ITC

jQuery How to Tips and Tricks

By IT Funda Corporation (http://www.ItFundaCorporation.com)

This jQuery book covers more than 101 how to Tips and Tricks of jQuery methods and written in easy to understand manner. All how to's are supported by a demo page & source code. This book comes with easy to navigate source code.

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Acknowledgement

I would like to thank John Resig for such a nice invention of jQuery that really changes the way JavaScript code is written. Apart from John I would also like to thanks all the project team who is supporting the development of jQuery and enhancing it on regular basis.

It was almost impossible to write this small book without the help from jQuery.com website from where I have learnt and practiced jQuery. So lots of thanks to the team behind the jQuery.com website.

Purpose of this book

The purpose of my effort of writing this and related information is not to replicate the same thing that is already there on different jquery related websites but to present the information in very concise and simple manner. To show the live demo that is easy to learn, use and understand.

I have also tried to provide the solution for some commonly faced problems while developing web pages.

How this book has been organized

This book has been organized in how to format. All jQuery methods covered in this book has been presented in such a manner that they are made to solve a particular problem. After every how to title, brief explanations about that method or topic has been written, after that code snippet related with that method or topic has been written and the explanations of the code follows. At last the demo url has been placed so that you can click on the url to directly see how the method or topic you are reading actually work.

Acceptance

I do accept that I am not master of any subject as learning is an endless journey, so if you find any error or improvement needed in this book, kindly let me know at Sheo.Narayan@ItFunda.Com.

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Who this book is written for

This book is written for beginners who have very basic knowledge of HTML, CSS, and JavaScript and want to learn jQuery. They can be either a web designer or a web developer. After going through this book, you should be intermediate level of jQuery knowledge and can you learn advanced concepts, different plug-ins easily on your own.

Is this book targeted for .NET Developer only?

No, despite the fact that the demo application web pages are .aspx page (asp.net pages), there is nothing technical in them related with asp.net or C#. They are pretty straight forward. Apart from certain pages like getting response from server in case of ASP.NET AJAX methods, all are client side (html, javascript) codes and it can be easily understandable by a person with any background (.NET or PHP or Java).

Of course in order to run the attached demo application, you will need to host them in the Internet Information Service (IIS) and your system should .NET Framework installed.

How to understand the code if I am not from .NET Background?

The web page structure is in following manner

There is a master page named “MasterPage.master” that has the reference of jQuery file like below.

```
<!-- START - jQuery Reference -->
    <script type="text/javascript" language="Javascript"
src="http://ajax.aspnetcdn.com/ajax/jquery/jquery-1.4.1.min.js"></script>
    <script type='text/javascript'>//<![CDATA[
        if (typeof jQuery == 'undefined') {
            document.write(unescape("%3Cscript src='/Script/jquery-
1.4.1.min.js' type='text/javascript' %3E%3C/script%3E"));
        }//]]>
    </script>
    <!-- END - jQuery Reference -->
```

In every content pages (extension ends with .aspx), focus on the code written only in between following tags (ignore the code for - Navigations Links) and you will be able to understand the code very easily.

```
<asp:Content ID="Content1" ContentPlaceHolderID="ContentPlaceHolder1"
runat="Server">
```

And

```
</asp:Content>
```

For example: the page **/Selectors/AllSelector.aspx** you should consider following code to understand all Selector.

```
<!-- START - jQuery Reference -->
    <script type="text/javascript" language="Javascript" src="
http://ajax.aspnetcdn.com/ajax/jquery/jquery-1.4.1.min.js"></script>
    <script type='text/javascript'>//<![CDATA[
        if (typeof jQuery == 'undefined') {
            document.write(unescape("%3Cscript src='/Script/jquery-1.4.1.min.js'
type='text/javascript' %3E%3C/script%3E"));
        }//]]>
    </script>
    <!-- END - jQuery Reference -->


<h3>All Selectors</h3>

    <div>
        <p id="p1">
            jQuery selector is used to select a particular type of element or
element of a particular
            Id, or class used</p>
        <p class="class1">
            Class - jQuery selector is used to select a particular type of element
or element
            of a particular Id, or class used</p>
    </div>
    <div id="div2">
        <p>Paragraph 1</p>
        <p>Paragraph 2</p>
        <p>Paragraph 3</p>
    </div>
    <input id="txtName" type="text" />

    <script language="javascript" type="text/javascript">

        $(document).ready(function () {

            $("*").css("border", "5px dashed red");

        });

    </script>
```

If you copy-paste the above code under <body> </body> tag, you will notice that all the all selectors work and it select all the element of the page and apply the specified css style.

How to setup the demo source code application?

To setup the demo source code application, please read ReadMe.txt from the source code root folder.

What is jQuery?

jQuery is not a language but it is a well written JavaScript code, As quoted on official jQuery website "it is a fast and concise JavaScript Library that simplifies HTML document traversing, event handling, animating, and Ajax interactions for rapid web development."

In order to work with jQuery you should be aware of basics of JavaScript, HTML and CSS.

It was released in January 2006 at BarCamp NYC by John Resig.

Licensing:

It is free, open source software Dual-licensed under the MIT License and the GNU General Public License. Microsoft has integrated jQuery officially into its IDE Visual Studio 2010 and jQuery intellisense is available in Visual Studio 2010 now.

Why jQuery?

jQuery is very compact and well written JavaScript code that increases the productivity of the developer by enabling them to achieve critical UI functionality by writing very less amount of code.

It helps to

- Improve the performance of the application
- Develop most browser compatible web page
- Implement UI related critical functionality without writing hundreds of lines of codes
- Fast
- Extensible – jQuery can be extended to implement customized behavior

Other advantages of jQuery are

- No need to learn fresh new syntaxes to use jQuery, knowing simple JavaScript syntax is enough
- Simple and Cleaner code, no need to write several lines of codes to achieve complex functionality.

Where to download jQuery from?

jQuery javascript file can be downloaded from jQuery Official website
http://www.jquery.com/

How to use jQuery?

jQuery usually comes as a single JavaScript file containing everything comes out of the box with jQuery. It can be included within a web page using the following mark-up:

To load local jQuery file

```
<script type="text/javascript" src="jQuery-1.4.1-min.js"></script>
```

Ideally this markup is kept in under <head></head> tag of your web page, however you are free to keep anywhere you want.

Do I need to refer jQuery file both in Master page/base page/template page and content page?

No, master page/base page/ template page basically helps to create consistent layout for the page in the application. In case you have referred the jQuery file in master page/base page/ template page that cause rendering the file in the browser, you do not need to refer jQuery file the content page again.

In summary, there should not be more than one <script> tag with jQuery file reference in the source code of the rendered web page in the browser.

What is the difference between jQuery-x.x.x.js and jQuery.x.x.x-min.js

In terms of functionality, there is no difference between the jQuery-x.x.x.js and jQuery-x.x.x-min.js (also called minified version). However this can play a vital role in the performance of the web page.

How it affects the performance?
jQuery-1.4.4.js file size is 178 KB as against its minified version jQuery-1.4.4-min.js that is only 76.7 KB in size. So when your page loads in the client's browser if you are not using minified version, it loads 178 KB file that takes more time to load than 76.7 KB.

Which version of jQuery file should be used?

In most of the recent releases so far, the core functionality of jQuery remains same however some more cool and better features are added. Ideally you should use the latest jQuery files available on the jQuery.com website. By doing this you ensure that your earlier functionality will still work and you can use new features available as part of the new release.

Loading jQuery from CDN (Content Distribution Network)

What is CDN?

CDN Stands for **C**ontent **D**istribution **N**etwork or also called **C**ontent **D**elivery **N**etwork is a group of computers placed at various points connected with network containing copies of data files to maximize bandwidth in accessing the data. In CDN a client access a copy of data nearer to the client location rather than all clients accessing

from the one particular server. This helps to achieve better performance of data retrieval by client.

There are two leading CDNs available that hosts jQuery files.

Microsoft - To load jQuery from Microsoft AJAX CDN

jQuery file can be loaded from Microsoft AJAX CDN. For more details, go to http://www.asp.net/ajaxlibrary/cdn.ashx. You will need to keep following tags in your page.

```
<script type="text/javascript" language="Javascript"
src="http://ajax.aspnetcdn.com/ajax/jquery/jquery-1.4.1.min.js"></script>
```

Google - To load jQuery from Google Libraries API

jQuery file can be loaded from Google CDN for more details, go to http://code.google.com/apis/libraries/devguide.html. You will need to keep following tag in your page.

```
<script type="text/javascript" language="Javascript"
src="https://ajax.googleapis.com/ajax/libs/jquery/1.4.4/jquery.min.js"></sc
ript>
```

Why to load jQuery file from CDN?

You may ask that if we can load the jQuery file from our own server why to load it from the CDNs. The answer is logical and very simple. The browser behavior is that whenever it loads any webpage, it keeps related files (eg. Javascript file, CSS file and Images) used for that page into its cache (also called history). When next time the user browses any web page, browser loads only those files that are new or modified and is not available in the browser cache or history. In this way, browser improves its performance and loads the page.

The possibility is that if more and more websites are using CDNs, the user might have already browsed some other web pages that is using CDNs jQuery file and that file may have into browser cache; so when user browse your page and you are also using CDNs file, the older cached version of jQuery file will be used. In this way your page will load faster as browser will not have to load the jQuery file for your page again.

