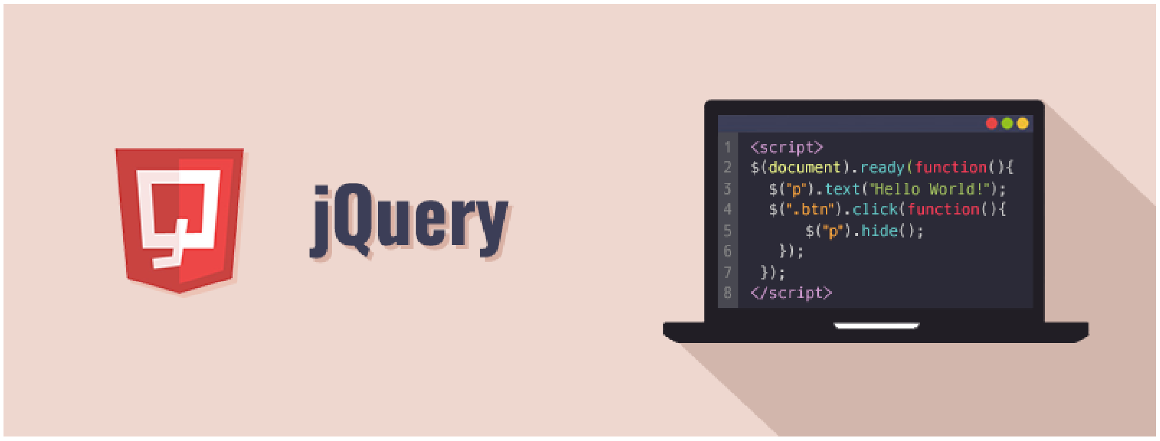
jQuery Tutorial

jQuery is a powerful and widely used JavaScript library to simplify common web scripting task.



```
<script>
$(document).ready(function(){
  $("p").text("Hello World!");
  $(".btn").click(function(){
      $("p").hide();
   });
 });
</script>
```

jQuery is a fast, lightweight, and feature-rich JavaScript library that is based on the principle "*write less, do more*". It's easy-to-use APIs makes the things like HTML document traversal and manipulation, event handling, adding animation effects to a web page much simpler that works seamlessly across all the major browsers like Chrome, Firefox, Safari, Internet Explorer, etc.

jQuery also gives you the ability to create an Ajax based application in a quick and simple way. Big companies like Google, Microsoft and IBM are using the jQuery for their applications. So you can easily understand how popular and powerful the jQuery is?

jQuery was originally created by John Resig in early 2006. The jQuery project is currently run and maintained by a distributed group of developers as an open-source project.

What You Can Do with jQuery

There are lot more things you can do with jQuery.

- You can easily select elements to perform manipulation.
- You can easily create effect like show or hide elements, sliding transition, and so on.
- You can easily create complex CSS animation with fewer lines of code.
- You can easily manipulate DOM elements and their attributes.
- You can easily implement Ajax to enable asynchronous data exchange between client and server.
- You can easily traverse all around the DOM tree to locate any element.
- You can easily perform multiple actions on an element with a single line of code.
- You can easily get or set dimensions of the HTML elements.

The list does not end here, there are many other interesting things that you can do with jQuery. You will learn about all of them in detail in upcoming chapters.

Advantages of Using jQuery

If you're not familiar with jQuery, you might be wondering what makes jQuery so special. There are several advantages why one should opt for jQuery:

- **Save lots of time** — You can save lots of time and efforts by using the jQuery inbuilt effects and selectors and concentrate on other development work.

- **Simplify common JavaScript tasks** — jQuery considerably simplifies the common JavaScript tasks. Now you can easily create feature rich and interactive web pages with fewer lines of codes, a typical example is implementing Ajax to update the content of a page without refreshing it.
- **Easy to use** — jQuery is very easy to use. Anybody with the basic working knowledge of HTML, CSS and JavaScript can start development with jQuery.
- **Compatible with browsers** — jQuery is created with modern browsers in mind and it is compatible with all major modern browsers such as Chrome, Firefox, Safari, Internet Explorer, etc.
- **Absolutely Free** — And the best part is, it is completely free to download and use.

Tip: In JavaScript, you often need to write several lines of code to select an element in an HTML document, but with jQuery robust selector mechanism you can traverse the DOM tree and select elements in an easy and efficient manner to perform any manipulation.

What This Tutorial Covers

This jQuery tutorial series covers all the features of the jQuery, including its selector mechanism, event handling system, as well as, effect methods to create interactive user interface features like showing and hiding elements, animating the elements on a web page, etc.

Later you will see some other interesting features of the jQuery such as chaining multiple methods, as well as how to perform common DOM manipulation task such as get or set contents and values of an HTML element on a web page, add or remove elements or their attributes, get and set CSS properties of an element, get or set width and height of the element, and so on.

Finally, you will explore one of the most powerful features of jQuery that is traversing the DOM tree to get the child, parent and sibling elements, as well as features like filtering element's selection, implementing Ajax to retrieve the information from a server and update the page content without refreshing it, and how to avoid conflicts between jQuery and other JavaScript library.

Tip: Every chapter in this tutorial contains lots of real-world examples that you can try and test using an online editor. These examples will help you to better understand the concept or topic. It also contains smart workarounds as well as useful tips and important notes.

jQuery Getting Started

In this tutorial you will learn how to make a jQuery powered web page.

Downloading jQuery

To get started, first download a copy of jQuery and include it in your document. There are two versions of jQuery available for downloading — *compressed* and *uncompressed*.

The uncompressed file is best suited for development or debugging; while, the minified and compressed file is recommended for production because it saves the precious bandwidth and improves the performance due to small file size.

You can download jQuery from here: https://jquery.com/download/

Once you've downloaded the jQuery file you can see it has `.js` extension, because the jQuery is just a JavaScript library, therefore you can include the jQuery file in your HTML document with the `<script>` element just like you include normal JavaScript files.

Example
Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>Simple HTML Document</title>
    <link rel="stylesheet" href="css/style.css">
    <script src="js/jquery-3.5.1.min.js"></script>
</head>
<body>
    <h1>Hello, World!</h1>
</body>
</html>
```

Always include the jQuery file before your custom scripts; otherwise, the jQuery APIs will not be available when your jQuery code attempts to access it.

Tip: As you can see we've skipped the attribute `type="text/javascript"` inside the `<script>` tag in the above example. Because this is not required in HTML5. JavaScript is the default scripting language in HTML5 and in all modern browsers.

Including jQuery from CDN

Alternatively, you can include jQuery in your document through freely available CDN (Content Delivery Network) links, if you don't want to download and host jQuery yourself.

CDNs can offer a performance benefit by reducing the loading time, because they are hosting jQuery on multiple servers spread across the globe and when a user requests the file, it will be served from the server nearest to them.

This also offers an advantage that if the visitor to your webpage has already downloaded a copy of jQuery from the same CDN while visiting other sites, it won't have to be re-downloaded since it is already there in the browser's cache.

jQuery's CDN provided by StackPath

```
<script src="https://code.jquery.com/jquery-3.5.1.min.js"></script>
```

You can also include jQuery through Google and Microsoft CDN's.

Creating Your First jQuery Powered Web Page

So far you have understood the purposes of jQuery library as well as how to include this in your document, now it's time to put jQuery into real use.

In this section, we will perform a simple jQuery operation by changing the color of the heading text from the default black color to red.

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>My First jQuery Powered Web Page</title>
    <link rel="stylesheet" href="css/style.css">
    <script src="js/jquery-3.5.1.min.js"></script>
    <script>
        $(document).ready(function(){
            $("h1").css("color", "#0088ff");
        });
    </script>
</head>
<body>
    <h1>Hello, World!</h1>
</body>
</html>
```

In the above example we've performed a simple jQuery operation by changing the color of the heading i.e. the `<h1>` element using the jQuery element selector and `css()` method when the document is ready which is known as document ready event. We'll learn about jQuery selectors, events and methods in upcoming chapters.

jQuery Syntax

In this tutorial you will learn how to write the jQuery code.

