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| ***John Resig in 2006*** | jQuery played a crucial role in advancing web development by simplifying JavaScript code, providing cross-browser compatibility, and offering a rich set of features for manipulating HTML documents. Its impact on the industry is evident in the widespread adoption and its influence on subsequent JavaScript libraries and frameworks.  *Prepared by*  **PARANOIA TECHNOLOGIES** |

**jQuery**

**What is jQuery?**

* jQuery is a multi-browser JavaScript library.
* It is nothing more than a bunch of JavaScript code.
* It makes it easy to navigate a document and select DOM elements.
* It handles events efficiently.
* Can use jQuery to create plugins on the top of JavaScript library.

**What can we do with jQuery?**

* Effects and Animations (Slideshows, tabs, etc).
* Handle Events (Clicks, toggle, hover, etc).
* Feature Detection. (Html 5 geolocation detection)
* Manipulate the DOM.
* Develop Ajax applications and work with Ajax.

**How to use jQuery?**

* You can download jQuery from jQuery.com and include it in your html document.

**<script type=”text/javascript” src=”jquery.js”></script>**

* CDN- CDN is a document or a library hosted by another service such as jQuery or Google which is a popular one and this doesn’t require us to download any code on our server all we need to do is throw the script tag in our file.
* You can also use a hosted library such as Google and simply include the link in your document.

**<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.6.4/jquery.min.js"></script>**

**Document Ready Handler**

* When we include our external jQuery scripts or we add jQuery to the <head> area, we need to first check if the document is ready.
* If we do not do this, then our jQuery code will run before the rest of the code in which we are trying to use or modify.

**Syntax**

$(document).ready(function(){

//all jQuery code goes here

})

**$(dollar)**

In jQuery, the $ (dollar sign) is a **shorthand alias** for the jQuery object.

It's a commonly used symbol to access and manipulate elements in the Document Object Model (DOM) using jQuery methods and syntax.

**Uses**

* Can use the $ symbol to select elements and apply jQuery methods to them.

**Example**

$(document).ready(function() {

$("#myElement").hide();

});

* Can also use **$** to create new jQuery objects and apply jQuery methods to them.

**Example**

var $newDiv = $("<div>").addClass("my-class").text("Hello, jQuery!");

**jQuery Actions**

* jQuery is a popular JavaScript library that simplifies HTML document traversal, manipulation, event handling, and animation.
* It provides a wide range of functions and methods that allow developers to perform various actions on web pages.

**jQuery actions are:**

**Selectors**

* A jQuery **Selector** is a function that uses the expressions to find out **matching elements** from a **DOM** based on the given criteria.
* Selectors are used to select one or more HTML elements using jQuery. Once an element is selected then we can perform various operations on that selected element.

**Selecting Elements**

* One of the reasons that jQuery is so powerful is that we can grab and select virtually anything in the DOM.
* This could be divs, lists, paragraphs or any other tag or element.
* The way we do this is wrapping them in $(“”).

**Example:**

$(“div”) will select ALL <div> tags.

$(“#myDiv”) will select the div with the id of myDiv.

$(“p.myClass”) will select the p with the class of myClass.

**Modifying HTML Content:**

* You can change the content of HTML elements using jQuery.

**Example:**

**// Change the text of an element**

$('#myElement').text('New text')

**// Change the HTML content of an element**

$('#myElement').html('<strong>New content</strong>')

**Manipulating CSS:**

* jQuery allows you to modify the CSS properties of elements.

**Example:**

**// Change the background color of an element**

$('#myElement').css('background-color', 'red')

**// Add or remove a class from an element**

$('#myElement').addClass('highlight')

$('#myElement').removeClass('highlight')

**Handling Events:**

* jQuery simplifies event handling.
* You can bind event handlers to elements and respond to user interactions.

**Example:**

**// Handle a click event**

$(“a”).click(function() {

// Do something when a link (<a> tag) is clicked

})

**Anonymous Function**

In jQuery, an anonymous function is a function that is defined without a specific name. Anonymous functions are often used as arguments to other functions, especially when dealing with asynchronous operations or event handling. These functions are sometimes referred to as "callback functions" or "inline functions."

**Example**

<!DOCTYPE html>

<html>

<head>

<title>Anonymous Function in jQuery</title>

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

</head>

<body>

<button id="myButton">Click Me</button>

<script>

$(document).ready(function() {

**// Anonymous function to handle the click event for the button**

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

alert("Button clicked!");

});

});

</script>

</body>

</html>

**Show/Hide Elements**

$(“#myElement”).hide(function(){

// Do something once the element is hidden

})

$(“#myElement”).show(function(){

// Do something once the element is shown

})

$(“#myElement”).toggle(function(){

// Do something once the element is shown/hidden.

//It basically changes from hide to show as you click

})

**Animations and Effects:**

* jQuery provides methods to create animations and apply visual effects to elements.

**Example:** **// Hide an element with a fade animation**

$('#myElement').fadeOut()

**// Show an element with a slide animation**

$('#myElement').slideDown()

**// Chain animations**

$('#myElement').slideUp().fadeIn()