The benefit

1. Faster page load as jQuery file need not to be downloaded
2. Saves your bandwidth as jQuery file is not loaded from your server
3. Scalable - generally CDNs place these files on the servers located at different geographical locations of the world so that they load faster so irrespective of from where your user is browsing your page, your application runs well.

What if the latest jQuery version is available and I am still referring older version of jQuery file from CDNs?

Do not worry about it, it's a general promise made by CDNs that they will remain hosting the older version of the files on the same location where they had initially released; so even if newer version of the files are released, the older version remains there on the CDNs and your web page still works.

How to load local jQuery file in case CDN is not available?

Sometimes, it may happen that the CDN you have used to load the jQuery file is not available (it rarely happens, however anything is possible, isn't it?); in that case you should load your local jQuery file that is available on your server so that all jQuery related functionality still work on your page.

Write following lines of code

```
     <!-- START - jQuery Reference -->
    <script type="text/javascript" language="Javascript"
src="http://ajax.aspnetcdn.com/ajax/jquery/jquery-1.4.1.min.js "></script>

    <script type='text/javascript'>//<![CDATA[
        if (typeof jQuery == 'undefined') {
            document.write(unescape("%3Cscript src='/Script/jquery-1.4.1.min.js'
type='text/javascript' %3E%3C/script%3E"));
        }//]]>
    </script>
    <!-- END - jQuery Reference -->
```

Replace bolded path with your own jQuery file path on the server. In the above code, first line tries to load the jQuery file from CDN, if browser could load the file successfully, "jQuery" variable will not be undefined and next script will not run otherwise next script will run that will write the script tag to load the jQuery file from your server.

How to execute jQuery code?

There are two ways you may want to execute jQuery codes.

1. As and when page loads, execute the jQuery code

```
<script language="javascript" type="text/javascript">
    $(function () {
        $("#div1").css("border", "2px solid green");
    });
</script>
```

OR

```
<script language="javascript" type="text/javascript">
        $("#div1").css("border", "2px solid green");
</script>
```

The benefit of executing jQuery code in this way is that it doesn't wait the whole page to load completely, so in case you want user to see the effects as soon as the corresponding elements are loaded, you can use this.

However the disadvantage is that if the element on which jQuery has to execute has not loaded then it will error out or you will not get desired result; so while using this way of executing jQuery code, you will have to make sure that the element on which you want to work with jQuery is loaded first (you can place your jQuery code right after your HTML element).

2. Execute jQuery only when the complete DOM objects (the complete page has been loaded). You will have to wrap your code in *.ready* function.

```
<script language="javascript" type="text/javascript">
    $(document).ready(function () {
            $("#div1").css("border", "2px solid green");
    });
</script>
```

This is the better and safer way to execute jQuery. This makes sure that jQuery code will execute only if complete page has been loaded in the browser so you are rest assured that user will not see any undesired behavior on the page.

As a developer, the decision of where and how to write jQuery code lies on you. I prefer to use 2nd method as it ensures that my complete page is loaded in the browser and I am ready to play with any element available on the page.

jQuery Features

jQuery Core

Demo url: http://localhost:9007/jQueryWeb/jQueryCore.aspx

jQuery accepts a string enclosed with double quote ("") that can contain a CSS selector which is used to match a set of elements on the web page.

jQuery code can start with either "**jQuery**" word or a "**$**" (dollar symbol). Take a look at below code snippet

```
<script language="javascript" type="text/javascript">
        $(function () {
            jQuery("#div1").css("border", "2px solid red");
        });
</script>
```

OR

```
<script language="javascript" type="text/javascript">
```

```
        $(function () {
            $("#div1").css("border", "2px solid green");
        });
    </script>
```

Both above code snippets are functionally same and do the same thing. So you can either user **jQuery** or **$** when you are writing jQuery code.

jQuery Selectors

Demo url: http://localhost:9007/jQueryWeb/Selectors.aspx

What is Selectors?

To work with an element on the web page, first we need to find them. To find the html element in jQuery we use selectors. jQuery provides many selectors out of the box. Let's explain some of the very useful selectors in "how to" ways.

How to select all elements of the page? - *All Selector ("*")*

To select all elements of the page, we can use all selectors, for that we need to use * (asterisk symbol).

```
    <script language="javascript" type="text/javascript">
        $("*").css("border", "5px dashed green");
    </script>
```

Above code will select all elements of the web page and apply border width as 5 pixel, style as dashed and color as green.

Demo url: http://localhost:9007/jQueryWeb/Selectors/AllSelector.aspx

How to select a particular element having a specific class? - *Class Selector (".class")*

To select an element with a specific class, class selector can be used. We need to prefix the class name with "." (dot).

```
    <script language="javascript" type="text/javascript">
        $(".class1").css("border", "5px solid green");
    </script>
```

Above code will select all elements of the web page having class as "class1" and apply css style border width as 5 pixel, style as solid and color as green.

Demo url: http://localhost:9007/jQueryWeb/Selectors/ClassSelector.aspx

How to select all elements of specific type? - *Element Selector ("element")*

To select all elements of specific type, we can use element selector. We need to use the html tag name.

```
    <script language="javascript" type="text/javascript">
        $("p").css("border", "5px solid green");
    </script>
```

Above code will select all p (paragraph) elements of the web page and apply css style border width as 5 pixel, style as solid and color as green.

Demo url: http://localhost:9007/jQueryWeb/Selectors/ElementSelector.aspx

How to select an element having a specific id - *ID Selector ("#id")*

To select an element having a specific id, id selector can be used. We need to prefix the id with "#" (hash symbol).

```
<script language="javascript" type="text/javascript">
        $("#p1").css("border", "5px solid green");
</script>
```

Above code will select all html elements having id attribute as "p1" and apply css style border width as 5 pixel, style as solid and color as green.

Demo url: http://localhost:9007/jQueryWeb/Selectors/IdSelector.aspx

How to select multiple elements at a time? *Multiple Selector ("selector1, selector2, selectorN")*

To select multiple elements having different attributes, multiple selector can be used. We can mix the class selector, element selector, id selector all in this selector separated by "," (comma).

```
<script language="javascript" type="text/javascript">
        $("p.class1, #p1").css("border", "5px solid green");
</script>
```

Above code will select all paragraph (p) having class attribute set as "class1" and all html elements having id attribute as "p1" and apply css style border width as 5 pixel, style as solid and color as green.

Demo url: http://localhost:9007/jQueryWeb/Selectors/MultipleSelector.aspx

How to select an element based on its attribute - *Attribute Selector (element['attribute$="name"]')*

To select an element based on a particular attribute value, attribute selector can be used. For example, if we have multiple textboxes on the page but we want to select all textboxes which ends with id value "txtName", we can use attribute selector.

```
<script language="javascript" type="text/javascript">
        $('input[id$="txtName"]').val('My data');
</script>
```

Above code snippet will select the textbox having id as "txtName" and set its value as "My data".

Notice that as against all other selectors, this selector is written in the single quote (') instead of double quote (") however the attribute value is written in the double quote (").

Demo url: http://localhost:9007/jQueryWeb/Selectors/AttributeSelector.aspx

How to select the first child of the parent element? - *First child selector*

To select first child of the parent element first child selector can be used.

```
<script language="javascript" type="text/javascript">
```

```
        $("#div2 p:first-child").css("background", "red");
</script>
```

Above code snippet will select the first paragraph (p) element that is inside the div element whose id is “div2” and will change the background color as red.

Demo url: http://localhost:9007/jQueryWeb/Selectors/firstChildSelector.aspx

How to select last child of the parent element? – *Last child selector*

To select the last child of the parent element last child selector can be used.

```
<script language="javascript" type="text/javascript">
        $("#div2 p:last-child").css("background", "red");
</script>
```

Above code snippet will select the last paragraph (p) element that is inside the div element whose id is “div2” and will change the background color as red.

Demo url: http://localhost:9007/jQueryWeb/Selectors/lastChildSelector.aspx

How to select a specific child of the parent element? *nth child selector*

To select the specific child of the parent element nth child select can be used.

```
<script language="javascript" type="text/javascript">
        $("#div2 p:nth-child(2)").css("background", "red");
</script>
```

Above code snippet will select the 2nd paragraph (p) element that is inside the div element whose id is “div2” and will change the background color as red.

Demo url: http://localhost:9007/jQueryWeb/Selectors/nthChildSelector.aspx

jQuery Attributes

Demo url: http://localhost:9007/jQueryWeb/Attributes.aspx

jQuery Attributes methods are used to get and/or set the attributes of the html elements.

How to add a css class to an element? - *.addClass()*

To add a css class to the html element, addClass method can be used.

```
<script language="javascript" type="text/javascript">
        $("div").addClass("class2");
</script>
```

Above code will set the class attribute of every “div” element on the web page to “class2”.

Demo url: http://localhost:9007/jQueryWeb/Attributes/addClass.aspx

How to get or set the attribute value of an element? - *.attr()*

To get or set a particular attribute of an element, attr() method can be used.

```
<script language="javascript" type="text/javascript">
```

```
        $("#div2").attr('class', 'class2');
        alert($("#div2").attr('class'));
    </script>
```

In above code snippet, the first line of code will set the class attribute as “class2” of the div element whose id as “div2”. The second line of code will alert the value of class attribute for the element whose id is “div2”.

