jQuery Events

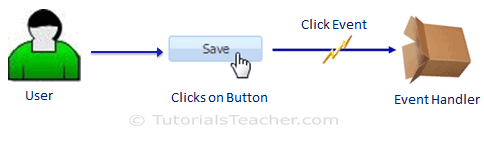
## What are Events?

## In most web applications, the user does some action to perform an operation. For example, user clicks on save button to save the edited data in a web page. Here, clicking on the button is a user's action, which triggers click event and click event handler (function) saves data.

Events are often triggered by the user's interaction with the web page, such as when a link or button is clicked, text is entered into an input box or textarea, selection is made in a select box, key is pressed on the keyboard, the mouse pointer is moved etc. In some cases, the Browser itself can trigger the events, such as the page load and unload events.

jQuery enhances the basic event-handling mechanisms by offering the events methods for most native browser events, some of these methods are ready(), click(), keypress(), focus(), blur(), change(), etc.

For example, to execute some JavaScript code when the DOM is ready, you can use the jQuery ready() method, like this:

[](https://www.tutorialsteacher.com/Content/images/jquery/jquery-event.png)Event

## In general, the events can be categorized into four main groups

## [Mouse events](https://www.tutorialrepublic.com/jquery-tutorial/jquery-events.php#mouse-events),

## [Keyboard events](https://www.tutorialrepublic.com/jquery-tutorial/jquery-events.php#keyboard-events),

## [Form events](https://www.tutorialrepublic.com/jquery-tutorial/jquery-events.php#form-events)

1. Document/Windows events

## Mouse Events

click()

<script>

$(document).ready(function(){

$("p").click(function(){

$(this).slideUp();

});

});

</script>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Executing a Function on Click Event in jQuery</title>

<script src="jquery-3.3.1.js"></script>

<style>

p{

padding: 20px;

font: 20px sans-serif;

background: khaki;

}

</style>

<script>

$(document).ready(function(){

$("p").click(function(){

$(this).slideUp();

});

});

</script>

</head>

<body>

<p>Click on me and I'll disappear.</p>

<p>Click on me and I'll disappear.</p>

<p>Click on me and I'll disappear.</p>

</body>

</html>

dblclick()

<script>

$(document).ready(function(){

$("p").dblclick(function(){

$(this).slideUp();

});

});

</script>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Executing a Function on Double-click Event in jQuery</title>

<script src="jquery-3.3.1.js"></script>

<style>

p{

padding: 20px;

font: 20px sans-serif;

background: khaki;

}

</style>

<script>

$(document).ready(function(){

$("p").dblclick(function(){

$(this).slideUp();

});

});

</script>

</head>

<body>

<p>Double-click on me and I'll disappear.</p>

<p>Double-click on me and I'll disappear.</p>

<p>Double-click on me and I'll disappear.</p>

</body>

</html>

hover()

<script>

$(document).ready(function(){

$("p").hover(function(){

$(this).addClass("highlight");

}, function(){

$(this).removeClass("highlight");

});

});

</script>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Executing a Function on Hover Event in jQuery</title>

<script src="jquery-3.3.1.js"></script>

<style>

p{

padding: 20px;

font: 20px sans-serif;

background: #f2f2f2;

}

p.highlight{

background: yellow;

}

</style>

<script>

$(document).ready(function(){

$("p").hover(function(){

$(this).addClass("highlight");

}, function(){

$(this).removeClass("highlight");

});

});

</script>

</head>

<body>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

</body>

</html>

mouseenter()

<script>

$(document).ready(function(){

$("p").mouseenter(function(){

$(this).addClass("highlight");

});

});

</script>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Executing a Function on Mouseenter Event in jQuery</title>

<script src="jquery-3.3.1.js"></script>

<style>

p{

padding: 20px;

font: 20px sans-serif;

background: #f2f2f2;

}

p.highlight{

background: yellow;

}

</style>

<script>

$(document).ready(function(){

$("p").mouseenter(function(){

$(this).addClass("highlight");

});

$("p").mouseleave(function(){

$(this).removeClass("highlight");

});

});

</script>

</head>

<body>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

</body>

</html>

mouseleave()

