>
```

Works well, but it can only attach **one** event handler.

3. Using addEventListener() (Best Method)

The recommended and modern method.

```
<button id="btn">Click Me</button>

<script>
document.getElementById("btn").addEventListener("click", function () {
  alert("Button clicked using addEventListener()");
});
</script>
```

Benefits:

- You can attach **multiple** event handlers
 - Clean and professional
 - Works for all events
-

Common Event Types With Examples

Click Event

```
<button id="saveBtn">Save</button>

<script>
document.getElementById("saveBtn").addEventListener("click", function() {
  console.log("Save button clicked");
});
</script>
```

Mouse Events

Mouse Over

```
<div id="box" style="width:100px; height:100px; background:lightblue;"></div>

<script>
document.getElementById("box").addEventListener("mouseover", function () {
  console.log("Mouse is over the box");
});
</script>
```

Key Press Event

```
<input type="text" id="inputBox">

<script>
```

```
document.getElementById("inputBox").addEventListener("keydown", function () {
  console.log("Key pressed");
});
</script>
```

Change Event

```
<select id="cities">
  <option>Delhi</option>
  <option>Mumbai</option>
</select>

<script>
document.getElementById("cities").addEventListener("change", function () {
  console.log("Dropdown value changed");
});
</script>
```

Page Load Event

```
<script>
window.addEventListener("load", function () {
  console.log("Page fully loaded");
});
</script>
```

```
<!DOCTYPE html>

<html>
<head>
  <title>JavaScript Events Demo</title>
```

```
<style>
body {
  font-family: Arial;
  padding: 20px;
}
```

```
#box {
```

```
width: 150px;  
height: 150px;  
background: lightblue;  
margin-bottom: 20px;  
text-align: center;  
line-height: 150px;  
border-radius: 10px;  
transition: 0.3s;  
}  
  
#city {
```

```
#btn {  
padding: 10px 20px;  
background: green;  
color: white;  
border: none;  
cursor: pointer;  
border-radius: 5px;  
}
```

```
#nameInput {  
margin-top: 20px;  
padding: 8px;  
}
```

```
#nameInput {  
padding: 8px;  
margin-top: 20px;
```

```
width: 200px;  
}  
  
  
#formSection {  
    margin-top: 20px;  
}  
</style>  
  
  
</head>  
  
<body>  
  
  


# JavaScript Events Example

  
  
  


<!-- Click event -->



<button id="btn">Click Me</button>



<p id="clickMsg"></p>

  
  


<!-- Mouse events -->



<div id="box">Hover Me</div>



<p id="hoverMsg"></p>

  
  


<!-- Keydown event -->



<input type="text" id="nameInput" placeholder="Type something...">



<p id="keyMsg"></p>

  
  


<!-- Change event -->



<select id="city">


```

```
<option value="">Select City</option>
<option value="Delhi">Delhi</option>
<option value="Mumbai">Mumbai</option>
<option value="Kolkata">Kolkata</option>
</select>
<p id="cityMsg"></p>

<!-- Submit event -->
<div id="formSection">
<form id="myForm">
<input type="text" id="email" placeholder="Enter Email" required>
<button type="submit">Submit</button>
</form>
<p id="submitMsg"></p>
</div>

<script>
// Page Load Event
window.addEventListener("load", function () {
    console.log("Page loaded successfully");
});

// Click Event
document.getElementById("btn").addEventListener("click", function () {
    document.getElementById("clickMsg").textContent = "Button was clicked!";
});
```

```
// Mouse Events

let box = document.getElementById("box");

box.addEventListener("mouseover", function () {
    box.style.background = "orange";
    document.getElementById("hoverMsg").textContent = "Mouse is over the box";
});

box.addEventListener("mouseout", function () {
    box.style.background = "lightblue";
    document.getElementById("hoverMsg").textContent = "Mouse left the box";
});

// Keydown Event

document.getElementById("nameInput").addEventListener("keydown", function () {
    document.getElementById("keyMsg").textContent = "You pressed a key!";
});

// Change Event

document.getElementById("city").addEventListener("change", function () {
    let selectedCity = this.value;
    document.getElementById("cityMsg").textContent = "You selected: " + selectedCity;
});

// Form Submit Event

document.getElementById("myForm").addEventListener("submit", function (event) {
    event.preventDefault(); // prevent page refresh
```

```
let email = document.getElementById("email").value;  
document.getElementById("submitMsg").textContent = "Form submitted with email: " +  
email;  
});  
</script>  
  
</body>  
</html>
```