Demo url: http://localhost:9007/jQueryWeb/Attributes/attr.aspx

How to determine if a given css class name has been used in an element - *.hasClass()*

To determine if a given css class name has been used for an element, hasClass() method can be used.

```
<script language="javascript" type="text/javascript">
       alert($("#div2").hasClass('class2'));
</script>
```

Above code snippet will alert **true** if element whose id is “div2” will have class attribute set as “class2” otherwise it will alert **false**.

Demo url: http://localhost:9007/jQueryWeb/Attributes/hasClass.aspx

How to get or set the html content for a particular element - *.html()*

To get or set the html content for a particular element, html() method can be used.

```
alert($("#div2").html());
```

Above code snippet will alert the complete html content exist inside the element whose id is “div2” (in my case it’s a div element).

```
$("#div3").html("This is a good <b>boy</b>");
```

Above code snippet will set the specified html content to the element whose id is “div3”.

Demo url: http://localhost:9007/jQueryWeb/Attributes/html.aspx

How to append html content to the element? *.append()*

To append html content to a particular element, append() method can be used.

```
$("#div2").append(" | This is a good <i>boy</i>");
```

Above code snippet will append the specified text in the html element whose id is “div2”

Demo url: http://localhost:9007/jQueryWeb/Attributes/append.aspx

How to append the source element content to the target? - *.appendTo()*

To append the source html content at the end of the target html content, appendTo method can be used.

```
$("p").appendTo("#div3");
```

Above code snippet will append all paragraphs element (“p”) content to the element whose id is “div3” (consider “p” as source and “div3” as target element).

Demo url: http://localhost:9007/jQueryWeb/Attributes/appendTo.aspx

How to insert html content at the beginning of an element - *.prepend()*

To insert html content at the beginning of an element, prepend() method can be used

```
$("#div2").prepend("Prepending text : ");
```

Above code snippet will insert specified string at the beginning of the element "div2" element.

For example, below code

```
<div id="div2" class="class1">Demo of <b>attr</b> attribute</div>
```

Will change to

```
<div id="div2" class="class1">Prepending Text : Demo of <b>attr</b>
attribute</div>
```

After executing the above prepend statement (notice the bold text).

Demo url: http://localhost:9007/jQueryWeb/Attributes/prepend.aspx

How to insert html content from source element to the beginning of target - *.prependTo()*

To insert html content of the source element to the beginning of the target element, prependTo() method can be used.

```
$("p").prependTo("#div2");
```

Above code snippet will write all paragraph elements of the page before the "div2" element.

Demo url: http://localhost:9007/jQueryWeb/Attributes/prependTo.aspx

How to get or set the element text? *.text()*

To get or set the element text content (including the child elements), text() method can be used.

```
$("#div3").html($("#div2").text());
```

Above code snippet will set the text content of element "div2" as the html content to the element "div3".

```
$("#div3").text("This text is set by <b>jQuery</b> !");
```

Above code snippet will set specified text to the element whose id is "div3".

Demo url: http://localhost:9007/jQueryWeb/Attributes/text.aspx

How to remove css class from an element? *.removeClass()*

To remove a css class from an element, removeClass method can be used.

```
$("#div2").removeClass("class1");
```

Above code snippet will remove the class "class1" from the html "div2" element.

Demo url: http://localhost:9007/jQueryWeb/Attributes/removeClass.aspx

How to remove an attribute from an element? *.removeAttr()*

To remove an attribute from the html element, removeAttr can be used.

```
$("#div4").removeAttr("style");
```

Above code snippet will remove the style attribute from html element whose id is “div2”.

Demo url: http://localhost:9007/jQueryWeb/Attributes/removeAttr.aspx

How to toggle the class of an element? *.toggleClass()*

To toggle (add/remove) css class of an html element, toggleClass() method can be used.

```
$("#btnToggleClass").click(function () {
  $("#div2").toggleClass("class1");
});
```

Above code will toggle class “class1” to the element whose id is “div2” on the button(“btnToggleClass”) click event.

Demo url: http://localhost:9007/jQueryWeb/Attributes/toggleClass.aspx

How to get or set the value of an element? *.val()*

To get an set the value attribute of an html element, val() method can be used..

```
alert($("#btnToggleClass").val());
```

Above code snippet will alert the value of the element whose id is “btnToggleClass” (in my case button, it will return button text).

```
$("#btnToggleClass").val("New Value");
```

Above code snippet will set the specified value to the html element whose id s “btnToggleClass” (in my case, it will set the text of button to “New Value”).

Demo url: http://localhost:9007/jQueryWeb/Attributes/val.aspx

jQuery Traversing

Demo url http://localhost:9007/jQueryWeb/Traversing.aspx

jQuery traversing methods enable us to traverse through the html elements of the web page.

How to add an element to a particular element - *.add()*

To add an html element to a particular html element, add() method can be used.

```
$("div").add("p").append(" + This is added - ").css("color", "brown");
```

Above code snippet add a paragraph (p) element to all div element of the page. That paragraph element will have “ + This is added - ” text written in brown color.

Demo url: http://localhost:9007/jQueryWeb/Traversing/add.aspx

How to get all the children elements of a element? - *.children()*

To get all the children element of an parent element, children() method can be used.

```
$("div").children().css("background", "red");
```

Above code snippet will get all the children element of all the div element of the page and apply css style background color as red.

Demo url: http://localhost:9007/jQueryWeb/Traversing/children.aspx

How to iterate through each specified element of the page? - *.each()*

To iterate through each specified element of the page, each() method can be used.

```
$('p').each(function (index) { alert(index + ': ' + $(this).text()); });
```

Above code snippet will iterate through every paragraph of the page and alert its zero based index (position in the page and its text).

Demo url: http://localhost:9007/jQueryWeb/Traversing/each.aspx

How to find a specific element form the group of similar kind of elements? - *.eq()*

To find a specific element from the group of similar kind of element, eq() method can be used.

```
$('p').eq(2).css('color', 'red');
```

Above code snippet shall find the 2nd paragraph (“p”) from the page and apply foreground color as red.

Demo url: http://localhost:9007/jQueryWeb/Traversing/eq.aspx

How to filter an element from the group of similar kind of elements based on its attribute value? - *.filter()*

To filter an element from the group of similar kind of elements based on its attribute value, filter() method can be used.

```
$("p").filter(".class1").css("border", "1px dotted red");
```

Above code snippet will filter the paragraph having class as “class1” and apply css style border 1px style dotted and color red.

Demo url: http://localhost:9007/jQueryWeb/Traversing/filter.aspx

How to find the descendent of an element - *.find()*

To find the descendent of the specified element, find() method can be used.

```
$("div").find(".class1").css("border", "5px dashed green");
```

Above code snippet shall find all div element and find only those descendent elements having class specified as “class1”.

The different between find and filter is that filter works on the specified element only however find works in the descendent elements.

Demo url: http://localhost:9007/jQueryWeb/Traversing/find.aspx

How to find the first element from the matched element – *.first()*

To find the first element from the group of matched element, first() method can be used.

```
$("div li").first().css("border", "5px dashed green");
```

Above code snippet will find first “li” element found under the each “div” element of the web page.

Demo url: http://localhost:9007/jQueryWeb/Traversing/first.aspx

How to find the last element form the matched element - *.last()*

To find the last element from the group of matched element, last() method can be used.

```
$("div li").last().html("<b>Changed</b>");
```

Above code snippet will change the html of the last “li” element found under each “div” element of the page.

Demo url: http://localhost:9007/jQueryWeb/Traversing/last.aspx

How to find the immediate next element from the element found by the selector - *.next()*

To find the immediate next element from the element found by the selector, next() method can be used.

```
$("div li").first().next().css("border", "5px dashed green");
```

Above code snippet will find the second “li” element under each “div” element.

Demo url: http://localhost:9007/jQueryWeb/Traversing/next.aspx

How to find the parent element of an element - *.parent()*

To find the parent element of an element, parent() method can be used.

```
$("ul").parent().css("border", "2px dashed green ");
```

Above code snippet shall find the parent element of the “ul” element (In my case “ul” is kept under “div”, so it will apply the border css style width as 2px, border style as dotted and color as green).

Demo url: http://localhost:9007/jQueryWeb/Traversing/parent.aspx

jQuery Manipulations

Demo url: http://localhost:9007/jQueryWeb/Manipulations.aspx

jQuery manipulations methods are used to manipulate the web page contents.