Standard jQuery Syntax

A jQuery statement typically starts with the dollar sign (`$`) and ends with a semicolon (`;`).

In jQuery, the dollar sign (`$`) is just an alias for jQuery. Let's consider the following example code which demonstrates the most basic statement of the jQuery.

Example
Try this code »

```
<script>
    $(document).ready(function(){
        // Some code to be executed...
        alert("Hello World!");
    });
</script>
```

The above example simply displays an alert message "Hello World!" to the user.

Explanation of code

If you are completely new to the jQuery, you might think what that code was all about. OK, let's go through each of the parts of this script one by one.

- The `<script>` element — Since jQuery is just a JavaScript library, so the jQuery code can be placed inside the `<script>` element. However, if you want to place it in an external JavaScript file, which is preferred, you just remove this part.
- The `$(document).ready(handler);` — This statement is typically known as ready event. Where the *handler* is basically a function that is passed to the `ready()` method to be executed safely as soon as the

document is ready to be manipulated i.e. when the DOM hierarchy has been fully constructed.

The jQuery `ready()` method is typically used with an anonymous function. So, the above example can also be written in a shorthand notation like this:

Example
Try this code »
```
<script>
    $(function(){
        // Some code to be executed...
        alert("Hello World!");
    });
</script>
```

Tip: You can use any syntax you like as both the syntax are equivalent. However, the document ready event is easier to understand when reading the code.

Further, inside an event handler function you can write the jQuery statements to perform any action following the basic syntax, like: `$(selector).action();`

Where, the `$(selector)` basically selects the HTML elements from the DOM tree so that it can be manipulated and the `action()` applies some action on the selected elements such as changes the CSS property value, or sets the element's contents, etc. Let's consider another example that sets the paragraph text after the DOM is ready:

Example
Try this code »
```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>jQuery Document Ready Demo</title>
    <link rel="stylesheet" href="css/style.css">
    <script src="js/jquery-3.5.1.min.js"></script>
    <script>
        $(document).ready(function(){
            $("p").text("Hello World!");
        });
    </script>
```

```
</head>
<body>
    <p>Not loaded yet.</p>
</body>
</html>
```

In the jQuery statement of the example above (*line no-10*) the `p` is a jQuery selector which select all the paragraphs i.e. the `<p>` elements in the document, later the `text()` method set the paragraph's text content to "Hello World!" text.

The paragraph text in the example above is replaced automatically when the document is ready. But what if we want the user to perform some action before executing the jQuery code to replace the paragraph text. Let's consider one last example:

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="utf-8">
    <title>jQuery Click Handler Demo</title>
    <link rel="stylesheet" href="css/style.css">
    <script src="js/jquery-3.5.1.min.js"></script>
    <script>
        $(document).ready(function(){
            $("button").click(function(){
                $("p").text("Hello World!");
            });
        });
    </script>
</head>
<body>
    <p>Not loaded yet.</p>
    <button type="button">Replace Text</button>
</body>
</html>
```

In the above example the paragraph text is replaced only when a click event is occur on the "Replace Text" `<button>` that simply means when a user click this button.

Now that you have a basic understanding of how the jQuery works, in the upcoming chapters you will learn about the terms we've discussed here in detail.

Note: You should place the jQuery code inside the document ready event so that your code executes when the document is ready to be worked on.

jQuery Selectors

In this tutorial you will learn how to select HTML elements using jQuery.

Selecting Elements with jQuery

JavaScript is most commonly used to get or modify the content or value of the HTML elements on the page, as well as to apply some effects like show, hide, animations etc. But, before you can perform any action you need to find or select the target HTML element.

Selecting the elements through a typical JavaScript approach could be very painful, but the jQuery works like a magic here. The ability of making the DOM elements selection simple and easy is one of the most powerful feature of the jQuery.

Tip: The jQuery supports almost all the selectors defined in the latest CSS3 specifications, as well as it has its own custom selectors. These custom selectors greatly enhance the capabilities selecting the HTML elements on a page.

In the following sections, you will see some of the common ways of selecting the elements on a page and do something with them using the jQuery.

Selecting Elements by ID

You can use the ID selector to select a single element with the unique ID on the page.

For example, the following jQuery code will select and highlight an element having the ID attribute `id="mark"`, when the document is ready to be manipulated.

Example
Try this code »

```
<script>
```

```
$(document).ready(function(){
    // Highlight element with id mark
    $("#mark").css("background", "yellow");
});
</script>
```

In the example above, the `$(document).ready()` is an event that is used to manipulate a page safely with the jQuery. Code included inside this event will only run once the page DOM is ready. We'll learn more about the events in next chapter.

Selecting Elements by Class Name

The class selector can be used to select the elements with a specific class.

For example, the following jQuery code will select and highlight the elements having the class attribute `class="mark"`, when the document is ready.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Highlight elements with class mark
    $(".mark").css("background", "yellow");
});
</script>
```

Selecting Elements by Name

The element selector can be used to select elements based on the element name.

For example, the following jQuery code will select and highlight all the paragraph i.e. the `<p>` elements of the document when it is ready.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Highlight paragraph elements
    $("p").css("background", "yellow");
});
</script>
```

Selecting Elements by Attribute

You can use the attribute selector to select an element by one of its HTML attributes, such as a link's `target` attribute or an input's `type` attribute, etc.

For example, the following jQuery code will select and highlight all the text inputs i.e. `<input>` elements with the `type="text"`, when the document is ready.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Highlight paragraph elements
    $('input[type="text"]').css("background", "yellow");
});
</script>
```

Selecting Elements by Compound CSS Selector

You can also combine the CSS selectors to make your selection even more precise.

For instance, you can combine the class selector with an element selector to find the elements in a document that has certain type and class.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Highlight only paragraph elements with class mark
    $("p.mark").css("background", "yellow");

    // Highlight only span elements inside the element with
ID mark
    $("#mark span").css("background", "yellow");

    // Highlight li elements inside the ul elements
    $("ul li").css("background", "red");

    // Highlight li elements only inside the ul element
with id mark
    $("ul#mark li").css("background", "yellow");

    // Highlight li elements inside all the ul element with
class mark
    $("ul.mark li").css("background", "green");

    // Highlight all anchor elements with target blank
    $('a[target="_blank"]').css("background", "yellow");
});
</script>
```

---

jQuery Custom Selector

In addition to the CSS defined selectors, jQuery provides its own custom selector to further enhancing the capabilities of selecting elements on a page.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Highlight table rows appearing at odd places
    $("tr:odd").css("background", "yellow");

    // Highlight table rows appearing at even places
    $("tr:even").css("background", "orange");

    // Highlight first paragraph element
    $("p:first").css("background", "red");

    // Highlight last paragraph element
    $("p:last").css("background", "green");

    // Highlight all input elements with type text inside a
form
    $("form :text").css("background", "purple");

    // Highlight all input elements with type password
inside a form
    $("form :password").css("background", "blue");

    // Highlight all input elements with type submit inside
a form
    $("form :submit").css("background", "violet");
});
</script>
```

jQuery Events

In this tutorial you will learn how to handle events with jQuery.

