Web Technology Lab

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Experiment 4: JQuery

AIM:

To implement Jquery on the website.

Theory:
jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript.

jQuery is a lightweight, "write less, do more", JavaScript library.

The purpose of jQuery is to make it much easier to use JavaScript on your website.

jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.

jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

The jQuery library contains the following features:

HTML/DOM manipulation
CSS manipulation
HTML event methods
Effects and animations
AJAX
Utilities

The jQuery syntax is tailor-made for selecting HTML elements and performing some action on the element(s).

Basic syntax is: $(selector).action()

A $ sign to define/access jQuery

A (selector) to "query (or find)" HTML elements
A jQuery action() to be performed on the element(s)
Examples:

$(this).hide() - hides the current element.

$("p").hide() - hides all <p> elements.

$(".test").hide() - hides all elements with class="test".

$("#test").hide() - hides the element with id="test".

jQuery selectors allow you to select and manipulate HTML element(s).

jQuery selectors are used to "find" (or select) HTML elements based on their name, id, classes, types, attributes, values of attributes and much more. It's based on the existing CSS Selectors, and in addition, it has some own custom selectors.

All selectors in jQuery start with the dollar sign and parentheses: $().

The jQuery #id selector uses the id attribute of an HTML tag to find the specific element.

An id should be unique within a page, so you should use the #id selector when you want to find a single, unique element.

The jQuery .class selector finds elements with a specific class.

If your website contains a lot of pages, and you want your jQuery functions to be easy to maintain, you can put your jQuery functions in a separate .js file.

When we demonstrate jQuery in this tutorial, the functions are added directly into the <head> section. However, sometimes it is preferable to place them in a separate file, like this (use the src attribute to refer to the .js file):

Examples of jQuery Selectors
$("*") Selects all elements
$(this) Selects the current HTML element
$("p.intro") Selects all <p> elements with class="intro"
$("p:first") Selects the first <p> element
$("ul li:first") Selects the first <li> element of the first
$("ul li:first-child") Selects the first <li> element of every
$("[href]") Selects all elements with an href attribute
$("a[target='_blank']") Selects all <a> elements with a target attribute value equal to "_blank"

$("a[target!='_blank']")Selects all <a> elements with a target attribute value NOT equal to "_blank"
$(":button") Selects all <button> elements and <input> elements of type="button"
$("tr:even") Selects all even <tr> elements
$("tr:odd") Selects all odd <tr> elements

The **jQuery animate()** method is used to create custom animations.

Syntax:

$(selector).animate({params},speed,callback);
The required params parameter defines the CSS properties to be animated.

The optional speed parameter specifies the duration of the effect. It can take the following values: "slow", "fast", or milliseconds.

The optional callback parameter is a function to be executed after the animation completes.

Set Content - text(), html(), and val()
We will use the same three methods from the previous page to set content:

text() - Sets or returns the text content of selected elements
html() - Sets or returns the content of selected elements (including HTML markup)
val() - Sets or returns the value of form fields

Get Content - text(), html(), and val()
Three simple, but useful, jQuery methods for DOM manipulation are:

text() - Sets or returns the text content of selected elements
html() - Sets or returns the content of selected elements (including HTML markup)
val() - Sets or returns the value of form fields

All the different visitors' actions that a web page can respond to are called events.

An event represents the precise moment when something happens.

Examples:

moving a mouse over an element
selecting a radio button
clicking on an element
The term "fires/fired" is often used with events. Example: "The keypress event is fired, the moment you press a key".

Conclusion:
I learnt the use and implementation of Jquery in websites. It reduces a lot of code as it replaces huge codes of javascript with a few lines. Its easier to write codes for animation and element changes through jquery.