How to place content before a specific element? - *.before()*

To place content before a specific html element, before() method can be used.

```
$("h1").before("<h2>This should not be at the top</h2>");
```

Above code snippet will insert the specified text before “h1” tag of the web page.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/before.aspx

How to place content after a specific element? - *.after()*

To place content after a specific html element, after() method can be used.

```
$("h1").after("<h2>This should be the sub heading</h2>");
```

Above code snippet will insert the specified text after “h1” of the web page.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/after.aspx

How to get and set the height of an element? *.height()*

To get and set the height of an html element, height() method can beused.

```
$("h1").css("background", "#c0c0c0").height("200px");
```

Above code snippet will set the height of the “h1” tag to 200px.

```
alert($("h1").height());
```

Above code snippet will alert the height of the “h1” element.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/height.aspx

How to get and set the width of an element? - *.width()*

To get and set the width of an html element, width() method can be used.

```
$("h1").css("background", "#c0c0c0").width("200px");
```

Above code snippet will set the width of the “h1” tag to 200px.

```
alert($("h1").width());
```

Above code snippet will alert the width of the “h1” element.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/width.aspx

How to insert an element after a specific element? - *.insertAfter()*

To insert an html element after specified html element, insertAfter() method can be used.

```
$("h1").insertAfter("#div3");
```

Above code snippet will insert “h1” element after the element whose id is “div3”

Demo url: http://localhost:9007/jQueryWeb/Manipulation/insertAfter.aspx

How to insert an element before a specific element? - *.insertBefore()*

To insert an html element before specified html element, insertBefore() method can be used.

```
$("h1").insertBefore("#div3");
```

Above code snippet will insert “h1” element before the element whose id is “div3”.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/insertBefore.aspx

How to retrieve the position of an html element? - *.position()*

To get the position of an html element, position() method can be used that gives the position object which can be used to determine the left and top position relative to its parent element.

```
var position = $("h1").position();
alert(position.left + " : " + position.top);
```

Above code snippet will find the position object for the “h1” element and alert its left and top position relative to its parent.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/position.aspx

How to get and set the horizontal scroll position of an element? - *.scrollLeft()*

To get and set the current horizontal scroll position of an element, scrollLeft() method can be used.

```
alert($("#divScroll").scrollLeft());
$("#divScroll").scrollLeft("100");
```

Above code snippet will first alert the scroll left position of the element whose id is “divScroll” and then move its horizontal scroll bar position to 100.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/scrollLeftTop.aspx

How to get and set the vertical position of an element? - *.scrollTop()*

To get and set the current vertical position of an element, scrollTop() method can be used.

```
alert($("#divScroll").scrollTop());
$("#divScroll").scrollTop("100");
```

Above code snippet will first alert the scroll top position of the element whose id is “divScroll” and then move its vertical scroll bar position to 100.

Demo url: http://localhost:9007/jQueryWeb/Manipulation/scrollLeftTop.aspx

How to unwrap the parent element from the specific element? - *.unwrap()*

To unwrap the parent element from the specific element, unwrap() method can be used.

```
$("#divP").unwrap();
```

Above code will remove the parent element of the “divP”.

```
<div id="divScroll" style="height:100px;width:300px;overflow:scroll;">
 <p id="divP" style="height:300px;width:500px;background:#efefef;">
     This is looking nice.
 </p>
</div>
```

After unwrapping, above code snippet will become

```
<p id="divP" style="height:300px;width:500px;background:#efefef;">
    This is looking nice.
</p>
```

Demo url: http://localhost:9007/jQueryWeb/Manipulation/wrapunwrap.aspx

How to wrap an element from a specific element? - *.wrap()*

To wrap an element from a specific element, wrap() method can be used.

```
$("#divP").wrap("<div id='divScroll'
style='height:100px;width:300px;overflow:scroll;'></div>");
```

Above code will wrap the “divP” with the specified div html tag.

```
<p id="divP" style="height:300px;width:500px;background:#efefef;">
     This is looking nice.
 </p>
```

After wrapping, above code snippet will become

```
<div id="divScroll" style="height:100px;width:300px;overflow:scroll;">
 <p id="divP" style="height:300px;width:500px;background:#efefef;">
     This is looking nice.
 </p>
</div>
```

Demo url: http://localhost:9007/jQueryWeb/Manipulation/wrapunwrap.aspx

jQuery Events

Demo url: http://localhost:9007/jQueryWeb/Events.aspx

jQuery events methods are used to specify the behavior of the html element when user interacts with the web page contents.

How to attach a blur event to an element - *.blur()*

To attach blur event to an element, blur() method can be used that fires when the element loses focus.

```
$("#txtBlur").blur(function () {
    alert("blur handler called");
});
```

Above code will execute when user will leave the focus from the "txtBlur" textbox.

Demo url: http://localhost:9007/jQueryWeb/Events/blur.aspx

How to attach change event to an element - *.change()*

To attach change event to an element, change() method can be used that fires when the element value is changed.

```
$("#dropChange").change(function () {
    alert("change handler called");
});
```

Above code will execute when user changes the value of the DropDown whose id is "dropChange".

Demo url: http://localhost:9007/jQueryWeb/Events/change.aspx

How to attach a click event to an element - *.click()*

To attach a click event to an element, ckick() method can be used that fires when the element is clicked.

```
$("#btnClick").click(function () {
    alert("click event called");
});
```

Above code will execute when user clicks the button "btnClick".

Demo url: http://localhost:9007/jQueryWeb/Events/click.aspx

How to attach double click event to an element - *.dblclick()*

To attach double click event to an element, dblclick() method can be used that fires when the element is double clicked.

```
$("#btnDblClick").dblclick(function () {
    alert("dblclick event called");
});
```

Above code will execute when user double click the "btnDblClick" button.

Demo url: http://localhost:9007/jQueryWeb/Events/dblclick.aspx

How to attach and detach an event to and from an element? - *.bind() & .unbind()*

To attach and detach an event to and from an element, bind() and unbind() method can be used respectively.

```
function bindAction() {
    alert("I am active !");
```

```
}

$("#btnBindAction").click(function () {
    $("#btnAction").bind('click', bindAction).val("Click Now");
});

$("#btnUnbindAction").click(function () {
    $("#btnAction").unbind('click', bindAction).val("Simple Button");
});
```

In above code snippet I have declared a function called “bindAction” that will be bounded to the “btnAction” when “btnBindAction” will be clicked and the same function will be unbounded when “btnUnbinAction” will be clicked.

Demo url: http://localhost:9007/jQueryWeb/Events/bindunbind.aspx

How to attach multiple events at once to an element?

To attach multiple events to an element, write the events separated by space.

```
function bindAction() {
        alert("I am active !");
}

$("#btnBindAction").click(function () {
                $("#btnAction").bind('mouseenter click',
  bindAction).val("Mouse hover Now and then click");
});

$("#btnUnbindAction").click(function () {
                $("#btnAction").unbind('mouseenter click',
  bindAction).val("Simple button");
});
```

In the above code, when you click on the “btnBindAction” button, *mouseenter* as well as *click* event is attached with the first button. So when you try to mouse hover the 1st button you get the alert (now press Enter key to close the alert) and click on the button and you will again get alert.

To unbind the events, click on the “btnUnbindAction” button and both events will be unbound.

Demo url: http://localhost:9007/jQueryWeb/Events/bindUnbindMultiple.aspx

How to attach an event to a particular type of element for the whole life of the page - *.live()*

To attach an event to a particular type of element for the whole life of the page, live() method can be used. The event attached using live() works for all similar type of elements even created after this method is called.

```
$("#pLive").live("click", function () {
    $(this).before("<p>New paragraph added</p>");
     $(this).after("<p id='pLive' style='color:green;'>New paragraph
  added - this is live</p>");
});
```

Above code will bind the click event on the “pLive” element but notice that third line is adding another html element with the same id “pLive” so this event will also raise when user will click green color this line.

We will not get this behavior in the case we would have bounded the click event with “bind()” method.

Demo url: http://localhost:9007/jQueryWeb/Events/livedie.aspx

How to detach an event from a particular type of element for the whole life of page - *.die()*

To detach an event that was attached using live() method, die() method can be used.

```
function spanLiveDieClick() {
    alert("I am attached with Live");
}

$("#btnLiveDie").click(function () {
  $("#spanLiveDie").live("click", spanLiveDieClick).text("click me to
  test");
});

$("#btnDieLive").click(function () {
  $("#spanLiveDie").die("click", spanLiveDieClick).text("click me and
  nothing will happen");
});
```

In the above code, first I have defined a function called “spanLiveDieClick” and then when button “btnLiveDie” will be clicked, I have attached “spanLiveDieClick” function using “.live()” method with the element whose id is “spanLiveDie”. When “btnDieLive” will be clicked then I have removed the click event from the “spanLiveDie” element.

Demo url: http://localhost:9007/jQueryWeb/Events/livedie.aspx

How to attach an error event to an element? - *.error()*

To attach an error event to an html element, error() method can be used.

```
error demo : <img src="idonotknow.jpg" id="imgError" />


$("#imgError").error(function () {
    alert("missing image");
});
```

In the above code, I have a img tag where I have specified src=”idonotknow.jpg” image, if this image doesn’t exists on the server, error event will raise and alert will be shown.

Demo url: http://localhost:9007/jQueryWeb/Events/error.aspx

How to get the mouse position? - *event.pageX & event.pageY*

To get the mouse position relative to the left and top edge of the page, event.pageX and event.pageY can be used.

```
$("#pEventXEventY").bind("mousemove", function (e) {
     $(this).text("pageX: " + e.pageX + " pageY: " + e.pageY);
```

```
});
```

In the above code, I have attached the “mousemove” event in the paragraph whose id is “pEventXEventY”. When user will move mouse on this, the left and top position of the mouse will be written using pageX and pageY.