What are Events

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:

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Code to be executed
    alert("Hello World!");
});
</script>
```

Note: The `$(document).ready()` is an event that is used to manipulate a page safely with the jQuery. Code included inside this event will only run once the page DOM is ready i.e. when the document is ready to be manipulated.

In general, the events can be categorized into four main groups — mouse events, keyboard events, form events and document/window events. The following section will give you the brief overview of all these events as well as related jQuery methods one by one.

Mouse Events

A mouse event is fired when the user click some element, move the mouse pointer etc. Here're some commonly used jQuery methods to handle the mouse events.

The `click()` Method

The jQuery `click()` method attach an event handler function to the selected elements for "click" event. The attached function is executed when the user clicks on that element. The following example will hide the `<p>` elements on a page when they are clicked.

Example
Try this code »

```
<script>
$(document).ready(function(){
    $("p").click(function(){
        $(this).slideUp();
    });
});
</script>
```

Note: The `this` keyword inside the jQuery event handler function is a reference to the element where the event is currently being delivered.

The `dblclick()` Method

The jQuery `dblclick()` method attach an event handler function to the selected elements for "dblclick" event. The attached function is executed when the user double-clicks on that element. The following example will hide the `<p>` elements when they are double-clicked.

Example
Try this code »

```
<script>
$(document).ready(function(){
    $("p").dblclick(function(){
        $(this).slideUp();
    });
});
</script>
```

The `hover()` Method

The jQuery `hover()` method attach one or two event handler functions to the selected elements that is executed when the mouse pointer enters and leaves the elements. The first function is executed when the user place the mouse pointer over an element, whereas the second function is executed when the user removes the mouse pointer from that element.

The following example will highlight `<p>` elements when you place the cursor on it, the highlighting will be removed when you remove the cursor.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("p").hover(function(){
        $(this).addClass("highlight");
    }, function(){
        $(this).removeClass("highlight");
    });
});
</script>
```

Tip: You can consider the `hover()` method is a combination of the jQuery `mouseenter()` and `mouseleave()` methods.

The `mouseenter()` Method

The jQuery `mouseenter()` method attach an event handler function to the selected elements that is executed when the mouse enters an element. The following example will add the class highlight to the `<p>` element when you place the cursor on it.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("p").mouseenter(function(){
        $(this).addClass("highlight");
    });
});
</script>
```

The `mouseleave()` Method

The jQuery `mouseleave()` method attach an event handler function to the selected elements that is executed when the mouse leaves an element. The following example will remove the class highlight from the `<p>` element when you remove the cursor from it.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("p").mouseleave(function(){
        $(this).removeClass("highlight");
    });
});
</script>
```
For more mouse event methods, please check out the jQuery Events Reference »

Keyboard Events

A keyboard event is fired when the user press or release a key on the keyboard. Here're some commonly used jQuery methods to handle the keyboard events.

The `keypress()` Method

The jQuery `keypress()` method attach an event handler function to the selected elements (typically form controls) that is executed when the browser receives keyboard input from the user. The following example will display a message when the kypress event is fired and how many times it is fired when you press the key on the keyboard.

Example
Try this code »
```
<script>
```

```
$(document).ready(function(){
    var i = 0;
    $('input[type="text"]').keypress(function(){
        $("span").text(i += 1);
        $("p").show().fadeOut();
    });
});
</script>
```

Note: The keypress event is similar to the keydown event, except that modifier and non-printing keys such as Shift, Esc, Backspace or Delete, Arrow keys etc. trigger keydown events but not keypress events.

The `keydown()` Method

The jQuery `keydown()` method attach an event handler function to the selected elements (typically form controls) that is executed when the user first presses a key on the keyboard. The following example will display a message when the keydown event is fired and how many times it is fired when you press the key on the keyboard.

Example

Try this code »

```
<script>
$(document).ready(function(){
    var i = 0;
    $('input[type="text"]').keydown(function(){
        $("span").text(i += 1);
        $("p").show().fadeOut();
    });
});
</script>
```

The `keyup()` Method

The jQuery `keyup()` method attach an event handler function to the selected elements (typically form controls) that is executed when the user releases a key on the keyboard. The following example will display a message when the keyup event is fired and how many times it is fired when you press and release a key on the keyboard.

Example
Try this code »
```
<script>
$(document).ready(function(){
    var i = 0;
    $('input[type="text"]').keyup(function(){
        $("span").text(i += 1);
        $("p").show().fadeOut();
    });
});
</script>
```
Tip: The keyboard events can be attached to any element, but the event is only sent to the element that has the focus. That's why the keyboard events generally attached to the form controls such as text input box or textarea.

Form Events

A form event is fired when a form control receive or loses focus or when the user modify a form control value such as by typing text in a text input, select any option in a select box etc. Here're some commonly used jQuery methods to handle the form events.

The `change()` Method

The jQuery `change()` method attach an event handler function to the `<input>`, `<textarea>` and `<select>` elements that is executed when its value changes. The following example will display an alert message when you select any option in dropdown select box.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("select").change(function(){
        var selectedOption = 
$(this).find(":selected").val();
```

```
        alert("You have selected - " + selectedOption);
    });
});
</script>
```

Note: For select boxes, checkboxes, and radio buttons, the event is fired immediately when the user makes a selection with the mouse, but for the text input and textarea the event is fired after the element loses focus.

The `focus()` Method

The jQuery `focus()` method attach an event handler function to the selected elements (typically form controls and links) that is executed when it gains focus. The following example will display a message when the text input receive focus.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("input").focus(function(){
        $(this).next("span").show().fadeOut("slow");
    });
});
</script>
```

The `blur()` Method

The jQuery `blur()` method attach an event handler function to the form elements such as `<input>`, `<textarea>`, `<select>` that is executed when it loses focus. The following example will display a message when the text input loses focus.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("input").blur(function(){
        $(this).next("span").show().fadeOut("slow");
    });
});
</script>
```

The `submit()` Method

The jQuery `submit()` method attach an event handler function to the `<form>` elements that is executed when the user is attempting to submit a form. The following example will display a message depending on the value entered when you try to submit the form.

Example
Try this code »

```
<script>
$(document).ready(function(){
    $("form").submit(function(event){
        var regex = /^[a-zA-Z]+$/;
        var currentValue = $("#firstName").val();
        if(regex.test(currentValue) == false){
            $("#result").html('<p class="error">Not
valid!</p>').show().fadeOut(1000);
            // Preventing form submission
            event.preventDefault();
        }
    });
});
</script>
```

Tip: A form can be submitted either by clicking a submit button, or by pressing Enter when certain form elements have focus.

Document/Window Events

Events are also triggered in a situation when the page DOM (Document Object Model) is ready or when the user resize or scrolls the browser window, etc. Here're some commonly used jQuery methods to handle such kind of events.

The `ready()` Method

The jQuery `ready()` method specify a function to execute when the DOM is fully loaded.

The following example will replace the paragraphs text as soon as the DOM hierarchy has been fully constructed and ready to be manipulated.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("p").text("The DOM is now loaded and can be
manipulated.");
});
</script>
```

The `resize()` Method

The jQuery `resize()` method attach an event handler function to the window element that is executed when the size of the browser window changes.

The following example will display the current width and height of the browser window when you try to resize it by dragging its corners.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $(window).resize(function() {
        $(window).bind("resize", function(){
            $("p").text("Window width: " +
$(window).width() + ", " + "Window height: " +
$(window).height());
        });
    });
});
</script>
```

The `scroll()` Method

The jQuery `scroll()` method attach an event handler function to the window or scrollable iframes and elements that is executed whenever the element's scroll position changes.

The following example will display a message when you scroll the browser window.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $(window).scroll(function() {
        $("p").show().fadeOut("slow");
    });
});
</script>
```

jQuery Show and Hide Effects

In this tutorial you will learn how to show hide HTML elements using jQuery.

jQuery `show()` and `hide()` Methods

You can show and hide HTML elements using the jQuery `show()` and `hide()` methods.

