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What is jQuery?

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

**Tip:** In addition, jQuery has plugins for almost any task out there.

**Will jQuery work in all browsers?**  
The jQuery team knows all about cross-browser issues, and they have written this knowledge into the jQuery library. jQuery will run exactly the same in all major browsers.

Adding jQuery to Your Web Pages

There are several ways to start using jQuery on your web site. You can:

* Download the jQuery library from jQuery.com
* Include jQuery from a CDN, like Google

Downloading jQuery

There are two versions of jQuery available for downloading:

* Production version - this is for your live website because it has been minified and compressed
* Development version - this is for testing and development (uncompressed and readable code)

Both versions can be downloaded from [jQuery.com](http://jquery.com/download/).

The jQuery library is a single JavaScript file, and you reference it with the HTML <script> tag (notice that the <script> tag should be inside the <head> section):

<head>  
<script src="jquery-3.5.1.min.js"></script>  
</head>

## jQuery CDN

If you don't want to download and host jQuery yourself, you can include it from a CDN (Content Delivery Network).

Google is an example of someone who host jQuery:

### Google CDN:

<head>  
<script src="https://ajax.googleapis.com/ajax/libs/jquery/3.5.1/jquery.min.js"></script>  
</head>

With jQuery you select (query) HTML elements and perform "actions" on them.

jQuery Syntax

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".

## The Document Ready Event

$(document).ready(function(){  
  
  *// jQuery methods go here...*  
  
});

This is to prevent any jQuery code from running before the document is finished loading (is ready).

It is good practice to wait for the document to be fully loaded and ready before working with it. This also allows you to have your JavaScript code before the body of your document, in the head section.

Here are some examples of actions that can fail if methods are run before the document is fully loaded:

* Trying to hide an element that is not created yet
* Trying to get the size of an image that is not loaded yet

$(function(){  
  
  *// jQuery methods go here...*  
  
});

jQuery selectors are one of the most important parts of the jQuery library.

## jQuery Selectors

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](https://www.w3schools.com/cssref/css_selectors.asp), and in addition, it has some own custom selectors.

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

## The element Selector

The jQuery element selector selects elements based on the element name.

You can select all <p> elements on a page like this:

$("p")

## The #id Selector

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.

To find an element with a specific id, write a hash character, followed by the id of the HTML element:

$("#test")

## The .class Selector

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

To find elements with a specific class, write a period character, followed by the name of the class:

$(".test")