Demo url: http://localhost:9007/jQueryWeb/Events/eventXeventY.aspx

How to stop the default behavior of an element? *event.preventDefault()*

To prevent the default behavior of an element, preventDefault() method can be used.

```
<a id="aPreventDefault" href="http://www.itfunda.com">preventDefault() -
Ideally it should go to Attributes.aspx page</a>

 $("#aPreventDefault").click(function (e) {
      e.preventDefault();
      $("#div3").text("sorry default behavior is prevented");
 });
```

In the above code snippet, when the anchor tag will be clicked then user should be redirected to http://www.itfunda.com but he will not as I have attached the click event of the anchor tag where I am calling “preventDefault()” method.

Demo url: http://localhost:9007/jQueryWeb/Events/preventDefault.aspx

How to find out which element has initiated a particular event - *event.target*

To know which element has initiated a particular event, event.Target can be used.

```
<div id="divEventTarget"
style="background:#dedede;width:300px;height:100px;"><br /><p>event.target
demo <br /><span>this is span </span><br />- This is the p</p><br /></div>


$("#divEventTarget").click(function (e) {
      alert(e.target.nodeName);
});
```

In the above code when user clicks the outer boundary then “DIV” will be alerted, when user will click “evet.target demo” text then “P” will be alerted and when “this is span” will be clicked then “SPAN” will be returned and so on.

Demo url: http://localhost:9007/jQueryWeb/Events/eventTarget.aspx

How to attach focus event to an html element? - *.focus()*

To attach focus event to a html element, focus() method can be used.

```
$("#txtFocus, #txtFocus1").focus(function () {
     alert("got focus");
});
```

Above code will attach the focus event with the “txtFocus” and txtFocus1” textboxes and when these textboxes will get the focus then user will be alerted.

Demo url: http://localhost:9007/jQueryWeb/Events/focus.aspx

How to attach focus out event to an element? - *.focusout()*

To attach focus out event to a html element, focusout() method can be used.

```
$("#txtFocusOut, #txtFocusOut1").focusout(function () {
     alert("got focus out");
});
```

In the above code when user leave the focus from "txtFocusOut" and "txtFocusOut1" textboxes then user will be alerted (I have used multiple selector here to select multiple element).

Demo url: http://localhost:9007/jQueryWeb/Events/focusout.aspx

How to attach hover event to an element? - *.hover()*

To attach hover event to a html element, hover() method can be used.

```
$("#pHover").hover(function () { $(this).hide(500); });
```

In the above code when user mouse over "pHover" element,it will hide.

Demo url: http://localhost:9007/jQueryWeb/Events/hover.aspx

How to attach keydown event to an element? - *.keydown()*

To attach keydown event to a html element, keydown() method can be used.

```
$("#txtKeyPress").keydown(function () { $("#div3").append(" | key DOWN
event fired"); });
```

In the above code when user press any key in the "txtKeyPress" textbox, " | key DOWN event fired" text will appended in the "div3" element.

Demo url: http://localhost:9007/jQueryWeb/Events/keyDown.aspx

How to attach keypress event to an element? - *.keypress()*

To attach keypress event to a html element, keypress() method can be used.

```
$("#txtKeyPress").keypress(function () { $("#div3").append(" | key PRESS
event fired"); });
```

In the above code when user press the key in the "txtKeyPress" textbox, " | key PRESS event fired" text will be appended in the "div3" element.

Note: If keyDown and keyPress both events has been specified for a certain control, keyDown event fires first and then keyPress event fires.

Demo url: http://localhost:9007/jQueryWeb/Events/keyPress.aspx

How to attach key up event to an element? - *.keyup()*

To attach key up event to a html element, keyup() method can be used.

```
$("#txtKeyPress").keyup(function () { $("#div3").append(" | key UP event
fired"); });
```

In the above code when user leave then key in the "txtKeyPress" textbox then " | key UP event fired" will be appended in the "div3" element.

Demo url: http://localhost:9007/jQueryWeb/Events/keyUp.aspx

How to attach load event to an element? - *.load()*

To attach load method to an html element, load() method can be used.

```
<img id="imgLoad" src="http://www.itfunda.com/Images/itfunda.gif" />

$("#imgLoad").load(function () {
        alert("ITFunda.Com Logo loaded");
});
```

In the above code when the image will be loaded completely then user will be alerted.

Demo url: http://localhost:9007/jQueryWeb/Events/load.aspx

How to attach mouse down event to an element? - *.mousedown()*

To attach mouse down event to a html element, mousedown() method can be used.

```
<div id="spanMouseDownUp"
style="background:green;color:White;padding:10px;">Try to click here</div>

$("#spanMouseDownUp").mousedown(function () {
        $(this).html("Mouse down");
});
```

In the above code when user start clicking mouse on the “spanMouserDownUp” element “Mouser clicked” will be written inside it.

Demo url: http://localhost:9007/jQueryWeb/Events/mousedown.aspx

How to attach mouse enter event to an element? -*.mouseenter()*

To attach mouse enter event to a html element, mouseenter() method can be used.

```
<div id="spanMouseDownUp"
style="background:green;color:White;padding:10px;">Try to bring your mouse
here</div>

$("#spanMouseDownUp").mouseenter(function () {
        $(this).html("Mouse entered in this area");
});
```

In the above code when user try to enter into the area of “spanMouseDownUp” element then “Mouse entered in this area” will be written inside it.

Demo url: http://localhost:9007/jQueryWeb/Events/mouseenter.aspx

How to attach mouse leave event to an element? - *.mouseleave()*

To attach mouse leave event to a element, mouseleave() method can be used.

```
<div id="spanMouseDownUp"
style="background:green;color:White;padding:10px;">Try to bring your mouse
here</div>

$("#spanMouseDownUp").mouseleave(function () {
      $(this).html("Mouse left this area");
});
```

In the above code when user try to leave the mouse from the “spanMouseDownUp” element then “Mouse left this area” text will be written inside it.

Demo url: http://localhost:9007/jQueryWeb/Events/mouseleave.aspx

How to attach mouse move event to an element? - *.mousemove()*

To attach mouse move event to a html element, mousemove() method can be used.

```
<div id="spanMouseDownUp"
style="background:green;color:White;padding:10px;">Try to bring your mouse
here</div>

$("#spanMouseDownUp").mousemove(function () {
     $(this).html("You have started moving");
});
```

In the above code when user move mouse over “spanMouseDownUp” element then “You have started moving” text will be written inside it.

Demo url: http://localhost:9007/jQueryWeb/Events/mousemove.aspx

How to attach mouse up event to an element? - *.mouseup()*

To attach mouse up event to a html element, mouseup() method can be used.

```
$("#spanMouseDownUp").mouseup(function () {
         $(this).html("Mouse released");
});
```

In the above code when user releases the mouse button from “spanMouseDownUp” element then “Mouse released” text will be written inside it.

Demo url: http://localhost:9007/jQueryWeb/Events/mouseup.aspx

How to attach resize event to an element? - *.resize()*

To attach resize event to a html element, resize() method can be used.

```
$(window).resize(function () {
         $("#divResize").text("Window size is: " + $(window).width());
});
```

In the above code when user resize the window then its size will be written inside “divResize”.

Demo url: http://localhost:9007/jQueryWeb/Events/resize.aspx

How to attach scroll event to an element? -*.scroll()*

To attach scroll event to a html element, scroll() method can be used.

```
$(window).scroll(function () {
  $("#divScroll").css("display", "inline").text("You are
  scrolling").fadeOut("slow");
});
```

In the above code when user scrolls the window then “You are scrolling” text is written in the “divScroll” element with fading effect.

Demo url: http://localhost:9007/jQueryWeb/Events/scroll.aspx

How to select text or attach select event to an element? - *.select()*

To select text or attach select event to a html element, select() method can be used.

```
<div id="divSelect" style="cursor:pointer;">Click here to select below
text</div>

<textarea id="txtAreaSelect" cols="20" rows="5">Try selecting this
text</textarea>


$("#txtAreaSelect").select(function () {
          alert("you are trying to select");
     });
$("#divSelect").click(function () {
          $("#txtAreaSelect").select();
     });
```

In the above code when user tries to select the text inside “txtAreaSelect”, he/she is alerted. In the very next line I have attached the click event to the “divSelect” element and when it is clicked the text of “txtAreaSelect” is selected.

Demo url: http://localhost:9007/jQueryWeb/Events/select.aspx

How to catch the Submit event of the Form element? - *.submit()*

To catch the submit event of the html form element, submit() method can be used.

```
$("form").submit(function () {
          $("#divSubmit").fadeIn("fast").text("You have tried to submit the
        form").delay(500).fadeOut("slow");
          return false;
});
```

Above code attach the submit event to the form element and when the form is submitted, it writes “You have tried to submit the form” with fadeout effect. But note that as the last statement of this function is “return false”, the form will not be submitted. To submit the form, you must write “return true”.

Demo url: http://localhost:9007/jQueryWeb/Events/submit.aspx

How to attach toggle event to an element? - *.toggle()*

To attach toggle events that fires in alternate clicks, toggle() method can be used.

```
$("#divToggle").toggle(function () {
    $(this).css("background", "red");
},
function () {
    $(this).css("background", "green");
},
function () {
    $(this).css("background", "");
});
```

In the above code when “divToggle” will be clicked for the first time the background will become red, the next time background will become green and when clicked again it will be transparent and again will repeat the same.

