

# JavaScript

## Day 3

### JavaScript Events

#### ◆ What Are Events?

JavaScript **events** are actions or occurrences that happen in the browser, which your code can "listen" for and respond to.

✓ Events help us create **interactive** and **dynamic** web pages.

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#### ◆ Why Use Events?

Events allow developers to:

- React to user input (e.g., clicks, keystrokes)
  - Validate form inputs
  - Load dynamic content
  - Improve user experience with real-time feedback
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#### ◆ Syntax for Adding Events

There are two main ways to attach events to HTML elements:

##### 1. Inline (Not recommended)

```
<button onclick="sayHello()">Click Me</button>
```

##### 2. Using `addEventListener()` (Recommended)

```
element.addEventListener("event", function);
```

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#### 🖱 Mouse Events

| Event | Description                          |
|-------|--------------------------------------|
| click | Triggered when an element is clicked |

| Event     | Description                                  |
|-----------|--|
| dblclick  | When an element is double-clicked            |
| mouseover | When the mouse enters the area of an element |
| mouseout  | When the mouse leaves the area of an element |
| mousedown | When any mouse button is pressed down        |
| mouseup   | When the mouse button is released            |

### ✓ **Example:**

```
let button = document.getElementById('btn1');
button.addEventListener("click", () => {
    alert("You clicked the button!");
});
```

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## **Keyboard Events**

| Event    | Description                               |
|----------|---|
| keydown  | Fires when a key is pressed down          |
| keyup    | Fires when a key is released              |
| keypress | <i>(Deprecated)</i> — use keydown instead |

### ✓ **Example:**

```
document.addEventListener("keydown", function(event) {
    console.log("Key pressed: " + event.key);
});
```

💡 `event.key` gives the actual key character, like "a", "Enter", etc.

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## Form Events

| Event  | Description                                      |
|--------|--|
| submit | Triggered when the form is submitted             |
| change | When input value changes (e.g., dropdown, input) |
| focus  | When an input gains focus                        |
| blur   | When an input loses focus                        |



### Example:

```
let form = document.getElementById("myForm");
form.addEventListener("submit", function(event) {
    event.preventDefault(); // Prevent form from reloading page
    alert("Form submitted!");
});
```

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## Window Events

| Event  | Description                                   |
|--------|---|
| load   | When the entire page and resources are loaded |
| resize | When the browser window is resized            |
| scroll | When the user scrolls the page                |



### Example:

```
window.addEventListener("resize", function() {
    console.log("Width: " + window.innerWidth + " Height: " +
window.innerHeight);
```

});