The `hide()` method simply sets the inline style `display: none` for the selected elements. Conversely, the `show()` method restores the display properties of the matched set of elements to whatever they initially were—typically block, inline, or inline-block—before the inline style `display: none` was applied to them. Here's is an example.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Hide displayed paragraphs
    $(".hide-btn").click(function(){
        $("p").hide();
    });

    // Show hidden paragraphs
    $(".show-btn").click(function(){
        $("p").show();
    });
});
</script>
```

You can optionally specify the duration (also referred as speed) parameter for making the jQuery show hide effect animated over a specified period of time.

Durations can be specified either using one of the predefined string `'slow'` or `'fast'`, or in a number of milliseconds, for greater precision; higher values indicate slower animations.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Hide displayed paragraphs with different speeds
    $(".hide-btn").click(function(){
        $("p.normal").hide();
        $("p.fast").hide("fast");
        $("p.slow").hide("slow");
        $("p.very-fast").hide(50);
        $("p.very-slow").hide(2000);
    });

    // Show hidden paragraphs with different speeds
    $(".show-btn").click(function(){
        $("p.normal").show();
        $("p.fast").show("fast");
        $("p.slow").show("slow");
        $("p.very-fast").show(50);
        $("p.very-slow").show(2000);
    });
});
</script>
```

Note: The speed or duration string `'fast'` indicates the durations of 200 milliseconds, while the string `'slow'` indicates the durations of 600 milliseconds.

You can also specify a callback function to be executed after the `show()` or `hide()` method completes. We'll learn more about the callback function in upcoming chapters.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Display alert message after hiding paragraphs
    $(".hide-btn").click(function(){
        $("p").hide("slow", function(){
            // Code to be executed
            alert("The hide effect is completed.");
        });
    });

    // Display alert message after showing paragraphs
    $(".show-btn").click(function(){
        $("p").show("slow", function(){
            // Code to be executed
            alert("The show effect is completed.");
        });
    });
});
</script>
```

---

jQuery `toggle()` Method

The jQuery `toggle()` method show or hide the elements in such a way that if the element is initially displayed, it will be hidden; if hidden, it will be displayed (i.e. toggles the visibility).

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Toggles paragraphs display
    $(".toggle-btn").click(function(){
        $("p").toggle();
    });
});
</script>
```

Similarly, you can specify the duration parameter for the `toggle()` method to make it animated like the `show()` and `hide()` methods.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Toggles paragraphs with different speeds
    $(".toggle-btn").click(function(){
        $("p.normal").toggle();
        $("p.fast").toggle("fast");
        $("p.slow").toggle("slow");
        $("p.very-fast").toggle(50);
        $("p.very-slow").toggle(2000);
    });
});
</script>
```

Similarly, you can also specify a callback function for the `toggle()` method.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Display alert message after toggling paragraphs
    $(".toggle-btn").click(function(){
        $("p").toggle(1000, function(){
            // Code to be executed
            alert("The toggle effect is completed.");
        });
    });
});
</script>
```

jQuery Fading Effects

In this tutorial you will learn how to fade in and out elements using jQuery.

jQuery `fadeIn()` and `fadeOut()` Methods

You can use the jQuery `fadeIn()` and `fadeOut()` methods to display or hide the HTML elements by gradually increasing or decreasing their opacity.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Fading out displayed paragraphs
    $(".out-btn").click(function(){
        $("p").fadeOut();
    });

    // Fading in hidden paragraphs
    $(".in-btn").click(function(){
        $("p").fadeIn();
    });
});
</script>
```

Like other jQuery effects methods, you can optionally specify the duration or speed parameter for the `fadeIn()` and `fadeOut()` methods to control how long the fading animation will run. Durations can be specified either using one of the predefined string `'slow'` or `'fast'`, or in a number of milliseconds; higher values indicate slower animations.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Fading out displayed paragraphs with different
speeds
    $(".out-btn").click(function(){
        $("p.normal").fadeOut();
        $("p.fast").fadeOut("fast");
        $("p.slow").fadeOut("slow");
        $("p.very-fast").fadeOut(50);
        $("p.very-slow").fadeOut(2000);
    });

    // Fading in hidden paragraphs with different speeds
    $(".in-btn").click(function(){
        $("p.normal").fadeIn();
        $("p.fast").fadeIn("fast");
        $("p.slow").fadeIn("slow");
        $("p.very-fast").fadeIn(50);
        $("p.very-slow").fadeIn(2000);
    });
});
</script>
```

Note: The effect of `fadeIn()/fadeOut()` method looks similar to `show()/hide()`, but unlike `show()/hide()` method the `fadeIn()/fadeOut()` method only animates the opacity of the target elements and does not animates their dimensions.

You can also specify a callback function to be executed after the `fadeIn()` or `fadeOut()` method completes. We'll learn more about the callback function in upcoming chapters.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Display alert message after fading out paragraphs
    $(".out-btn").click(function(){
        $("p").fadeOut("slow", function(){
            // Code to be executed
            alert("The fade-out effect is completed.");
        });
    });

    // Display alert message after fading in paragraphs
    $(".in-btn").click(function(){
        $("p").fadeIn("slow", function(){
            // Code to be executed
            alert("The fade-in effect is completed.");
        });
    });
});
</script>
```

jQuery `fadeToggle()` Method

The jQuery `fadeToggle()` method display or hide the selected elements by animating their opacity in such a way that if the element is initially displayed, it will be fade out; if hidden, it will be fade in (i.e. toggles the fading effect).

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Toggles paragraphs display with fading
    $(".toggle-btn").click(function(){
        $("p").fadeToggle();
    });
});
</script>
```

Similarly, you can specify the duration parameter for the `fadeToggle()` method like `fadeIn()`/`fadeOut()` method to control the duration or speed of the fade toggle animation.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Fade Toggles paragraphs with different speeds
    $(".toggle-btn").click(function(){
        $("p.normal").fadeToggle();
        $("p.fast").fadeToggle("fast");
        $("p.slow").fadeToggle("slow");
        $("p.very-fast").fadeToggle(50);
        $("p.very-slow").fadeToggle(2000);
    });
});
</script>
```

Similarly, you can also specify a callback function for the `fadeToggle()` method.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Display alert message after fade toggling paragraphs
    $(".toggle-btn").click(function(){
        $("p").fadeToggle(1000, function(){
            // Code to be executed
            alert("The fade-toggle effect is completed.");
        });
    });
});
</script>
```

---

jQuery `fadeTo()` Method

The jQuery `fadeTo()` method is similar to the `.fadeIn()` method, but unlike `.fadeIn()` the `fadeTo()` method lets you fade in the elements to a certain opacity level.

```
$(selector).fadeTo(speed, opacity, callback);
```

The required opacity parameter specifies the final opacity of the target elements that can be a number between 0 and 1. The duration or speed parameter is also required for this method that specifies the duration of the fade to animation.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Fade to paragraphs with different opacity
    $(".to-btn").click(function(){
        $("p.none").fadeTo("fast", 0);
        $("p.partial").fadeTo("slow", 0.5);
        $("p.complete").fadeTo(2000, 1);
    });
});
</script>
```

jQuery Sliding Effects

In this tutorial you will learn how to create slide motion effect using jQuery.

jQuery `slideUp()` and `slideDown()` Methods

The jQuery `slideUp()` and `slideDown()` methods is used to hide or show the HTML elements by gradually decreasing or increasing their height (i.e. by sliding them up or down).

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Slide up displayed paragraphs
    $(".up-btn").click(function(){
        $("p").slideUp();
    });

    // Slide down hidden paragraphs
    $(".down-btn").click(function(){
        $("p").slideDown();
    });
});
</script>
```

