**JQuery**

**🔹 Step 1: Basics of JavaScript & jQuery Introduction**

🔸 **Learn JavaScript First**

* Variables (let, const, var)
* Data types (String, Number, Boolean, Object, Array)
* Functions & Arrow functions
* ES6 Features (Template literals, Destructuring, Spread operator, etc.)
* DOM Manipulation (querySelector, getElementById, etc.)
* Event Handling (click, mouseover, keypress, etc.)

🔸 **Introduction to jQuery**

* What is jQuery
* How to include jQuery (CDN & Local file)
* Basic jQuery syntax: $(selector).action();

The basic syntax of jQuery is:

$(selector).action();

* **$** → Indicates jQuery.
* **selector** → Selects HTML elements.
* **action()** → Performs an action on the selected elements.

**Example: Change text color**

$(document).ready(function(){

$("p").css("color", "red");

});

**🔹 Step 2: jQuery Selectors & Basic Manipulations**

🔸 **Selectors**

* ID Selector: $("#id")
* Class Selector: $(".class")
* Tag Selector: $("div")
* Attribute Selector: $("[type='text']")
* Pseudo Selectors: :first, :last, :even, :odd

🔸 **DOM Manipulation**

* Change text: .text(), .html(), .val()
* Modify attributes: .attr(), .removeAttr()
* CSS manipulation: .css(), .addClass(), .removeClass()
* Append & Prepend elements: .append(), .prepend()
* Remove elements: .remove(), .empty()

**🔹 Step 3: jQuery Events**

🔸 **Mouse Events**

* .click(), .dblclick(), .hover(), .mousedown(), .mouseup()

🔸 **Keyboard Events**

* .keypress(), .keydown(), .keyup()

🔸 **Form Events**

* .focus(), .blur(), .change(), .submit()

🔸 **Window Events**

* .load(), .resize(), .scroll(), .unload()

🔸 **Event Delegation**

* .on(), .off() for dynamically added elements

**🔹 Step 4: jQuery Effects & Animations**

🔸 **Hiding & Showing Elements**

* .hide(), .show(), .toggle()

🔸 **Fading Effects**

* .fadeIn(), .fadeOut(), .fadeToggle(), .fadeTo()

🔸 **Sliding Effects**

* .slideUp(), .slideDown(), .slideToggle()

🔸 **Custom Animations**

* .animate({ properties }, speed, callback)
* Queue & stop animations with .stop()

**🔹 Step 5: jQuery AJAX & API Handling**

🔸 **Fetching Data using AJAX**

* .load(), .get(), .post(), .ajax()
* Handling JSON data with .getJSON()
* Handling errors using .fail() & .always()

🔸 **Example: Fetching Data from an API**

js

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$.ajax({

url: "<https://jsonplaceholder.typicode.com/users>",

method: "GET",

success: function(response) {

console.log(response);

},

error: function(error) {

console.log("Error fetching data", error);

}

});

**🔹 Step 6: jQuery Traversing (DOM Navigation)**

🔸 **Parent, Children, Siblings**

* .parent(), .parents(), .closest()
* .children(), .find()
* .siblings(), .next(), .prev()

🔸 **Filtering Elements**

* .filter(), .not(), .first(), .last(), .eq(index)

**🔹 Step 7: jQuery Plugins & UI Components**

🔸 **jQuery UI**

* Accordion
* Datepicker
* Dialog
* Tooltip

🔸 **Popular jQuery Plugins**

* **DataTables** – Enhance tables
* **Slick.js** – Image sliders
* **jQuery Validate** – Form validation
* **Select2.js** – Advanced dropdowns

🔸 **Best Practices**

* Use **ID selectors** instead of class/tag selectors for better performance

**🔹 jQuery Alternatives & Modern JS Frameworks**

jQuery is useful, but modern frameworks are replacing it. Consider learning:

✅ **JavaScript (ES6+ Features)**

✅ **React.js or Vue.js** for complex UI

✅ **Fetch API & Axios** for AJAX calls