

jQuery vs JavaScript

jQuery provides a set of methods and functions that you can use within your JavaScript code to perform various actions on HTML elements.

Here are some common jQuery actions and their equivalent JavaScript code:

1. Selecting Elements:

- jQuery: `$("selector")`
- JavaScript: `document.querySelector("selector")`

2. Hiding Elements:

- jQuery: `$(element).hide()`
- JavaScript: `element.style.display = "none"`

3. Showing Elements:

- jQuery: `$(element).show()`
- JavaScript: `element.style.display = "block"`

4. Fading In Elements:

- jQuery: `$(element).fadeIn()`
- JavaScript: You can achieve this effect using CSS transitions or the **animate** method in jQuery.

5. Fading Out Elements:

- jQuery: `$(element).fadeOut()`
- JavaScript: You can achieve this effect using CSS transitions or the **animate** method in jQuery.

6. Adding Classes to Elements:

- jQuery: `$(element).addClass("className")`
- JavaScript: `element.classList.add("className")`

7. Removing Classes from Elements:

- jQuery: `$(element).removeClass("className")`
- JavaScript: `element.classList.remove("className")`

8. Toggling Classes on Elements:

- jQuery: `$(element).toggleClass("className")`
- JavaScript: `element.classList.toggle("className")`

9. Handling Click Events:

- jQuery: `$(element).click(function() { ... })`
- JavaScript: `element.addEventListener("click", function() { ... })`

10. Making AJAX Requests:

- jQuery: `$.ajax({ ... })`
- JavaScript: You can use the **XMLHttpRequest** object or the **fetch** API.

Remember that jQuery is built on top of JavaScript, so anything you can do with jQuery, you can also achieve with vanilla JavaScript. However, jQuery often provides a simpler and more concise syntax for common tasks.

Example 1: Selecting elements and setting up event listener

Html:

A screenshot of a code editor window titled 'QvsJS_1.html'. The code is HTML and includes a jQuery CDN link and a script tag for 'jqvsJS1script.js'. The HTML structure includes a head section with meta tags for charset, viewport, and title, and a body section with a container div containing an h1, a p, and a button.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Element Selection Example</title>
7 </head>
8 <body>
9   <div id="container">
10     <h1>Hello, World!</h1>
11     <p>This is a paragraph.</p>
12     <button>Click Me</button>
13   </div>
14
15   <!-- jQuery CDN -->
16   <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
17
18   <!-- Script file -->
19   <script src="jqvsJS1script.js"></script>
20 </body>
21 </html>
```

JavaScript:

```
1 // jQuery: Selecting elements
2 $(document).ready(function() {
3     // Selecting elements using jQuery
4     var $container = $("#container");
5     var $heading = $("h1");
6     var $paragraph = $("p");
7     var $button = $("button");
8
9     // Manipulating selected elements using jQuery
10    $heading.text("Hello, jQuery!");
11    $paragraph.css("color", "blue");
12    $button.click(function() {
13        alert("Button clicked!");
14    });
15 });
16
17 // JavaScript: Selecting elements
18 document.addEventListener("DOMContentLoaded", function() {
19     // Selecting elements using vanilla JavaScript
20     var container = document.getElementById("container");
21     var heading = document.querySelector("h1");
22     var paragraph = document.querySelector("p");
23     var button = document.querySelector("button");
24
25     // Manipulating selected elements using vanilla JavaScript
26     heading.textContent = "Hello, JavaScript!";
27     paragraph.style.color = "red";
28     button.addEventListener("click", function() {
29         alert("Button clicked!");
30     });
31 });
32
```