Like other jQuery effects methods, you can optionally specify the duration or speed parameter for the `slideUp()` and `slideDown()` methods to control how long the slide animation will run. Durations can be specified either using one of the predefined string `'slow'` or `'fast'`, or in a number of milliseconds; higher values indicate slower animations.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Sliding up displayed paragraphs with different
speeds
    $(".up-btn").click(function(){
        $("p.normal").slideUp();
        $("p.fast").slideUp("fast");
        $("p.slow").slideUp("slow");
        $("p.very-fast").slideUp(50);
        $("p.very-slow").slideUp(2000);
    });

    // Sliding down hidden paragraphs with different speeds
    $(".down-btn").click(function(){
        $("p.normal").slideDown();
        $("p.fast").slideDown("fast");
        $("p.slow").slideDown("slow");
        $("p.very-fast").slideDown(50);
        $("p.very-slow").slideDown(2000);
    });
});
</script>
```

You can also specify a callback function to be executed after the `slideUp()` or `slideDown()` method completes. We'll learn more about the callback function in upcoming chapters.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Display alert message after sliding up paragraphs
    $(".up-btn").click(function(){
        $("p").slideUp("slow", function(){
            // Code to be executed
            alert("The slide-up effect is completed.");
        });
    });

    // Display alert message after sliding down paragraphs
    $(".down-btn").click(function(){
        $("p").slideDown("slow", function(){
            // Code to be executed
            alert("The slide-down effect is completed.");
        });
    });
});
</script>
```

jQuery `slideToggle()` Method

The jQuery `slideToggle()` method show or hide the selected elements by animating their height in such a way that if the element is initially displayed, it will be slide up; if hidden, it will be slide down i.e. toggles between the `slideUp()` and `slideDown()` methods.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Toggles paragraphs display with sliding
    $(".toggle-btn").click(function(){
        $("p").slideToggle();
    });
});
</script>
```

Similarly, you can specify the duration parameter for the `slideToggle()` method like `slideUp()` and `slideDown()` methods to control the speed of the slide toggle animation.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Slide Toggles paragraphs with different speeds
    $(".toggle-btn").click(function(){
        $("p.normal").slideToggle();
        $("p.fast").slideToggle("fast");
        $("p.slow").slideToggle("slow");
        $("p.very-fast").slideToggle(50);
        $("p.very-slow").slideToggle(2000);
    });
});
</script>
```

Similarly, you can also specify a callback function for the `slideToggle()` method.

Example
Try this code »

```
<script>
```

```
$(document).ready(function(){
    // Display alert message after slide toggling
paragraphs
    $(".toggle-btn").click(function(){
        $("p").slideToggle(1000, function(){
            // Code to be executed
            alert("The slide-toggle effect is completed.");
        });
    });
});
</script>
```

jQuery Animation Effects

In this tutorial you will learn how to animate CSS properties using jQuery.

jQuery `animate()` Method

The jQuery `animate()` method is used to create custom animations.
The `animate()` method is typically used to animate numeric CSS properties, for example, `width`, `height`, `margin`, `padding`, `opacity`, `top`, `left`, etc. but the non-numeric properties such as `color` or `background-color` cannot be animated using the basic jQuery functionality.

Note: Not all CSS properties are animatable. In general, any CSS property that accepts values that are numbers, lengths, percentages, or colors is animatable. However, the color animation is not support by the core jQuery library. To manipulate and animate the color use the jQuery color plugin.

Syntax

The basic syntax of the jQuery `animate()` method can be given with:

```
$(selector).animate({ properties }, duration, callback);
```

The parameters of the `animate()` method have the following meanings:

- The required properties parameter defines the CSS properties to be animated.
- The optional duration parameter specifies how long the animation will run. Durations can be specified either using one of the predefined string `'slow'` or `'fast'`, or in a number of milliseconds; higher values indicate slower animations.
- The optional callback parameter is a function to call once the animation is complete.

Here's a simple example of the jQuery `animate()` method that animates an image from its original position to the right by 300 pixels on click of the button.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("img").animate({
            left: 300
        });
    });
});
</script>
```
Note: All HTML elements have static position by default. Since the static element cannot be moved, so you must set the CSS `position` property for the element to `relative`, `fixed`, or `absolute` to manipulate or animate its position.

Animate Multiple Properties At Once

You can also animate multiple properties of an element together at the same time using the `animate()` method. All the properties animated simultaneously without any delay.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $(".box").animate({
            width: "300px",
            height: "300px",
            marginLeft: "150px",
            borderWidth: "10px",
            opacity: 0.5
        });
    });
});
</script>
```

Note: The CSS properties names must be camel-cased when using with the `animate()` method, e.g. if you want to animate the font size you need to write `'fontSize'` rather than `'font-size'`. Similarly, write `'marginLeft'` instead of `'margin-left'`, `'borderWidth'` instead of `'border-width'`, and so on.

Tip: You must set the `border-style` property for the element before animating its `border-width` property. An element must have borders before you can animate the border width, because the default value of the `border-style` property is `none`.

Animate Multiple Properties One by One or Queued Animations

You can also animate the multiple properties of an element one by one individually in a queue using the jQuery's chaining feature. We'll learn more about chaining in next chapter.

The following example demonstrates a jQuery queued or chained animation, where each animation will start once the previous animation on the element has completed.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $(".box")
            .animate({width: "300px"})
            .animate({height: "300px"})
            .animate({marginLeft: "150px"})
            .animate({borderWidth: "10px"})
            .animate({opacity: 0.5});
    });
});
</script>
```

Animate Properties with Relative Values

You can also define the relative values for the animated properties. If a value is specified with a leading `+=` or `-=` prefix, then the target value is calculated by adding or subtracting the given number from the current value of the property.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $(".box").animate({
            top: "+=50px",
            left: "+=50px",
            width: "+=50px",
            height: "+=50px"
        });
    });
});
</script>
```

Animate Properties with Pre-defined Values

In addition to the numeric values, each property can take the strings `'show'`, `'hide'`, and `'toggle'`. It will be very helpful in a situation when you simply want to animate the property from its current value to the initial value and vice versa.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $(".box").animate({
            width: 'toggle'
        });
    });
});
</script>
```

jQuery Stop Animations

In this tutorial you will learn how to stop running animations using jQuery.

jQuery `stop()` Method

The jQuery `stop()` method is used to stop the jQuery animations or effects currently running on the selected elements before it completes.

The basic syntax of the jQuery `stop()` method can be given with:

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

The parameters in the above syntax have the following meanings:

- The optional *stopAll* Boolean parameter specifies whether to remove queued animation or not. Default value is `false`, that means only the current animation will be stopped, rest of the animations in the queue will run afterwards.
- The optional *goToEnd* Boolean parameter specifies whether to complete the current animation immediately. Default value is `false`.

Here's a simple example that demonstrates the jQuery `stop()` method in real action in which you can start and stop the animation on click of the button.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Start animation
    $(".start-btn").click(function(){
      $("img").animate({left: "+=150px"}, 2000);
    });

    // Stop running animation
    $(".stop-btn").click(function(){
      $("img").stop();
    });
    // Start animation in the opposite direction
    $(".back-btn").click(function(){
      $("img").animate({left: "-=150px"}, 2000);
    });

    // Reset to default
    $(".reset-btn").click(function(){
      $("img").animate({left: "0"}, "fast");
    });
});
</script>
```

Note: The jQuery `stop()` method works for all jQuery effects such as fading, sliding, animated show and hide effects as well as custom animations.