Demo url: http://localhost:9007/jQueryWeb/Events/toggle.aspx

How to trigger an event of an element? - *.trigger()*

To trigger an event of an element, trigger() method can be used.

```
$("#divTrigger").click(function () {
        $("form").trigger('submit');
});
```

In the above code when “divTrigger” will be clicked then form “submit” event will trigger (the behavior will be same as if the form is being submitted).

Demo url: http://localhost:9007/jQueryWeb/Events/trigger.aspx

How to attach unload event? - *.unload()*

To attach unload event, unload() method can be used. Generally used with window object.

```
$(window).unload(function () {
        alert("Hope this was a good time, bye. See you again soon!");
});
```

In the above code when user tries to close the browser window he/she will be alerted with “Hope this was a good time, by. See you again soon!”.

What is custom event and how to attach a custom event to an element?

Custom event in jQuery is a type of event that allows us to add any functionality on a particular element. This event is similar to any other type of inbuilt events like “click, mouseenter” however its behavior is not pre-defined instead you have ability to define its behavior.

```
<div id="divCustom" style="border:1px solid #c0c0c0;padding:5px;padding:10px;">
        DotNetFunda.com | ItFunda.com
    </div>

    <input type="button" id="btnCustomEvent" value="Trigger Custom Event"/>

    <div id="divDemo" style="font-size:50px;">Demo Text</div>


       <script type="text/javascript">

               function MyFunction() {
                   $("#divDemo").slideUp().delay("500").slideDown();
               }

               $("#divCustom").bind("myCustomEvent", MyFunction);

               $("#btnCustomEvent").click(function () {
                   $("#divCustom").trigger("myCustomEvent");
               });
```

```
</script>
```

In the above code snippet, a custom event named “myCustomEvent” is bound to the “divCustom” div element that fires javascript function ***MyFunction*** when called. On click of the “btnCustomEvent” button, I have triggered “myCustomEvent” event that calls the ***MyFunction***.

jQuery effects

Demo url: http://localhost:9007/jQueryWeb/Animations.aspx

jQuery effects methods are used to give animation effect to html elements.

How to animate a particular element? - *.animate()*

To animate a particular html element we can use animate() method where we need to pass different css animation attributes separated by comma (,).In general animations can be performed on only those CSS properties that are specified as numberic values. Eg. Width, height, font size etc.

```
<input type="button" value="Animate" id="btnAnimate" />
             <p id="pAnimate" style="background-color:Green;">
                 Animate This</p>

$("#btnAnimate").click(function () {
     $("#pAnimate").animate({
         width: "800px",
         fontSize: "60px",
         height: "500px"
     }, 500); // instead of 500, we can also keep "slow", "fast"
 });
```

Above code snippet animate the width, font size and height properties of “pAnimate” element after every 500 milliseconds in such a manner that the final width, font size and height of that element will be 800px, 60px and 500px respectively.

Demo url: http://localhost:9007/jQueryWeb/Animations/animate.aspx

How to hide a particular element? *.hide()*

To hide a particular html element, hide() method can be used.

```
<input type="button" id="btnHide" value="Hide" />
<div id="divHide" style="height: 50px; width: 50px; background: red; left:
0px; position: absolute;"> </div>

$("#btnHide").click(function () {
     $("#divHide").hide("slow");
     // $("#divSlideDown").hide("slow", QueueIt);
 });
```

In the above code, on click of the button “btnHide”, the element “divHide” hides. You can also mention a second parameter as the function name that will execute when the “divHide” will be completely hidden.

Demo url: http://localhost:9007/jQueryWeb/Animations/hide.aspx

How to hide an element using slide up effect? *.slideUp()*

To hide a html element using slide up effect, slideUp() method can be used.

```
<input type="button" id="btnSlideUp" value="SlideUp" />
<div id="divSlideUp" style="height: 50px; width: 50px; background: brown;
left: 300px;position: absolute; display: ;"></div>

$("#btnSlideUp").click(function () {
     $("#divSlideUp").slideUp();
     // $("#divSlideUp").slideUp("slow", QueueIt);
 });
```

In the above code, on click of “btnSlideUp” the “divSlideUp” element will hide by sliding up effect. You can also mention second parameter as function name that will execute when “divSlideUp” will be completely hidden.

Demo url: http://localhost:9007/jQueryWeb/Animations/slideUp.aspx

How to show an element? - *.show()*

To show a html element, show() method can be used.

```
<input type="button" id="btnShow" value="Show" />
<div id="divShow" style="height: 50px; width: 50px; background: brown;
left: 0px;position: absolute; display: none;"></div>

 $("#btnShow").click(function () {
     $("#divShow").show("slow");
    // $("#divSlideDown").show("slow", QueueIt);
 });
```

In the above code, on click on “btnShow” the “divShow” element will display. You can also mention second parameter as the function name to be execute when “divShow” element will be shown completely.

Demo url: http://localhost:9007/jQueryWeb/Animations/show.aspx

How to toggle display an element with sliding effect? -*.slideToggle()*

To toggle display an html element with sliding effect, slideToggle() method can be used.

```
<input type="button" id="btnSlideToggle" value="SlideToggle" /></p>
<div id="divSlideToggle" style="height: 50px; width: 50px; background:
brown; left: 0px;position: absolute; display: none;"></div>

$("#btnSlideToggle").click(function () {
     $("#divSlideToggle").slideToggle();
     // $("#divSlideToggle").slideToggle("slow", QueueIt);
 });
```

In the above code when “btnSlideToggle” button will be clicked “divSlideTogge” element will toggle display with sliding effect. That means that if the element is hidden, it will be shown and vice versa. You can also mention the second parameter as function to execute when the animation is complete.

Demo url: http://localhost:9007/jQueryWeb/Animations/slideToggle.aspx

How to toggle display an element? - *.toggle()*

To toggle display a html element, toggle() method can be used.

```
<input type="button" id="btnToggle" value="Toggle" />
<div id="divToggle" style="height: 50px; width: 50px; background: brown;
left: 300px;position: absolute;"></div>

 $("#btnToggle").click(function () {
     $("#divToggle").toggle("slow");
 });
```

In the above code, on click of “btnToggle” button “divToggle” element toggle display (ie if the element will be hidden then it will be shown or vice versa). A second parameter as function name can also be specified as we were doing for slideToggle() to execute when the toggle animation will complete.

Demo url: http://localhost:9007/jQueryWeb/Animations/toggle.aspx

How to stop currently executing animation? - *.stop()*

To stop currently executing animation for an element, stop() method can be used. When the currently executing animation stops, the next animation in the queue starts (if exists).

```
<input type="button" id="btnStart" value="Start" />
 <input type="button" id="btnStop" value="Stop" />

<div id="divStop" style="height: 50px; width: 50px; background: brown;
left: 300px;position: absolute; display:none ;"></div>


$("#btnStart").click(function () {
     $("#divStop").show("slow");
     $("#divStop").animate({ width: '+=200px' }, 2000);
     $("#divStop").animate({ width: '-=200px' }, 1500);
 });

 $("#btnStop").click(function () {
     $("#divStop").stop();
 });
```

In the above code when “btnStart” button will be clicked, the ”divStop” element will be shown and its width will start increasing; suppose while its width is increasing user clicks on the “btnStop” button then this particular animation will stop and next animation will begin (ie. decreasing the width will start).

Demo url: http://localhost:9007/jQueryWeb/Animations/stop.aspx

How to remove unexecuted/unused animation items from the queue? - *.clearQueue()*

To remove the unexecuted/unused animation items from the queue, clearQueue() method can be used.

```
<input type="button" value="Start" id="btnStart" />
<input type="button" value="Stop" id="btnStopp" />

<div id="divStarClearQueue" style="height: 50px; width: 50px; background:
yellow; left: 0px; display: none; position: absolute;"> </div>

$("#btnStart").click(function () {
     $("#divStarClearQueue").show("slow");
     $("#divStarClearQueue").animate({ width: '+=200px' }, 500);
     $("#divStarClearQueue").slideUp();
 });

 $("#btnStopp").click(function () {
     $("#divStarClearQueue").clearQueue();
     $("#divStarClearQueue").stop();
 });
```

In the above code on click of “btnStart” I have written 3 animation effects to take place. When user clicks on Start button, first the “divStartClearQueue” element will be shown and after that its width will start increasing by 200px. Now suppose at this point user clicks Stop button then the next animation item in the queue that is .slideUp() will be removed (because of .clearQueue() method) and the animation of increasing the width stops (because of .stop() method).

Demo url: http://localhost:9007/jQueryWeb/Animations/clearqueue.aspx

How to display an element using slide down effect? - *.slideDown()*

To display a html element using slide down effect, slideDown() method can be used.

```
<input type="button" id="btnSlideDown" value="SlideDown" />
<div id="divSlideDown" style="height: 50px; width: 50px; background: brown;
left: 0px;position: absolute; display: none;"></div>

$("#btnSlideDown").click(function () {
     $("#divSlideDown").slideDown();
     // $("#divSlideDown").slideDown("slow", QueueIt);
 });
```

In the above code, on click of the “btnSlideDown” button “divSlideDown” element will be shown with sliding down effect. You can also mention second parameter as the function to execute when “divSlideDown” element will be completely shown.

