

jQuery Event Methods

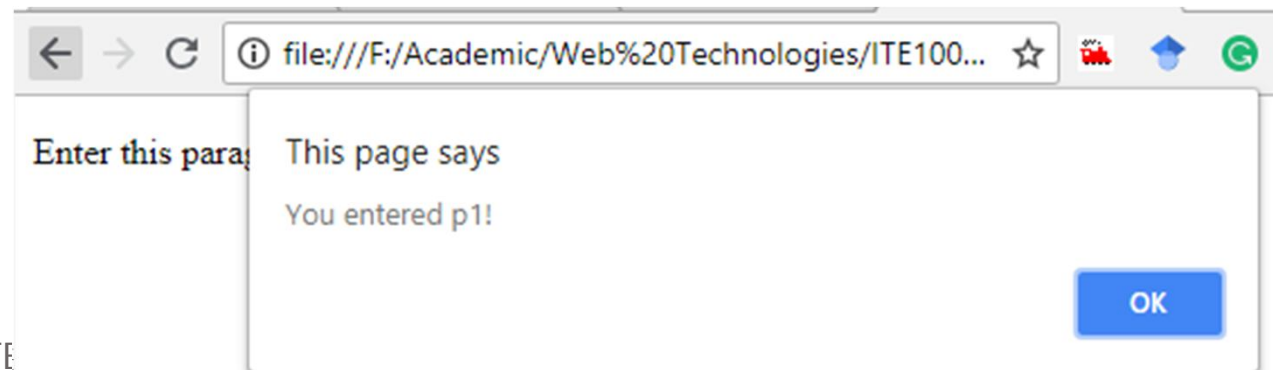
- All the different visitor's actions that a web page can respond to are called events.
- An event represents the precise moment when something happens. "The keypress event is fired, the moment you press a key".

Mouse Events	Keyboard Events	Form Events	Document/Window Events
click	keypress	submit	load
dblclick	keydown	change	resize
mouseenter	keyup	focus	scroll
mouseleave		blur	unload

Event Methods

- **click()**-The function is executed when the user clicks on the HTML element.
- **dblclick()**-The function is executed when the user double-clicks on the HTML element
- **mouseenter()**-The function is executed when the mouse pointer enters the HTML element
- **mouseleave()**-The function is executed when the mouse pointer leaves the HTML element
- **mousedown()**-The function is executed, when the left, middle or right mouse button is pressed down, while the mouse is over the HTML element
- **mouseup()**-The function is executed, when the left, middle or right mouse button is released, while the mouse is over the HTML element
- **hover()**-takes two functions and is a combination of the `mouseenter()` and `mouseleave()` methods
- **focus()**-The function is executed when the form field gets focus
- **blur()**-The function is executed when the form field loses focus
- **on()**-method attaches one or more event handlers for the selected elements

```
<html><head><script  
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.  
js"></script>  
<script>  
$(document).ready(function(){  
    $("#p1").mouseenter(function(){  
        alert("You entered p1!");  
    });  
}); </script></head><body>  
<p id="p1">Enter this paragraph.</p></body></html>
```



```
<html><head><script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script
><script>
$(document).ready(function(){
    $("p").on({
        mouseenter: function(){
            $(this).css("background-color", "lightgray");
        },
        mouseleave: function(){
            $(this).css("background-color", "lightblue");
        },
        click: function(){
            $(this).css({"background-color":"yellow","font-size":"200%"});
        }    });});
</script></head><body><p>Click or move the mouse pointer over this
paragraph.</p></body></html>
```

Click or move the mouse pointer over this paragraph.

jQuery Effects - Hide and Show

```
$("#hide").click(function(){  
    $("p").hide();  
});
```

If you click on the "Hide" button, I will disappear.

Hide

Show

```
$("#show").click(function(){  
    $("p").show();  
});
```

Hide

Show

```
$("#button").click(function(){  
    $("p").hide(1000);  
});
```

If you click on the "Hide" button, I will disappear.

Hide

Show

The optional speed parameter specifies the speed of the hiding/showing, and can take the following values: "slow", "fast", or milliseconds.

jQuery Effects - Toggle

```
<html> <head> <script  
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.j  
s"></script> <script>  
$(document).ready(function(){  
    $("button").click(function(){  
        $("p").toggle();  
    }); });  
</script> </head> <body>  
<button>Toggle between hiding and showing the paragraphs</button>  
<p>This is a paragraph with little content.</p> <p>This is another  
small paragraph.</p>  
</body> </html>
```

Toggle between hiding and showing the paragraphs

This is a paragraph with little content.

This is another small paragraph.

Toggle between hiding and showing the paragraphs

Toggle between hiding and showing the paragraphs

This is a paragraph with little content.