Here's one more example of this method in which, if you click the "Slide Toggle" button again after starting the animation but before it is completed, the animation will begin in the opposite direction immediately from the saved starting point.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Kill and toggle the current sliding animation
    $(".toggle-btn").on("click", function(){
        $(".box").stop().slideToggle(1000);
    });
});
</script>
```

Creating Smooth Hover Effect

While creating the animated hover effect one of the common problem you may face is multiple queued animations, when you place and remove the mouse cursor rapidly. Because, in this situation `mouseenter` or `mouseleave` events are triggered quickly before the animation complete. To avoid this problem and create a nice and smooth hover effect you can add the `stop(true, true)` to the method chain, like this:

Example

Try this code »

```
<script>
$(document).ready(function(){
    $(".box").hover(function(){
        $(this).find("img").stop(true, true).fadeOut();
    }, function(){
        $(this).find("img").stop(true, true).fadeIn();
    });
});
</script>
```

Note: The jQuery method `stop(true, true)` clears all the queued animations and jumps the current animation to the final value.

jQuery Chaining

In this tutorial you will learn how chain multiple methods in jQuery.

jQuery Method Chaining

The jQuery provides another robust feature called method chaining that allows us to perform multiple action on the same set of elements, all within a single line of code.

This is possible because most of the jQuery methods return a jQuery object that can be further used to call another method. Here's an example.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").animate({width: "100%"}).animate({fontSize:
"46px"}).animate({borderWidth: 30});
    });
});
</script>
```

The above example demonstrate the chaining of three `animate()` method. When a user click the trigger button, it expands the `<p>` to 100% width. Once the `width` change is complete the `font-size` is start animating and after its completion, the `border` animation will begin.

Tip: The method chaining not only helps you to keep your jQuery code concise, but it also can improve your script's performance since browser doesn't have to find the same elements multiple times to do something with them.

You can also break a single line of code into multiple lines for greater readability. For example, the sequence of methods in the above example could also be written as:

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p")
            .animate({width: "100%"})
            .animate({fontSize: "46px"})
            .animate({borderWidth: 30});
    });
});
</script>
```
Some jQuery methods doesn't return the jQuery object. In general, setters i.e. methods that assign some value on a selection return a jQuery object, that allows you to continue calling jQuery methods on your selection. Whereas, getters return the requested value, so you can't continue to call jQuery methods on the value returned by the getter.

A typical example of this scenario is the `html()` method. If no parameters are passed to it, the HTML contents of the selected element is returned instead of a jQuery object.

Example
Try this code »
```
<script>
$(document).ready(function(){
    $("button").click(function(){
        // This will work
        $("h1").html("Hello World!").addClass("test");

        // This will NOT work
        $("p").html().addClass("test");
    });
});
</script>
```

jQuery Callback

In this tutorial you will learn how define a callback function for the jQuery effect.

jQuery Callback Functions

JavaScript statements are executed line by line. But, since jQuery effect takes some time to finish the next line code may execute while the previous effect is still running. To prevent this from happening jQuery provides a callback function for each effect method.

A callback function is a function that is executed once the effect is complete. The callback function is passed as an argument to the effect methods and they typically appear as the last argument of the method. For example, the basic syntax of the jQuery `slideToggle()` effect method with a callback function can be given with:

```
$(selector).slideToggle(duration, callback);
```

Consider the following example in which we've placed the `slideToggle()` and `alert()` statements next to each other. If you try this code the alert will be displayed immediately once you click the trigger button without waiting for slide toggle effect to complete.

Example
Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").slideToggle("slow");
        alert("The slide toggle effect has completed.");
    });
});
</script>
```

And, here's the modified version of the pevious example in which we've placed the `alert()` statement inside a callback function for the `slideToggle()` method. If you try this code the alert message will be displayed once the slide toggle effect has completed.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").slideToggle("slow", function(){
            // Code to be executed once effect is complete
            alert("The slide toggle effect has 
completed.");
        });
    });
});
</script>
```

Similarly, you can define the callback functions for the other jQuery effect methods, like `show()`, `hide()`, `fadeIn()`, `fadeOut()`, `animate()`, etc.

Note: If the effect method is applied to multiple elements, then the callback function is executed once for each selected element, not once for all.

Example

Try this code »

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("h1, p").slideToggle("slow", function(){
            // Code to be executed once effect is complete
            alert("The slide toggle effect has 
completed.");
        });
    });
});
</script>
```

If you try the above example code, it will display the same alert message two times once per `<h1>` and `<p>` element, upon clicking the trigger button.

jQuery `Getters` & `Setter`

In this tutorial you will learn how to get or set the element's content and attribute value as well as the from control value using jQuery.

jQuery Get or Set Contents and Values

Some jQuery methods can be used to either assign or read some value on a selection. A few of these methods are `text()`, `html()`, `attr()`, and `val()`.

When these methods are called with no argument, it is referred to as a *getters*, because it gets (or reads) the value of the element. When these methods are called with a value as an argument, it's referred to as a *setter* because it sets (or assigns) that value.

jQuery `text()` Method

The jQuery `text()` method is either used to get the combined text contents of the selected elements, including their descendants, or set the text contents of the selected elements.

Get Contents with `text()` Method

The following example will show you how to get the text contents of paragraphs:

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Get combined text contents of all paragraphs
    $(".btn-one").click(function(){
        var str = $("p").text();
        alert(str);
    });

    // Get text contents of the first paragraph
    $(".btn-two").click(function(){
        var str = $("p:first").text();
        alert(str);
    });
});
</script>
```

Note: The jQuery `text()` retrieves the values of all the selected elements (i.e. combined text), whereas the other getters such as `html()`, `attr()`, and `val()` returns the value only from the first element in the selection.

Set Contents with `text()` Method

The following example will show you how to set the text contents of a paragraph:

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Set text contents of all paragraphs
    $(".btn-one").click(function(){
        $("p").text("This is demo text.");
    });

    // Set text contents of the first paragraph
    $(".btn-two").click(function(){
        $("p:first").text("This is another demo text.");
    });
});
</script>
```

Note: When the jQuery `text()`, `html()`, `attr()`, and `val()` methods are called with a value as an argument it sets that value to every matched element.

---

jQuery `html()` Method

The jQuery `html()` method is used to get or set the HTML contents of the elements.

Get HTML Contents with `html()` Method

The following example will show you how to get the HTML contents of the paragraph elements as well as a `<div>` element container:

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Get HTML contents of first selected paragraph
    $(".btn-one").click(function(){
        var str = $("p").html();
        alert(str);
    });

    // Get HTML contents of an element with ID container
    $(".btn-two").click(function(){
        var str = $("#container").html();
        alert(str);
    });
});
</script>
```

Note: If multiple elements are selected, the `html()` method only returns the HTML contents of the first element from the set of matched elements.

Set HTML Contents with `html()` Method

The following example will show you how to set the HTML contents of the `<body>` element:

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Set HTML contents for document's body
    $("button").click(function(){
        $("body").html("<p>Hello World!</p>");
    });
});
</script>
```

jQuery `attr()` Method

You can use the jQuery `attr()` method to either get the value of an element's attribute or set one or more attributes for the selected element.

Get Attribute Value with `attr()` Method

The following example will show you how get the `href` attribute of the hyperlink i.e. the `<a>` element as well as the alt attribute of an `<img>` element:

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Get href attribute value of first selected hyperlink
    $(".btn-one").click(function(){
        var str = $("a").attr("href");
        alert(str);
    });

    // Get alt attribute value of an image with ID sky
    $(".btn-two").click(function(){
        var str = $("img#sky").attr("alt");
        alert(str);
    });
});
</script>
```

Note: If multiple elements are selected, the `attr()` method only returns the attribute value of the first element from the set of matched elements.

Set Attributes with `attr()` Method

The following example will show you how to set the `checked` attribute of the checkbox.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Check all the checkboxes
    $("button").click(function(){
        $('input[type="checkbox"]').attr("checked", 
"checked");
    });
});
</script>
```
The `attr()` method also allows you to set multiple attributes at a time. The following example will show you how to set the `class` and `title` attribute for the `<img>` elements.