There might be a scenario where we want to perform any action only when slide down effect is complete. In that case we can specify the 2nd parameter as action to perform in the slideDown() method.

```
$("#btnSlideDown").click(function () {
       $("#divSlideDown").slideDown("slow", QueueIt);
 });

function QueueIt() {
     $("#divQueue").show("slow");
```

```
        $("#divQueue").animate({ left: '+=400px' }, 2000);
        $("#divQueue").animate({ left: '-=400px' }, 2000);
        $("#divQueue").hide("fast", QueueIt);
    }
```

In the above code, I have specified "QueueIt" function that will execute when slideDown effect is complete.

Demo url: http://localhost:9007/jQueryWeb/Animations/slideDown.aspx

How to display an element using fading effect - *.fadeIn()*

To display a hidden html element using fade in effect, fadeIn() method can be used.

```
<input type="button" id="btnFadeIn" value="Fade In" />
<div id="divFadeIn" style="height: 50px; width: 50px; background: red;
left: 0px; display: none; position: absolute;"> </div>


 $("#btnFadeIn").click(function () {
     $("#divFadeIn").fadeIn('slow');
 });
```

In the above code when button "btnFadeIn" will be clicked, the "divFadeIn" will be displayed by fading effect.

Note: Like slideDown() method, we can specify 2nd parameter in this function as well to execute once fadeIn effect is complete.

Demo url: http://localhost:9007/jQueryWeb/Animations/fadeinout.aspx

How to hide an element using fading effect - *.fadeOut()*

To hide a displaying html element, fadeout() method can be used. This makes the element transparent.

```
<div id="divFadeIn" style="height: 50px; width: 50px; background: red;
left: 0px; position: absolute;"> </div>

$("#btnFadeout").click(function () {
     $("#divFadeIn").fadeOut('slow');
 });
```

In the above code when "btnFadeout" will be clicked, the "divFadeIn" will become hidden by fading effect.

Note: Like slideDown() method, we can specify 2nd parameter in this function as well to execute once fadeOut effect is complete.

Demo url: http://localhost:9007/jQueryWeb/Animations/fadeinout.aspx

How to adjust the opacity of an element? - *.fadeTo()*

To adjust the opacity of the html element, fadeTo() method can be used.

```
<input type="button" id="btnFadeTo" value="Fade To" />

<div id="divFadeTo" style="height: 50px; width: 50px; background: red;
left: 0px; display: none; position: absolute;"> </div>
```

```
$("#btnFadeTo").click(function () {
    $("#divFadeTo").fadeTo("slow", "0.20");
});
```

In the above code when button “btnFadeTo” is clicked the opacity fo the “divFadeTo” will be set to .20.

Demo url: http://localhost:9007/jQueryWeb/Animations/fadeTo.aspx

How to delay the execution of a subsequent method? - *.delay()*

To delay the execution of the subsequent method, delay() method can be used. It accepts number of milliseconds as parameter.

```
<input type="button" id="btnDelay" value="Click and Delay Animation" /></p>

<div id="divDelay" style="height: 50px; width: 50px; background: green;
left: 0px; display: none; position: absolute;"> </div>

 $("#btnDelay").click(function () {
     $("#divDelay").slideDown().delay(500).fadeOut();
 });
```

In the above code on click of “btnDelay”, “divDelay” element slideDown() effect will start and then it will wait for 500 milliseconds and fadeOut() effect will start.

Demo url: http://localhost:9007/jQueryWeb/Animations/delay.aspx

How to get the number of items to be executed on a particular element? - *.queue()*

To get the number of items to be executed on a particular element, queue() method can be used.

```
<input type="button" id="btnQueue" value="Queue" />
<div id="divQueue" style="height: 50px; width: 50px; background: brown;
left: 0px; position: absolute; display: none;">
            </div>

 $("#btnQueue").click(function () {
     QueueIt();

     var n = $("#divQueue").queue("fx");
     alert(n.length);
 });

 function QueueIt() {
     $("#divQueue").show("slow");
     $("#divQueue").slideUp("slow");
     $("#divQueue").slideDown("slow");
     $("#divQueue").hide("fast", QueueIt);
 }
```

In the above code, on the click event of the “btnQueue”, a “QueueIt()” function will be execute that has four animation to be executed so it will alert 4. Note that in the last statement I have specified the “QueueIt” function name in the second parameter of the “hide()” function so a “QueueIt” function will keep executing.

Demo url: http://localhost:9007/jQueryWeb/Animations/queue.aspx

How to remove the current executing item from the queue? - *.dequeue()*

To remove the currently executing item from the queue and start executing subsequent item dequeue() method can be used. Please note that this must be called inside the queue.

```
<input type="button" id="btnDequeue" value="Dequeue Demo" /></p>
<div id="divDequeue" style="height: 50px; width: 50px; background: red;
left: 0px; display: none; position: absolute;"> </div>

 $("#btnDequeue").click(function () {
     $("#divDequeue").show("fast");
     $("#divDequeue").fadeOut("slow");
     $("#divDequeue").fadeIn("slow");
     $("#divDequeue").queue(function () {
         $("#divDequeue").animate({ top: '+=200px' }, 2000);
         $(this).dequeue();
     });
     $("#divDequeue").animate({ left: '+200px' }, 2000);
 });
```

In the above code, on the click on the “btnQueue”; “divDequeue”’s Show(), fadeout(), fadeIn() will be called and then I have kept top position animation in the queue() and after that .dequeue() has been called and then at last the left position has been animated. In this example, try commenting the .dequeue() line and see the difference. When you comment the dequeue() line the next statement should not execute as queue() will remain executing.

Demo url: http://localhost:9007/jQueryWeb/Animations/dequeue.aspx

How to on and off the animation effect - *jQuery.fx.off*

To switch off and on the animation effect for the entire page, jQuery.fx.off can be used. This disables all animations globally and set the elements to its final state directly.

```
<input type="button" id="btnFxOff" value="Toggle Animation" />

$("#btnFxOff").click(function () {
     $.fx.off = !$.fx.off;
 });
```

In the above code when “btnFxOff” will be clicked then the animations will not work on the page and if animation is called the element will go to its final position rather than animating and going to the final position. For example .slideUp() will not hide the element by sliding up but it will simply hide the element.

Demo url: http://localhost:9007/jQueryWeb/Animations/fxOff.aspx

jQuery Ajax

jQuery Ajax methods are used to load the data from server without page refresh. It also helps to capture events that fires at different stages of the Ajax request.

How to send asynchronous HTTP request to the server and get response? - *.ajax(type, url, data, success)*

To send asynchronous HTTP request to the server and get response (Sending request to the server and getting response without browser postback/refresh), ajax method can be used.

```
<input type="button" id="bntAjax" value="Load Data + Other Ajax Test" />
<div id="divResult"></div>

    $("#bntAjax").click(function () {
        $.ajax({
            type: "POST",
            url: "jQueryAjaxData.aspx",
            data: "a=2&b=5",
            success: function (msg) {
                $("#divResult").text(msg);
            }
        });
    });
```

Here on click of "btnAjax" button, ajax method will fire.

Here

1. type: request is sent via html form "post" or "get" mechanism
2. url: Any valid url
3. data : data to send to the page
4. success: function to execute when the request is processed successfully, the "msg" is the exact value that will have all the response string returned from the server.

In above code snippet, "a" and "b" form variable will be posted by using POST to the jQueryAjaxData.aspx page. In order to retrieve the value on post page, we need to write following code (in asp.net)

```
int a = int.Parse(Request.Form["a"]);
int b = int.Parse(Request.Form["b"]);
```

The returned value from "jQueryAjaxData.aspx page will be written to the "divResult".

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajax.aspx

How to send request to and get response from server using HTTP Get and HTTP Post - *.post(), .get()*

To send request to and get response from the server using HTTP Get and HTTP post, we can use post() and get() methods respectively. In this way also browser post back doesn't happen.

Post()

```
<input type="button" id="btnPost" value="Load Data using Post" />
<div id="divResult"></div>

$("#btnPost").click(function () {
        $.post(
        "jQueryAjaxData.aspx",
        { a: "20", b: "6" },
        function (data) {
        $("#divResult").html("<b>The result is: " + data + "</b>");
        });
});
```

This is similar to .ajax method however this guarantees that ajax request will be sent to the server using html form post mechanism.

Here

1. First parameter is the url to post data
2. Second parameter is the data to be posted. Note that parameter should be specified in the curly braces and key and value should be separated with ":" (colon)
3. Third parameter will be the function to execute after successful request. Here "data" will have all the response string returned by jQueryAjaxData.aspx page.

Demo url: http://localhost:9007/jQueryWeb/Ajax/getpost.aspx

Get()

```
<input type="button" id="btnGet" value="Load Data using Get" />
<div id="divResult"></div>

$("#btnGet").click(function () {
        $.get(
        "jQueryAjaxData.aspx",
        { ag: "2", bg: "6" },
        function (data) {
        $("#divResult").html("<b>The result is: " + data + "</b>");
        });
});
```

This is similar to .ajax method however this guarantees that ajax request will be sent to the server using html form get mechanism. The only difference between Post and Get is the mechanism by which data is submitted to the page.