<script>

$(document).ready(function(){

$("p").mouseleave(function(){

$(this).removeClass("highlight");

});

});

</script>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>Executing a Function on Mouseleave Event in jQuery</title>

<script src="jquery-3.3.1.js"></script>

<style>

p{

padding: 20px;

font: 20px sans-serif;

background: #f2f2f2;

}

p.highlight{

background: yellow;

}

</style>

<script>

$(document).ready(function(){

$("p").mouseenter(function(){

$(this).addClass("highlight");

});

$("p").mouseleave(function(){

$(this).removeClass("highlight");

});

});

</script>

</head>

<body>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

<p>Place mouse pointer on me.</p>

</body>

</html>

**Keyboard Events**

## jQuery Event Methods

The jQuery library provides methods to handle DOM events. Most jQuery methods correspond to native DOM events.

The following table lists all jQuery methods and corresponding DOM events.

| Category | jQuery Method | DOM Event |
| --- | --- | --- |
| Form events | blur | onblur |
|  | change | onchange |
|  | focus | onfocus |
|  | focusin | onfocusin |
|  | select | onselect |
|  | submit | onsubmit |
| Keyboard events | keydown | onkeydown |
|  | keypress | onkeypress |
|  | keyup | onkeyup |
|  | focusout |  |
| Mouse events | click | onclick |
|  | dblclick | ondblclick |
|  | focusout |  |
|  | hover |  |
|  | mousedown | onmousedown |
|  | mouseenter | onmouseenter |
|  | mouseleave | onmouseleave |
|  | mousemove | onmousemove |
|  | mouseout | onmouseout |
|  | mouseover | onmouseover |
|  | mouseup | onmouseup |
|  | Toggle |  |
| Browser events | Error | onerror() |
|  | Resize | onresize |
|  | Scroll | onscroll |
| Document loading | Load | onload |
|  | Ready |  |
|  | Unload | onunload |

685.1K

Too old to learn programming? at 30? Or 40 or 50? No. But...

## Event Handling

To handle DOM events using jQuery methods, first get the reference of DOM element(s) using jQuery selector and invoke appropriate jQuery event method.

The following example shows how to handle button click event.

Example:Handle Button Click Event

$('#saveBtn').click(function () {

alert('Save button clicked');

});

<input type="button" value="Save" id="saveBtn" />

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-91)

In the above example, we first use id selector to get a reference of 'Save' button and then call click method. We have specified handler function as a callback function, which will be called whenever click event of Save button is triggered.

### Event Object

jQuery passes an [event object](https://api.jquery.com/category/events/event-object/) to every event handler function. The event object includes important properties and methods for cross-browser consistency e.g. target, pageX, pageY, relatedTarget etc.

Example: jQuery Event Object

$('#saveBtn').click(function (eventObj) {

alert('X =' + eventObj.pageX + ', Y =' + eventObj.pageY);

});

<input type="button" value="Save" id="saveBtn" />

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-92)

### *this* Keyword in Event Handler

**this** keyword in an event handler represents a DOM element which raised an event.

Example: this in Event Handler

$(':button').click(function (eventObj) {

alert(this.value + ' ' + this.type + ' clicked');

});

<input type="button" value="Save" id="saveBtn" />

<input type="button" value="Delete" id="delBtn" />

<input type="button" value="Clear" id="clearBtn" />

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-93)

### Hover Events

jQuery provides various methods for mouse hover events e.g. mouseenter, mouseleave, mousemove, mouseover, mouseout and mouseup.

Example: Hover Events

$('#myDiv').mouseenter(function (data) {

$(this).css('background-color','green');

});

$('#myDiv').mouseleave(function (data) {

$(this).css('background-color','red');

});

<div id="myDiv" style="width:100px;height:100px">

</div>

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-94)

You can use **hover()** method instead of handling mouseenter and mouseleave events separately.

Example: hover() Method

$('#myDiv').hover(function () {

$(this).css('background-color','green');

},

function () {

$(this).css('background-color','red');

});

<div id="myDiv" style="width:100px;height:100px">

</div>

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-95)

## Event Binding using on()

jQuery allows you to attach an event handler for one or more events to the selected elements using **on** method.

Internally all of the shorthand methods uses on() method. The on() method gives you more flexibility in event binding.