Example
Try this code »
```
<script>
$(document).ready(function(){
    // Add a class and title attribute to all the images
    $("button").click(function(){
        $("img").attr({
            "class" : "frame",
            "title" : "Hot Air Balloons"
        });
    });
});
</script>
```

---

jQuery `val()` Method

The jQuery `val()` method is mainly used to get or set the current value of the HTML form elements such as `<input>`, `<select>` and `<textarea>`.

Get the Values of Form Fields with `val()` Method

The following example will show you how to get the values of form controls:

Example
Try this code »
```
<script>
$(document).ready(function(){
    // Get value of a text input with ID name
    $("button.get-name").click(function(){
        var name = $('input[type="text"]#name').val();
        alert(name);
    });

    // Get value of a textarea with ID comment
    $("button.get-comment").click(function(){
        var comment = $("textarea#comment").val();
        alert(comment);
    });

    // Get value of a select box with ID city
    $("button.get-city").click(function(){
        var city = $("select#city").val();
        alert(city);
    });
});
</script>
```

Note: If multiple form elements are selected, the `val()` method only returns the value of the first element from the set of matched elements.

Set the Values of Form Fields with `val()` Method

The following example will show you how to set the values of the form controls:

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Set value of all the text inputs
    $("button").click(function(){
        var text = $(this).text();
        $('input[type="text"]').val(text);
    });
});
</script>
```

jQuery `Insert` Content

In this tutorial you will learn how to insert new elements or contents to the document using jQuery.

jQuery Insert New Content

jQuery provides several methods, like `append()`, `prepend()`, `html()`, `text()`, `before()`, `after()`, `wrap()` etc. that allows us to insert new content inside an existing element.

The jQuery `html()` and `text()` methods have already covered in the previous chapter, so in this chapter, we will discuss about the rest of them.

jQuery `append()` Method

The jQuery `append()` method is used to insert content to the end of the selected elements.

The following example will append some HTML to all the paragraphs on document ready, whereas append some text to the container element on button click.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Append all paragraphs
    $("p").append(' <a href="#">read more...</a>');

    // Append an element with ID container
    $("button").click(function(){
       $("#container").append("This is demo text.");
    });
});
</script>
```

Note: The contents or elements inserted using the jQuery `append()` and `prepend()` methods is added inside of the selected elements.

---

jQuery `prepend()` Method

The `prepend()` method is used to insert content to the beginning of the selected elements.

The following example will prepend some HTML to all the paragraphs on document ready, whereas prepend some text to the container element on button click.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Prepend all paragraphs
    $("p").prepend("<strong>Note:</strong> ");

    // Prepend an element with ID container
    $("button").click(function(){
       $("#container").prepend("This is demo text.");
    });
});
</script>
```

Insert Multiple Elements with `append()` & `prepend()` Method

The jQuery `append()` and `prepend()` also supports passing in multiple arguments as input.

The jQuery code in the following example will insert a `<h1>`, `<p>` and an `<img>` element inside the `<body>` element as a last three child nodes.

Example

Try this code »

```
<script>
$(document).ready(function(){
    var newHeading = "<h1>Important Note:</h1>";
    var newParagraph = document.createElement("p");
    newParagraph.innerHTML = "<em>Lorem Ipsum is dummy
text...</em>";
    var newImage = $('<img src="images/smiley.png"
alt="Symbol">');
    $("body").append(newHeading, newParagraph, newImage);
});
</script>
```

---

jQuery `before()` Method

The jQuery `before()` method is used to insert content before the selected elements.

The following example will insert a paragraph before the container element on document ready, whereas insert an image before the `<h1>` element on button click.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Add content before an element with ID container
    $("#container").before("<p>&mdash; The Beginning
&mdash;</p>");

    // Add content before headings
    $("button").click(function(){
        $("h1").before('<img src="images/marker-left.gif"
alt="Symbol">');
    });
});
</script>
```

Note: The contents or elements inserted using the jQuery `before()` and `after()` methods is added outside of the selected elements.

---

jQuery `after()` Method

The jQuery `after()` method is used to insert content after the selected elements.

The following example will insert a paragraph after the container element on document ready, whereas insert an image after the `<h1>` element on button click.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Add content after an element with ID container
    $("#container").after("<p>&mdash; The End
&mdash;</p>");

    // Add content after headings
    $("button").click(function(){
        $("h1").after('<img src="images/marker-right.gif"
alt="Symbol">');
    });
});
</script>
```

Insert Multiple Elements with `before()` & `after()` Method

The jQuery `before()` and `after()` also supports passing in multiple arguments as input. The following example will insert a `<h1>`, `<p>` and an `<img>` element before the `<p>` elements.

Example
Try this code »

```
<script>
$(document).ready(function(){
    var newHeading = "<h2>Important Note:</h2>";
    var newParagraph = document.createElement("p");
    newParagraph.innerHTML = "<em>Lorem Ipsum is dummy
text...</em>";
    var newImage = $('<img src="images/smiley.png"
alt="Symbol">');
    $("p").before(newHeading, newParagraph, newImage);
});
</script>
```

---

jQuery `wrap()` Method

The jQuery `wrap()` method is used to wrap an HTML structure around the selected elements.

The jQuery code in the following example will wrap the container elements with a `<div>` element with the class `.wrapper` on document ready, whereas wrap all the inner content of the paragraph elements first with the `<b>` and again with `<em>` element.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Wrap elements with class container with HTML
    $(".container").wrap('<div class="wrapper"></div>');

    // Wrap paragraph's content with HTML
    $("button").click(function(){
        $("p").contents().wrap("<em><b></b></em>");
    });
});
</script>
```

jQuery Remove Elements & Attribute

In this tutorial you will learn how to remove the HTML elements or its contents as well as its attribute from the document using jQuery.

jQuery Remove Elements or Contents

jQuery provides handful of methods, such as `empty()`, `remove()`, `unwrap()` etc. to remove existing HTML elements or contents from the document.

jQuery `empty()` Method

The jQuery `empty()` method removes all child elements as well as other descendant elements and the text content within the selected elements from the DOM.

The following example will remove all the content inside of the elements with the class `.container` on click of the button.

Example
Try this code »

```
<script>
$(document).ready(function(){
    // Empty container element
    $("button").click(function(){
       $(".container").empty();
    });
});
</script>
```

Note: According to the W3C (World Wide Web Consortium) DOM specification, any string of text within an element is considered a child node of that element.

jQuery `remove()` Method

The jQuery `remove()` method removes the selected elements from the DOM as well as everything inside it. In addition to the elements themselves, all bound events and jQuery data associated with the elements are removed.

The following example will remove all the `<p>` elements with the class `.hint` from the DOM on button click. Nested elements inside these paragraphs will be removed, too.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Removes paragraphs with class "hint" from DOM
    $("button").click(function(){
       $("p.hint").remove();
    });
});
</script>
```

The jQuery `remove()` method can also include a selector as an optional parameter, that allows you to filter the elements to be removed. For instance, the previous example's jQuery DOM removal code could be rewritten as follows:

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Removes paragraphs with class "hint" from DOM
    $("button").click(function(){
       $("p").remove(".hint");
    });
});
</script>
```

Note: You can also include selector expression as a parameter within the jQuery `remove()` method, like `remove(".hint, .demo")` to filter multiple elements.

jQuery `unwrap()` Method

The jQuery `unwrap()` method removes the parent elements of the selected elements from the DOM. This is typically the inverse of the `wrap()` method.