Here

1. First parameter is the url to post data
2. Second parameter is the data to be posted. Note that parameter should be specified in the curly braces and key and value should be separated with ":" (colon)
3. Third parameter will be the function to execute after successful request. Here "data" will have all the response string returned by jQueryAjaxData.aspx page.

Demo url: http://localhost:9007/jQueryWeb/Ajax/getpost.aspx

How to load JSON data from server? - *.getJSON(Url, data, callBack)*

To load JSON data from server, getJSON() method can be used. In this way, data is loaded from server using HTTP Get method.

JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write and also easy for machines to parse and generate. Read more about JSON at http://www.json.org/

```
<input type="button" id="btnJson" value="Load Json data" />

// Get Sample jSon data from
http://labs.adobe.com/technologies/spry/samples/data_region/JSONDataSetSample.
html
$("#btnJson").click(function () {
    $.getJSON("jQueryAjaxData.aspx", { format: "json" }, jsonCallback);
});

   function jsonCallback(datas) {
           alert(datas[0].FirstName);
```

```
}
```

In the above code snippet, getJSON method is called to get the JSOPN data from server. If the request is successful, the callback method is called where we can retrieve the data.

Server side response code is written below

```
if (Request.QueryString["format"] != null)
{
    string data = " [
                  { \"FirstName\": \"Sheo\", \"LastName\": \"Narayan\",
                  \"City\": \"Hyderabad\" }, " +
                  "{ \"FirstName\": \"Jack\", \"LastName\": \"Jeel\",
                  \"City\": \"NY\" }
                  ]";
    Response.Write(data);
}
```

Here, I have formed two object with FirstName, LastName and City property. In the call back method I am expecting FirstName of the first object that will alert me with “Sheo”.

Demo url: http://localhost:9007/jQueryWeb/Ajax/getJSON.aspx

How to load a page data from the server into a particular element - *.load(url, callBack)*

To load a page data from server into a particular page element, load() method can be used. An optional callback method can also be specified to catch the returned data.

```
<input type="button" id="btnLoad" value="Load Simple Page Content" />
<textarea id="txtArea1" name="txtArea1" rows="10" cols="50"></textarea>

// without callback
$("#btnLoad").click(function () {
        $("#txtArea1").load('jQueryAjaxData.aspx?format=json');
});

// with callback
$("#btnLoad").click(function () {
$("#txtArea1").load('jQueryAjaxData.aspx?format=json', function (e) {
            alert(e);
        });
});
```

In the above code snippet, the first code snippet “without callback” will call the page jQueryAjaxData.aspx and set the response to the “txtArea1” textbox.

Similarly, in the second code snippet “with callback” will call the same page but it will also alert the response from server along with setting the response to “txtArea1” textbox.

Demo url: http://localhost:9007/jQueryWeb/Ajax/load.aspx

How to serialize the form element data that can be submitted to the server - *.serialize()*

To serialize (URL Encoded notation) the html form element data that can be sent to the server, serialize() method can be used.

```
<input type="button" id="btnSerialize" value="Serialize data" />
<textarea id="txtArea1" name="txtArea1" rows="10" cols="50"></textarea>
```

```
$("#btnSerialize").click(function () {
        var data = $("form").serialize();
        $("#txtArea1").val(data);
});
```

In the above code snippet, on click button "btnSerialize", all the form element of the page is serialized into a string that can be sent to the server.

Demo url: http://localhost:9007/jQueryWeb/Ajax/serialize.aspx

How to register a handler to be called when first ajax request begins? - *.ajaxStart()*

While working with ajax, how to show "loading …" or "Please wait …" type of message?

To register a handler to be called when first ajax request begins, ajaxStart() method can be used. This can be used to show the loading… or wait …. Messages.

```
$("#divAjaxStart").ajaxStart(function () {
    $("#divAjaxStart").text("Starting ... : ");
});
```

In the above code snippet, when ajax request starts, "Starting …" is written inside "divAjaxStart" element.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to perform certain operations when ajax request is about to send? -*.ajaxSend()*

To perform certain operations when ajax request is about to send, ajaxSend() method can be used.

```
$("#divAjaxSend").ajaxSend(function () {
    $("#divAjaxSend").text("Sending ajax request ...: ");
});
```

In the above code snippet, when ajax request is about to send, "Sending ajax request …" will be written inside the "divAjaxSend" div element. This event can be used to show any message or perform any activity.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to know if my ajax request is successful? - *.ajaxSuccess()*

To know if the ajax request is successful, ajaxSuccess() method can be used.

```
$("#divAjaxSuccess").ajaxSuccess(function () {
   $("#divAjaxSuccess").text("ajaxSuccess = Ajax request is successful : ");
});
```

In the above code snippet, when ajax request is successful, "ajaxSuccess: Ajax request is successful :" is written inside "divAjaxSuccess".

When an ajax request is sent and if it is successful, the ajaxSuccess() event fires. We can catch this event to show any success message or to perform any activity.

Note that this event only fires when ajax request is successful, it doesn't fire if an error occurred while processing the request.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to know when my ajax request is complete? - *.ajaxComplete()*

To know if the ajax request is complete, ajaxComplete() method can be used.

```
// fires after ajaxSuccess
$("#divAjaxComplete").ajaxComplete(function () {
    $("#divAjaxComplete").html("ajaxComplete = ajax request completed : ");
});
```

In the above code snippet, when ajax request is complete "ajaxComplete – ajax request complted :" is written inside "divAjaxComplete" element.

When an ajax request is sent and it is complete, the ajaxComplete() event fires. Note that this event fires after ajaxSuccess() event. We can catch this event to show any message or perform any activity.

Note that this event fires irrespective of ajax request completed successfully or it error out.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to know when all ajax request is completed and no other ajax activity is in process? - *.ajaxStop()*

To know when all ajax request is completed and no other ajax activity is in process, ajaxStop() method can be used. This event fires after ajaxComplete()

```
// fires after ajaxComplete
$("#divAjaxStop").ajaxStop(function () {
    v++;
    $("#divAjaxStop").text("ajaxStop = Ajax request stopped : " + v);
});
```

In the above code snippet, when all ajax request is complete "ajaxStop = Ajax request stopped : " is written in the "divAjaxStop" element.

Note that this event fires irrespective of ajax request is completed successfully or not. This event can be used to hide the loading message or progress bar.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to know if an error occurred while performing ajax operation - *.ajaxError()*

To know if an error occurred while performing ajax operation, ajaxError() method can be used. It fires when ajax request completes with an error.

```
$("#divAjaxError").ajaxError(function (ee) {
    $("#divAjaxError").text("Error occurred while sending ajax request");
});
```

In the above code snippet, when ajax request completes with error "Error occurred while sending ajax request" is written inside "divAjaxError".

This event can be used to show the error or setting the default value in case of error.

Demo url: http://localhost:9007/jQueryWeb/Ajax/ajaxEvents.aspx

How to Solution

How to consume web services from jQuery?

To consume web services from jQuery, we can call web service suffixed by web method in the $.ajax method and pass conetntType as “application/json” and dataType as “json”.

jQuery code

```
<script language="javascript" type="text/javascript">

     var webServiceUrl = "../MathService.asmx/GetFullName";

     $("#btnAjax").click(function () {
         var webServiceUrl = "../MathService.asmx/GetFullName";
         var name = $("#txtBoxName").val();
         $.ajax({
             type: "POST",
             url: webServiceUrl,
             data: "{'name':'"+ name + "'}",
             contentType: "application/json; charset=utf-8",
             dataType: "json",
             success: SuccessCallBack,
             error: FailureCallBack
         });
     });

     function SuccessCallBack(data) {
         alert(data.d);
     }

     function FailureCallBack(data) {
         alert(data.staus + " : " + data.statusText);
     }

</script>
```

Web Service Code

```
/// <summary>
/// Summary description for MathService
/// </summary>
[WebService(Namespace = "http://tempuri.org/")]
[WebServiceBinding(ConformsTo = WsiProfiles.BasicProfile1_1)]
// To allow this Web Service to be called from script, using ASP.NET AJAX,
uncomment the following line.
[System.Web.Script.Services.ScriptService]
public class MathService : System.Web.Services.WebService {

    public MathService () {
```

```
            //Uncomment the following line if using designed components
            //InitializeComponent();
        }

        [WebMethod]
        public string GetFullName(string name)
        {
            return "[Webservice response]\n\nYou have entered : " + name ;
        }
    }
```

Notice that MathService attribute *System.Web.Script.Services.ScriptServices* is the mandatory to keep for any web services to be consumed through client side script.

Demo url: http://localhost:9007/jQueryWeb/HowTo/CallingWebMethod.aspx
For more detailed explanations on this topic, visit http://www.dotnetfunda.com/articles/article1127-consuming-web-service-webmethod-from-jquery-in-aspnet-.aspx that has written by me.

jQuery Interview Questions

Most frequently asked jQuery questions are covered in first couple of pages in this book, you may start reading the book till "jQuery Features" that will give you enough knowledge on frequently asked jQuery questions.

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