Syntax:

on(types, selector, data, fn )

* Types = One or more space-separated event types and optional namespaces
* Selector = selector string
* Data = data to be passed to the handler in event.data when an event is triggered.
* Fn = A function to execute when the event is triggered.

Example: Event Binding using on

$('#saveBtn').on('click',function () {

alert('Save Button clicked');

});

<input type="button" value="Save" id="saveBtn" />

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-96)

You can use selector to filter the descendants of the selected elements that trigger the event.

Example: Event Binding using on

$('#myDiv').on('click',':button', function () {

alert('Button clicked');

});

<div id="myDiv" >

<input type="button" value="Save" id="saveBtn" />

<input type="button" value="Add" id="addBtn" />

</div>

<input type="button" value="Delete" id="delBtn" />

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-97)

In the above example, we specify ':button' selector. So click event triggered by buttons in <div> tag whose id is myDiv, will only be handled.

## Binding Multiple Events

You can also specify multiple event types separated by space.

Example: Multiple Events Binding

$( 'myDiv' ).on('mouseenter mouseleave', function() {

$(this).text('The mouse entered or left from the div' );

});

<div id="myDiv" style="width:100px;height:100px">

</div>

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-98)

### Specify Named Function as Event Handler

You can create separate functions and specify that as a handler. This is useful if you want to use the same handler for different events or events on different elements.

Example:Binding Named Function to Event

var mouseHandler = function() {

alert( "The mouse entered" );

};

$('#myDiv').on('mouseenter', mouseHandler);

<div id="myDiv" style="width:100px;height:100px">

</div>

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-99)

jQuery on() method is replacement of live() and delegate() method.

## Event Bubbling

The following example demonstrates event bubbling in jQuery.

Example:Event Bubbling

$('div').click(function (event) {

alert( event.target.tagName + ' clicked');

});

<div>

<p>

<span>This is span.</span>

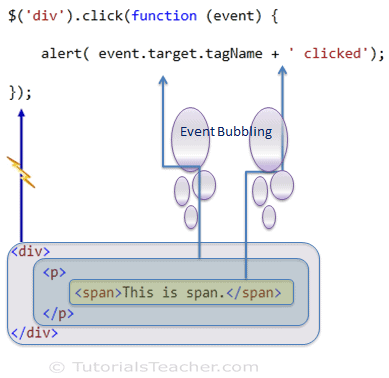
</p>

</div>

[Try it](https://www.tutorialsteacher.com/codeeditor?cid=jquery-901)

As you can see in the above example, we have handled click event of <div> element in jQuery. So if you click on div, it will display alert message 'DIV clicked'. However, if you click on span, still it will popup alert message SPAN clicked even though we have not handled click event of <span>. This is called event bubbling. Event bubbles up to the **document** level in DOM hierarchy till it finds it.

The following figure illustrates event bubbling.

[](https://www.tutorialsteacher.com/Content/images/jquery/jquery-event-bubbling.png)jQuery Event Bubbling

Event refers to the actions performed by the site visitor during their interactivity with the website (or webpage).There can be various types of events such as

User clicks on the button.

User moves mouse pointer over an image.

User pressed any key from keyboard, etc.

Some of the events methods are given

|  |  |
| --- | --- |
| Method Name | Description |
| click() | The click() method contains an function for event handling which gets invoked when the user clicks on the particular HTML element. |
| dblclick() | The dblclick() method contains an function for event handling which gets invoked when the user double clicks on the particular HTML element. |
| mouseenter() | The mouseenter() method contains an function for event handling which gets invoked when mouse pointer enters the particular HTML element. |
| mouseleave() | The mouseleave() method contains an function for event handling which gets invoked when mouse pointer is removed from the particular HTML element which was selected earlier. |
| mousedown() | The mousedown() method contains an function for event handling which gets invoked when mouse left, right or middle button is pressed while the mouse pointer is over the HTML element. |
| mouseup() | The mouseup() method contains an function for event handling which gets invoked when mouse left, right or middle button is released while the mouse pointer is over the HTML element. |
| hover() | The hover() method contains an function for event handling which gets invoked when mouse pointer enter and leaves the HTML element. It is a combination of mouseenter() and mouseleave() methods. |

**Get and Set Methods:**

jQuery has various methods to get the value of an attribute and set the attribute to specific value.There methods are powerful enough to the change the website content and its style. Some of them are:

* 1. **text() –** This method is used get or set the text content of selected HTML element.
  2. **html() –** This method is used get or set the content of selected elements (including HTML elements).
  3. **val() –** This method is used get or set the value of various form fields in the webpage.
  4. **attr() –** This method is used get or set the value of various attributes in the webpage.
  5. **css() –** This method is used get or set the value of various CSS properties in the webpage.