The following example will remove the parent element of `<p>` elements on button click.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Removes the paragraph's parent element
    $("button").click(function(){
       $("p").unwrap();
    });
});
</script>
```

---

jQuery `removeAttr()` Method

The jQuery `removeAttr()` method removes an attribute from the selected elements.

The example below will remove the `href` attribute form the `<a>` elements on button click.

Example

Try this code »

```
<script>
$(document).ready(function(){
    // Removes the hyperlink's href attribute
    $("button").click(function(){
       $("a").removeAttr("href");
    });
});
</script>
```

jQuery Add and Remove CSS Classes

In this tutorial you will learn how to add or remove CSS classes using jQuery.

jQuery CSS Classes Manipulation

jQuery provides several methods, such as `addClass()`, `removeClass()`, `toggleClass()`, etc. to manipulate the CSS classes assigned to HTML elements.

jQuery `addClass()` Method

The jQuery `addClass()` method adds one or more classes to the selected elements.

The following example will add the class `.page-header` to the `<h1>` and the class `.highlight` to the `<p>` elements with class `.hint` on button click.

Example
Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery addClass() Demo</title>
<style>
    .page-header{
        color: red;
        text-transform: uppercase;
    }
    .highlight{
        background: yellow;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
```

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("h1").addClass("page-header");
        $("p.hint").addClass("highlight");
    });
});
</script>
</head>
<body>
    <h1>Demo Text</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing
elit...</p>
    <p class="hint"><strong>Tip:</strong> Lorem Ipsum is
dummy text.</p>
    <button type="button">Add Class</button>
</body>
</html>
```

You can also add multiple classes to the elements at a time. Just specify the space separated list of classes within the `addClass()` method, like this:

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery addClass() Demo</title>
<style>
    .page-header{
        color: red;
        text-transform: uppercase;
    }
    .highlight{
        background: yellow;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("h1").addClass("page-header highlight");
    });
});
</script>
```

```
</head>
<body>
    <h1>Hello World</h1>
    <p>The quick brown fox jumps over the lazy dog.</p>
    <button type="button">Add Class</button>
</body>
</html>
```

---

jQuery `removeClass()` Method

Similarly, you can remove the classes from the elements using the jQuery `removeClass()` method. The `removeClass()` method can remove a single class, multiple classes, or all classes at once from the selected elements.

The following example will remove the class `.page-header` from the `<h1>` and the class `.hint` and `.highlight` from the `<p>` elements on button click.

Example
Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery removeClass() Demo</title>
<style>
    .page-header{
        color: red;
        text-transform: uppercase;
    }
    .highlight{
        background: yellow;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("h1").removeClass("page-header");
        $("p").removeClass("hint highlight");
    });
});
</script>
</head>
<body>
    <h1 class="page-header">Demo Text</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing
elit...</p>
    <p class="hint highlight"><strong>Tip:</strong> Lorem
Ipsum is dummy text.</p>
    <button type="button">Remove Class</button>
</body>
</html>
```

When the `removeClass()` method is called without an argument it will remove all the classes from the selected elements. Here's an example:

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery removeClass() Demo</title>
<style>
    .page-header{
        color: red;
        text-transform: uppercase;
    }
    .highlight{
        background: yellow;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("h1").removeClass();
        $("p").removeClass();
    });
});
</script>
</head>
<body>
    <h1 class="page-header">Demo Text</h1>
    <p>Lorem ipsum dolor sit amet, consectetur adipiscing
elit...</p>
```

```
    <p class="hint highlight"><strong>Tip:</strong> Lorem
Ipsum is dummy text.</p>
    <button type="button">Remove Class</button>
</body>
</html>
```

---

jQuery `toggleClass()` Method

The jQuery `toggleClass()` add or remove one or more classes from the selected elements in such a way that if the selected element already has the class, then it is removed; if an element does not have the class, then it is added i.e. toggle classes.

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery toggleClass() Demo</title>
<style>
    p{
        padding: 10px;
        cursor: pointer;
        font: bold 16px sans-serif;
    }
    .highlight{
        background: yellow;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $("p").click(function(){
        $(this).toggleClass("highlight");
    });
});
</script>
</head>
<body>
```

```
    <p>Click on me to toggle highlighting.</p>
    <p class="highlight">Click on me to toggle
highlighting.</p>
    <p>Click on me to toggle highlighting.</p>
</body>
</html>
```

You will learn about the CSS properties manipulation in next chapter »

jQuery Get and Set CSS Properties

In this tutorial you will learn how to get or set style properties using jQuery.

jQuery `css()` Method

The jQuery `css()` method is used to get the computed value of a CSS property or set one or more CSS properties for the selected elements.

This method provides a quick way to apply the styles directly to the HTML elements (i.e. inline styles) that haven't been or can't easily be defined in a stylesheet.

Get a CSS Property Value

You can get the computed value of an element's CSS property by simply passing the property name as a parameter to the `css()` method. Here's the basic syntax:

```
$(selector).css("propertyName");
```

The following example will retrieve and display the computed value of the CSS `background-color` property of a `<div>` element, when it is clicked.

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery css() Demo</title>
<style>
    div{
        width: 100px;
        height: 100px;
        display: inline-block;
        margin: 10px;
    }
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
```

```
<script>
$(document).ready(function(){
    $("div").click(function(){
        var color = $(this).css("background-color");
        $("#result").html(color);
    });
});
</script>
</head>
<body>
    <div style="background-color:orange;"></div>
    <div style="background-color:#ee82ee;"></div>
    <div style="background-color:rgb(139,205,50);"></div>
    <div style="background-color:#f00;"></div>
    <p>The computed background-color property value of the
clicked DIV element is: <b id="result"></b></p>
</body>
</html>
```

Set a Single CSS Property and Value

The `css()` method can take a property name and value as separate parameters for setting a single CSS property for the elements. The basic syntax can be given with:

```
$(selector).css("propertyName", "value");
```

The following example will set the CSS `background-color` property of the `<div>` elements, to the color value `blue`, when it is clicked.

Example

Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery css() Demo</title>
<style>
    .box{
        width: 100px;
        height: 100px;
        display: inline-block;
        border: 1px solid #cdcdcd;
        margin: 10px;
    }
```

```
</style>
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $(".box").click(function(){
        $(this).css("background-color", "blue");
    });
});
</script>
</head>
<body>
    <div class="box"></div>
    <div class="box"></div>
    <div class="box"></div>
    <div class="box"></div>
</body>
</html>
```

Set Multiple CSS Properties and Values

You can also set multiple CSS properties with the `css()` method. The basic syntax for setting the more than one property for the elements can be given with:

```
$(selector).css({"propertyName":"value", "propertyName":"value",
...});
```

The following example will set the `background-color` as well as the `padding` CSS property for the selected elements at the same time.

Example
Try this code »

```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title>jQuery css() Demo</title>
<style>
    p{
        font-size: 18px;
        font-family: Arial, sans-serif;
    }
</style>
```

```
<script src="https://code.jquery.com/jquery-
3.5.1.min.js"></script>
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").css({"background-color": "yellow",
"padding": "20px"});
    });
});
</script>
</head>
<body>
    <h1>This is a heading</h1>
    <p style="background-color:orange;">This a
paragraph.</p>
    <p style="background-color:#ee82ee;">This is another
paragraph.</p>
    <p style="background-color:rgb(139,205,50);">This is
none more paragraph.</p>
    <p>This is one last paragraph.</p>
    <button type="button">Add CSS Styles</button>
</body>
</html>
```