This is another small paragraph.

jQuery Effects - Fading

- **fadeIn()** method is used to fade in a hidden element

```
$("#button").click(function(){  
    $("#div1").fadeIn();  
    $("#div2").fadeIn("slow");  
    $("#div3").fadeIn(3000); });
```

- **fadeOut()** method is used to fade out a visible element

```
$("#button").click(function(){  
    $("#div1").fadeOut();  
    $("#div2").fadeOut("slow");  
    $("#div3").fadeOut(3000); });
```

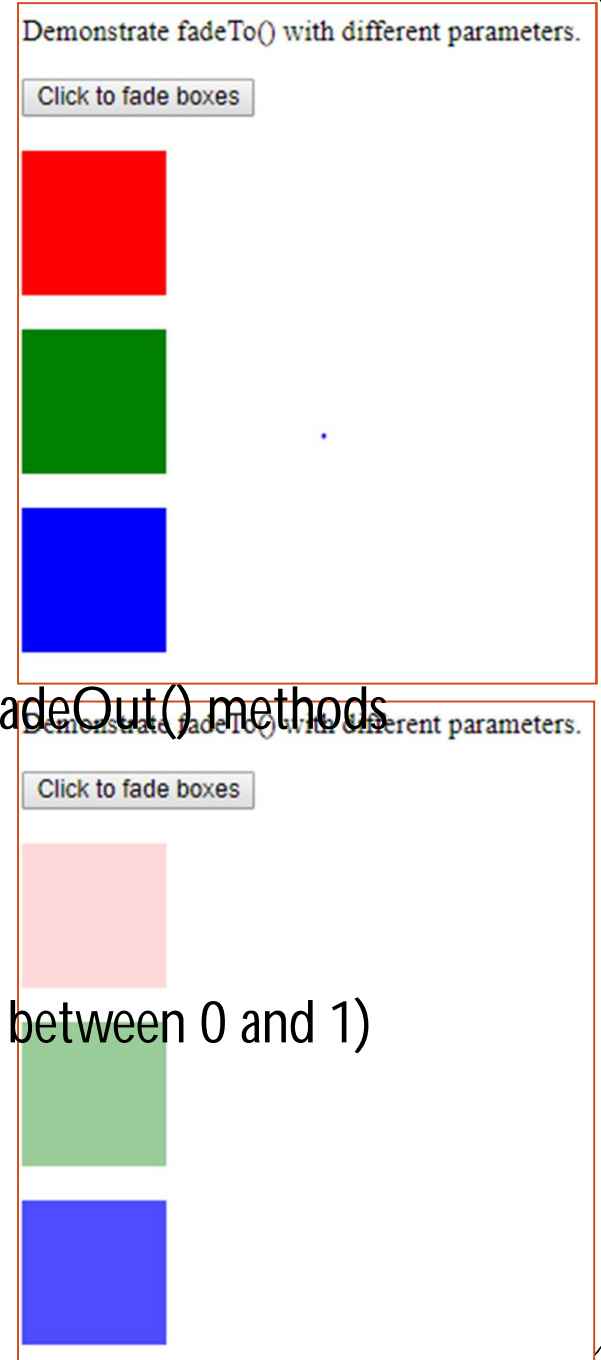
- **fadeToggle()** method toggles between the fadeIn() and fadeOut() methods

```
$("#button").click(function(){  
    $("#div1").fadeToggle();  
    $("#div2").fadeToggle("slow");  
    $("#div3").fadeToggle(3000); });
```

- **fadeTo()** method allows fading to a given opacity (value between 0 and 1)

```
$("#button").click(function(){  
    $("#div1").fadeTo("slow", 0.15);  
    $("#div2").fadeTo("slow", 0.4);  
    $("#div3").fadeTo("slow", 0.7); });
```

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jQuery Effects - Sliding

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

```
$(document).ready(function(){  
    $("#flip").click(function(){  
        $("#panel").slideDown("slow");  
    });});</script>
```

```
<style>  
#panel, #flip {  
    padding: 5px;  
    text-align: center;  
    background-color: #e5eccc;  
    border: solid 1px #c3c3c3;}
```

```
#panel {  
    padding: 50px; display: none;}
```

```
</style></head><body> <div id="flip">Click to slide down panel</div>  
<div id="panel">Hello world!</div></body></html>
```

Click to slide down panel

Click to slide down panel

Hello world!

slideDown()
slideUp()
slideToggle()

jQuery Effects - Animation

- The jQuery animate() method is used to **create custom animations**.
- By default, all HTML elements have a static position, and cannot be moved. To manipulate the position, remember to **first set the CSS position property of the element to relative, fixed, or absolute!**

```
$("#button").click(function(){  
    $("#div").animate({top: '250px'}); });
```

- multiple properties can be animated at the same time

```
$("#button").click(function(){  
    $("#div").animate({  
        opacity: '0.5',  
        height: '150px',  
        width: '150px'  
    });});
```

```
$(selector).animate({params}, speed, callback);
```