<!DOCTYPE html>

<html>

<head>

<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<style type="text/css">

#e5 {

width: 100px;

height: 100px;

border-radius: 0px;

background-color: aqua;

}

</style>

</head>

<body>

<p id="e1">Welcome.</p>

<p id="e2">Learn and Explore</p>

<p>

<input type="text" id="e3" value="jQuery is powerful!" />

</p>

<p id="e4" align="left">Geeks for Geeks</p>

<p>

<div id="e5"></div>

</p>

<button id="gfg1">Change Text</button>

<button id="gfg2">Change HTML</button>

<button id="gfg3">Change Value</button>

<button id="gfg4">Change Alignment</button>

<button id="gfg5">Change Shape</button>

<script type="text/javascript">

$("#gfg1").click(function() {

$("#e1").text("Geeks for Geeks");

});

$("#gfg2").click(function() {

$("#e2").html("<b>Enrich your Knowledge.</b>");

});

$("#gfg3").click(function() {

$("#e3").val("jQuery at Geeks for Geeks");

});

$("#gfg4").click(function() {

$("#e4").attr("align", "center");

});

$("#gfg5").click(function() {

$("#e5").css("border-radius", "50px");

});

</script>

</body>

</html>

**jQuery \* Selector**

The jQuery **\* selector** selects all the elements in the document, including HTML, body, and head. If the \* selector is used together with another element then it selects all child elements within the element used.

**Syntax:**

$("\*")

**Parameters:**

* **\*:**This parameter is used to select all elements.

**Example 1:** Selects all element and change background color.

<!DOCTYPE html>

<html>

<head>

<script src=

"https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<script>

$(document).ready(function () {

$("\*").css("background-color",

"lightgreen");

});

</script>

</head>

<body>

<center>

<h1>Welcome to geeksforgeeks

</h1>

<p>My name is akash.</p>

<p>I live in mathura.</p>

<p>My best friend is ajay.</p>

<p>Who is your favourite:</p>

<ul type="square">

<li>virat</li>

<li>akshay</li>

</ul>

</center>

</body>

</html>

**Example 2:** Selects all element and change background color.

<!DOCTYPE html>

<html>

<head>

<script src=

"https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<script>

$(document).ready(function () {

$("\*").css("background-color",

"green");

});

</script>

</head>

<body>

<h1>GeeksForGeeks</h1>

<p>cricket is religion in india</p>

<p>sachin is god of cricket.</p>

<p>records:</p>

<ul type="circle">

<li>100 centuries</li>

<li>highest run scorer</li>

</ul>

</body>

</html>

**jQuery #id Selector**

The **#id selector** specifies an id for an element to be selected. It should not begin with a number and the id attribute must be unique within a document which means it can be used only one time.

**Syntax:**$("#id")

**Parameter:**

**id:** An element’s specific id.

<!DOCTYPE html>

<html>

<head>

<script src=

"https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<script>

$(document).ready(function () {

$("#Geeks").css("background-color", "red");

});

</script>

</head>

<body>

<h1>GEEKS FOR GEEKS</h1>

<p id="Geeks">jQuery|#id selector</p>

</body>

</html>

<!DOCTYPE html>

<html lang="en">

<head>

<meta charset="utf-8">

<title>ID</title>

<style>

div {

width: 100px;

height: 100px;

float: left;

padding: 10px;

margin: 10px;

background-color: pink;

}

</style>

<script src="https://code.jquery.com/jquery-1.10.2.js">

</script>

</head>

<body>

<div id="DIV1">

<p>id="DIV1"</p>

</div>

<div id="DIV2">id="DIV2"</div>

<script>

$("#DIV2").css("border",

"2px solid yellow");

</script>

</body>

</html>

**JQuery Multiple ID selectors**

Given an HTML document and the task is to select the elements with different ID’s at the same time using JQuery.