```
1 // Define an array of colors
2 var colors = ["red", "blue", "green", "yellow", "orange"];
3
4 // jQuery: Selecting elements and setting up event listener
5 $(document).ready(function() {
6     var $paragraph = $("p");
7     var $button = $("button");
8
9     $button.click(function() {
10        // Get a random color from the colors array
11        var randomColor = colors[Math.floor(Math.random() * colors.length)];
12
13        // Change paragraph color
14        $paragraph.css("color", randomColor);
15    });
16 });
17
18 // JavaScript: Selecting elements and setting up event listener
19 document.addEventListener("DOMContentLoaded", function() {
20     var paragraph = document.querySelector("p");
21     var button = document.querySelector("button");
22
23     button.addEventListener("click", function() {
24        // Get a random color from the colors array
25        var randomColor = colors[Math.floor(Math.random() * colors.length)];
26
27        // Change paragraph color
28        paragraph.style.color = randomColor;
29    });
30 });
```

Example 2: Hiding elements

Html:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Hide Elements Example</title>
7     <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
8 </head>
9 <body>
10
11     <h2>Hide Elements Example</h2>
12     <p>This is a paragraph.</p>
13     <button id="hideButton">Hide Paragraph</button>
14
15     <script src="jqvJS_2script.js"></script>
16 </body>
17 </html>
```

JavaScript:

```
1 // jQuery: Hiding elements
2 $(document).ready(function() {
3     $("#hideButton").click(function() {
4         $("p").hide();
5     });
6 });
7
8 // JavaScript: Hiding elements
9 document.addEventListener("DOMContentLoaded", function() {
10     var hideButton = document.getElementById("hideButton");
11
12     hideButton.addEventListener("click", function() {
13         var paragraph = document.querySelector("p");
14         paragraph.style.display = "none";
15     });
16 });
```

Example 3: Showing elements

Html:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Show Elements Example</title>
7   <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
8 </head>
9 <body>
10
11   <h2>Show Elements Example</h2>
12   <p id="hiddenParagraph" style="display: none;">This paragraph was hidden.</p>
13   <button id="showButton">Show Paragraph</button>
14
15   <script src="jqvsJS_3script.js"></script>
16 </body>
17 </html>
```

JavaScript:

```
1 // jQuery: Showing elements
2 $(document).ready(function() {
3   $("#showButton").click(function() {
4     $("#hiddenParagraph").show();
5   });
6 });
7
8 // JavaScript: Showing elements
9 document.addEventListener("DOMContentLoaded", function() {
10   var showButton = document.getElementById("showButton");
11   var hiddenParagraph = document.getElementById("hiddenParagraph");
12
13   showButton.addEventListener("click", function() {
14     hiddenParagraph.style.display = "block";
15   });
16 });
```

Example 4: Fading in elements using fadeIn method

Html:JavaScript

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Fading In Elements</title>
7   <style>
8     #fadingElement {
9       display: none;
10      opacity: 0;
11      transition: opacity 1s ease-in-out;
12    }
13  </style>
14 </head>
15 <body>
16   <button id="fadeInButton">Fade In Element</button>
17   <div id="fadingElement">This element will fade in when the button is clicked.</div>
18
19
20   <script>
21     document.addEventListener("DOMContentLoaded", function() {
22       var fadeInButton = document.getElementById("fadeInButton");
23       var fadingElement = document.getElementById("fadingElement");
24
25       fadeInButton.addEventListener("click", function() {
26         fadingElement.style.display = "block";
27         setTimeout(function() {
28           fadingElement.style.opacity = "1";
29         }, 100); // Delay to allow display change before opacity transition
30       });
31     });
32   </script>
33
34 </body>
35 </html>
36
```

Html:jQuery

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Fading In Elements</title>
7   <style>
8     #fadingElement {
9       display: none;
10      opacity: 0;
11      transition: opacity 1s ease-in-out;
12    }
13  </style>
14   <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script> <!-- jQuery library -->
15 </head>
16 <body>
17   <button id="fadeInButton">Fade In Element</button>
18   <div id="fadingElement">This element will fade in when the button is clicked.</div>
19
20
21   <script>
22     $(document).ready(function() {
23       $("#fadeInButton").click(function() {
24         $("#fadingElement").css("display", "block").animate({opacity: 1}, 1000); // Fade in over 1 second
25       });
26     });
27   </script>
28
29 </body>
30 </html>
```