

JavaScript is one of the 3 languages all web developers must learn:

1. HTML to define the content of web pages
2. CSS to specify the layout of web pages
3. JavaScript to program the behavior of web pages

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.

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 and put in your server folder

```
<head>  
<script src="jquery-3.3.1.min.js"></script>  
</head>
```

Link to it in the head of the document from jquery.com:

```
<script src="http://code.jquery.com/jquery-3.3.1.min.js"></script>
```

Link to it from a CDN, like Google:

```
<script src="http://ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
```

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"`.

Document Ready Function

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.

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

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, and in addition, it has some own custom selectors.

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

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")
```

When a user clicks on a button, all `<p>` elements will be hidden:

```
$(document).ready(function(){  
  $("#button").click(function(){  
    $("#p").hide();  
  });  
});
```

Events

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".

Events

Mouse Events

click
dblclick
mouseenter
mouseleave

Keyboard Events

keypress
keydown
keyup

Form Events

submit
change
focus
blur

Document/Window Events

load
resize
scroll
unload

Events

To assign a click event to all paragraphs on a page, you can do this:

```
$("#p").click();
```

The next step is to define what should happen when the event fires. You must pass a function to the event:

```
$("#p").click(function(){  
    // action goes here!!  
});
```

common example:

```
$("#button").click(function(){  
    $(this).hide();  
});
```

Effects

Hide, Show, Toggle, Slide, Fade, and Animate.

Syntax:

```
$(selector).hide(speed,callback);
```

```
$(selector).show(speed,callback);
```

The optional speed parameter specifies the speed of the hiding/showing, and can take the following values: "slow", "fast", or milliseconds.

The optional callback parameter is a function to be executed after the hide() or show() method completes. (more advanced)

Effects

```
$("#hide").click(function(){  
  $("#p").hide();  
});
```

Event

Effect

```
$("#show").click(function(){  
  $("#p").show();  
});
```

Event

Effect