

Exercise 1

1) What are JavaScript events?

JavaScript events are signals generated by the browser that indicate an action has occurred within a web page. These actions can result from user interaction such as clicking, typing, or submitting a form, or from browser behavior such as finishing loading or resizing the window. Event listeners are attached to elements so that when an event is triggered, a specified function executes in response.

2) Six Common JavaScript Events and Their Purpose

Event	Trigger Condition	Typical Use
click	Activated when a user clicks a mouse button or taps an element	Used with buttons, toggles, or links
dblclick	Activated when a user double-clicks an element	Used for zoom, edit, or special actions
mouseenter	Activated when the pointer enters an element	Used to highlight or show tooltips
mouseleave	Activated when the pointer leaves an element	Used to remove highlighting or hide tooltips
keydown	Activated when a key is pressed	Used for shortcuts, games, or validation during typing
submit	Activated when a form is submitted	Used for validation or controlling form submission

3) Code Examples: Calling a Function for Each Event

CLICK Event Example

```
<button id="buyBtn">Buy</button>
<script>
function handleBuyClick() {
    alert("Added to cart!");
}
document.getElementById("buyBtn").addEventListener("click",
handleBuyClick);
</script>
```

CS-222 Assignment 3

Alexander Goda

DBLCLICK Event Example

```
<div id="photo"
style="width:160px;height:100px;background:#cfe6ff;">Double-click
me</div>
<script>
function zoomPhoto() {
    console.log("Zooming in...");
}
document.getElementById("photo").addEventListener("dblclick",
zoomPhoto);
</script>
```

MOUSEENTER Event Example

```
<div id="card" style="padding:16px;border:1px solid #ccc;">Hover over
me</div>
<script>
function highlight() {
    document.getElementById("card").style.background = "#ffffcc";
}
document.getElementById("card").addEventListener("mouseenter",
highlight);
</script>
```

MOUSELEAVE Event Example

```
<div id="panel" style="padding:16px;border:1px solid #ccc;">Move the
mouse away</div>
<script>
function unhighlight() {
    document.getElementById("panel").style.background = "";
}
document.getElementById("panel").addEventListener("mouseleave",
unhighlight);
</script>
```

KEYDOWN Event Example

```
<input id="shortcut" placeholder="Press Ctrl+S here">
<script>
function handleKeydown(e) {
    if (e.ctrlKey && e.key.toLowerCase() === "s") {
        e.preventDefault();
        console.log("Saving...");
    }
}
document.getElementById("shortcut").addEventListener("keydown",
handleKeydown);
</script>
```

CS-222 Assignment 3
Alexander Goda

SUBMIT Event Example

```
<form id="signup">
  <input id="email" type="email" required placeholder="Email">
  <button>Create account</button>
</form>
<script>
function handleSignup(e) {
  e.preventDefault(); // stop page reload
  const email = document.getElementById("email").value.trim();
  if (!email) {
    alert("Email is required.");
    return;
  }
  console.log("Submitting signup for:", email);
}
document.getElementById("signup").addEventListener("submit",
handleSignup);
</script>
```