**Approach:**

* Select the ID’s of different element and then use each() method to apply the CSS property on all selected ID’s element.
* Then use css() method to set the background color to pink to all selected elements.
* Display the text which indicates the multiple ID selectors.

**Example 1:**In this example, the elements of different ID’s are selected and background color of these elements are changed.

<!DOCTYPE HTML>

<html>

<head>

<title>

JQuery | Multiple ID selectors

</title>

<style>

#GFG\_DIV {

background: green;

height: 100px;

width: 200px;

margin: 0 auto;

color: white;

}

</style>

<script src =

"https://ajax.googleapis.com/ajax/libs/jquery/3.4.0/jquery.min.js">

</script>

</head>

<body style = "text-align:center;">

<h1 style = "color:green;" >

GeeksForGeeks

</h1>

<p id = "GFG\_UP" style =

"font-size: 19px; font-weight: bold;">

</p>

<div id = "GFG\_DIV">

This is Div box.

</div>

<br>

<button onClick = "GFG\_Fun()">

click here

</button>

<p id = "GFG\_DOWN" style =

"color: green; font-size: 24px; font-weight: bold;">

</p>

<script>

$('#GFG\_UP').text("Click on button to select multiple"

+ " ID's and change their background-color");

function GFG\_Fun() {

$("#GFG\_UP, #GFG\_DIV, #GFG\_DOWN").each(function(){

$(this).css("background-color", "pink");

});

$('#GFG\_DOWN').text("Background-color of all "

+ "elements is changed.");

}

</script>

</body>

</html>

**Example 2:**In this example, the elements of different ID’s are selected and text color of these elements are changed.

<!DOCTYPE HTML>

<html>

<head>

<title>

JQuery | Multiple ID selectors

</title>

<style>

#GFG\_DIV {

background: green;

height: 100px;

width: 200px;

margin: 0 auto;

color: white;

}

</style>

<script src =

"https://ajax.googleapis.com/ajax/libs/jquery/3.4.0/jquery.min.js">

</script>

</head>

<body style = "text-align:center;">

<h1 style = "color:green;" >

GeeksForGeeks

</h1>

<p id = "GFG\_UP" style =

"font-size: 19px; font-weight: bold;">

</p>

<div id = "GFG\_DIV">

This is Div box.

</div>

<br>

<button onClick = "GFG\_Fun()">

click here

</button>

<p id = "GFG\_DOWN" style =

"color: green; font-size: 24px; font-weight: bold;">

</p>

<script>

$('#GFG\_UP').text("Click on button to select multiple"

+ "ID's and change their Text color");

function GFG\_Fun() {

$("#GFG\_UP, #GFG\_DIV, #GFG\_DOWN").each(function(){

$(this).css("color", "blue");

});

$('#GFG\_DOWN').text("Text color of all elements is "

+ "changed.");

}

</script>

</body>

</html>

**jQuery .class Selector**

The **.class** selector specifies the class for an element to be selected. It should not begin with a number. It gives styling to several HTML elements.

**Syntax:** $(".class")

**Parameter:**

* **class:** This parameter is required to specify the class of the elements to be selected.

<!DOCTYPE html>

<html>

<head>

<script src=

"https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<script>

$(document).ready(function () {

$(".GEEKS").css("background-color", "pink");

});

</script>

</head>

<body>

<p class="GEEKS">Geeks For Geeks</p>

<span class="GEEKS">jQuery|.class selector

</span>

</body>

</html>

**Example 2:**

<!DOCTYPE html>

<html>

<head>

<script src=

"https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js">

</script>

<script>

$(document).ready(function () {

$(".GEEKS").css("background-color", "orange");

});

</script>

</head>

<body>

<div style="border:2px solid red" class="GEEKS">

Geeks For Geeks

</div>

<br>

<br>

<span class="GEEKS">jQuery|.class selector

</span>

</body>

</html>

Complete

https://www.geeksforgeeks.org/jquery-class-selector/