- It is also possible to **define relative values** (the value is then relative to the element's current value). This is done by putting += or -= in front of the value.

```
$("#button").click(function(){  
    $("#div").animate({  
        left: '250px',  
        height: '+ =150px',  
        width: '+ =150px'  
    });});
```

- You can even specify a property's animation value as "show", "hide", or "toggle"

```
$("#button").click(function(){  
    $("#div").animate({  
        height: 'toggle'  
    });});
```

- **Uses Queue Functionality**

- This means that if you write multiple `animate()` calls after each other, jQuery creates an "internal" queue with these method calls. Then it runs the animate calls ONE by ONE.

```
$("#button").click(function(){  
    var div = $("#div");  
    div.animate({height: '300px', opacity: '0.4'}, "slow");  
    div.animate({width: '300px', opacity: '0.8'}, "slow");  
    div.animate({height: '100px', opacity: '0.4'}, "slow");  
    div.animate({width: '100px', opacity: '0.8'}, "slow"); });
```

- The example below first moves the `<div>` element to the right, and then increases the font size of the text.


```
$("#button").click(function(){  
    var div = $("#div");  
    div.animate({left: '100px'}, "slow");  
    div.animate({fontSize: '3em'}, "slow"); });
```

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Move Opacity Relative Toggle Multiple Font

By default, all HTML elements have a static position, and cannot be moved. To manipulate the position, remember to first set the CSS position property of the element to relative, fixed, or absolute!

Mareeswari

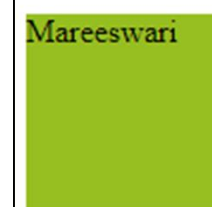


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By default, all HTML elements have a static position, and cannot be moved. To manipulate the position, remember to first set the CSS position property of the element to relative, fixed, or absolute!

Mareeswari




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Move Opacity Relative Toggle Multiple Font

By default, all HTML elements have a static position, and cannot be moved. To manipulate the position, remember to first set the CSS position property of the element to relative, fixed, or absolute!

Mareeswari



jQuery stop() Method

`$(selector).stop(stopAll,goToEnd);`

- The jQuery stop() method is used to stop an animation or effect before it is finished.
- The stop() method works for all jQuery effect functions, including sliding, fading and custom animations.

```
$(document).ready(function(){  
    $("#flip").click(function(){  
        $("#panel").slideDown(5000);  
    });  
    $("#stop").click(function(){  
        $("#panel").stop();  
    });});
```

Stop sliding

Click to slide down panel

Hello world!

Stop sliding

Click to slide down panel

Hello world!

jQuery Callback Functions

- JavaScript statements are executed line by line. However, with effects, the **next line of code can be run even though the effect is not finished**. This can create errors. To prevent this, you can create a callback function. A **callback function is executed after the current effect is 100% finished**.
- ```
$("#button").click(function(){
 $("#p").hide("slow", function(){
 alert("The paragraph is now hidden");
 });});
```

***callback***
- ```
$("#button").click(function(){  
    $("#p").hide(1000);  
    alert("The paragraph is now hidden");  
});
```

without callback

jQuery Method Chaining

- Chaining allows us to run multiple jQuery methods (on the same element) within a single statement.
- The following example chains together the `css()`, `slideUp()`, and `slideDown()` methods. The "p1" element first changes to red, then it slides up, and then it slides down:

```
<html><head><script  
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script><script>  
$(document).ready(function(){  
    $("button").click(function(){  
        $("#p1").css("color", "red").slideUp(2000).slideDown(2000);  
    });});</script></head><body>  
<p id="p1">jQuery is fun!!</p><br><br><br>  
<button>Click me</button></body></html>
```

jQuery DOM Manipulation

- **DOM = Document Object Model**

The DOM defines a standard for accessing HTML and XML documents: *"The W3C Document Object Model (DOM) is a platform and language-neutral interface that allows programs and scripts to dynamically access and update the content, structure, and style of a document."*

- Three simple, but useful, jQuery methods for DOM manipulation are:
 - `text()` - Sets or returns the text content of selected elements
 - `html()` - Sets or returns the content of selected elements (including HTML markup)
 - `val()` - Sets or returns the value of form fields


```

<html> <head> <script
src="https://ajax.googleapis.com/ajax/libs/jquery
/3.3.1/jquery.min.js"></script> <script>
$(document).ready(function(){
    $("#btn1").click(function(){
        alert("Text: " + $("#test").text());    });
    $("#btn2").click(function(){
        alert("HTML: " + $("#test").html());    });
    $("#btn3").click(function(){
        alert("Value: " + $("#t1").val());    });
});</script></head><body>
<p id="test">This is some <b>bold</b> text in a paragraph.</p>
<button id="btn1">Show Text</button>
<button id="btn2">Show HTML</button>
<p>Name: <input type="text" id="t1" value="Mickey Mouse"></p>
<button id="btn3">Show Value</button></body></html>

```

This page says

Text: This is some bold text in a paragraph.

OK

This page says

HTML: This is some `bold` text in a paragraph.

OK

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This is some **bold** text in a paragraph.

Show Text

Show HTML

Name:

Show Value

This page says

Value: Mareeswari

OK

- The **jQuery attr() method** is used to get attribute values.
- The following example demonstrates how to get the value of the href attribute in a link:

```
<html><head><script  
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script><script>  
$(document).ready(function(){  
    $("button").click(function(){  
        alert($("#w3s").attr("href"));  
    });  
});  
</script></head><body>  
<a href="https://www.w3schools.com" id="w3s">  
W3Schools.com</a>  
<button>Show href Value</button></body>
```



Add new HTML content

jQuery methods that are used to add new content:

- `append()` - Inserts content at the end of the selected elements
- `prepend()` - Inserts content at the beginning of the selected elements
- `after()` - Inserts content after the selected elements
- `before()` - Inserts content before the selected elements

- `$("p").append("Some appended text.");`
- `$("p").prepend("Some prepended text.");`
- `$("img").after("Some text after");`
- `$("img").before("Some text before");`

Adding several elements

```
function appendText() {  
    // Create element with HTML  
    var txt1 = "<p>Text.</p>";  
    // Create with jQuery  
    var txt2 = $("<p></p>").text("Text.");  
    // Create with DOM  
    var txt3 = document.createElement("p");  
    txt3.innerHTML = "Text.";  
    // Append the new elements  
    $("body").append(txt1, txt2, txt3);  
}
```

Adding several elements

```
function afterText() {  
    var txt1 = "<b>I </b>"; // Create element with HTML  
    // Create with jQuery  
    var txt2 = $("<i></i>").text("love ");  
    // Create with DOM  
    var txt3 = document.createElement("b");  
    txt3.innerHTML = "jQuery!";  
    // Insert new elements after <img>  
    $("img").after(txt1, txt2, txt3);  
}
```

Remove Elements/Content

To remove elements and content, there are mainly two jQuery methods:

- `remove()` - Removes the selected element (and its child elements)

```
$("#div1").remove();
```

- `empty()` - Removes the child elements from the selected element

```
$("#div1").empty();
```


Display JSON data in Table Format

```
<html><head><script
src="https://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
<style> #mytable,td{ border:1px solid blue;}</style> <script>
$(document).ready(function () {
var obj=[ { item : "001",    name : "apple",    category : "fruit",    color : "red"  },
    {    item : "002",    name : "melon",    category : "fruit",    color : "green"  },
    {    item : "003",    name : "banana",    category : "fruit",    color : "yellow"  } ]
var tbl=$("<table/>").attr("id","mytable"); → table creation at dynamically
$("#div1").append(tbl);
for(var i=0;i<obj.length;i++) {  var tr="<tr>";
    var td1="<td>"+obj[i]["item"]+"</td>";
    var td2="<td>"+obj[i]["name"]+"</td>";
    var td3="<td>"+obj[i]["color"]+"</td></tr>";
    $("#mytable").append(tr+td1+td2+td3);  }}) </script> </head><body>
<div id="div1"> </div></body></html>
```

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001	apple	red
002	melon	green
003	banana	yellow

EXERCISE

1. Use a jQuery method to hide the `<p>` element when it is clicked on.
2. Use a jQuery method to hide the `<p>` element when it is clicked on. The speed should be "slow".
3. There is a hidden `<p>` element in the document. Use a jQuery method to show the `<p>` element with a click of a button.
4. Toggle between hiding and showing the `<p>` element when you click on the "Toggle" button.
5. Use a jQuery method to slide up the `<div>` element. The duration of the effect should be "slow".



jQuery post form data using .ajax() method

information submit sucessfully.

Name	E-mail	Password
Test User	testuser@gmail.com	2154741247

Exercise

- Develop a quiz application using JQuery methods. The application should be developed in such a way that after the user attempted a quiz question, the answer along with the explanation should be displayed when the user clicks the answer button. Use sliding methods to develop the same.
- Develop a animated application using JQuery, the application should be developed in such a way that the user pressed the button, the object along with text should be move from left to right, right to left , top to bottom and bottom to top with particular set of intervals after completing the task it should be hide.

Exercise

- Use jQuery selectors to identify elements with these properties in a hypothetical page:
 - All p tags that have no children, but only if they don't have a class of ignore
 - Any element with the text "REPLACE_ME" in it.
 - All div tags with a child that has a class of special
 - All heading elements (h1, h2, h3, h4, h5, h6)
 - Every other visible li.Use the DOM API to target the #square and periodically change its position in a random direction. Use jQuery selectors instead of the DOM API.