JQUERY

jQuery, at its core, is a **DOM** (Document Object Model) manipulation library. The DOM is a tree-structure representation of all the elements of a web-page and jQuery makes finding, selecting, and manipulating these DOM elements simple and convenient. For example, jQuery can be used for finding an element in the document with a certain property (e.g. all elements with an h1 tag), changing one or more of its attributes (e.g. color, visibility), or making it respond to an event (e.g. a mouse click).

jQuery provides a new paradigm for event handling in JavaScript beyond basic DOM element selection and manipulation. The event assignment and the event callback function definition are done in a single step in a single location in the code. jQuery also aims to incorporate other highly-used JavaScript functionalities (e.g. fade ins and fade outs when hiding elements, animations by manipulating CSS properties).

The advantages of using jQuery are:

•**Separates JavaScript and HTML**: Instead of using HTML attributes to call JavaScript functions for event handling, jQuery can be used to handle events purely in JavaScript. Thus, the HTML tags and JavaScript can be completely separated.
•**Brevity and Clarity**: jQuery promotes brevity and clarity with features like chain-able functions and shorthand function names.
•**Eliminates cross-browser incompatibilities**: The JavaScript engines of different browsers differ slightly so JavaScript code that works for one browser may not work for another. jQuery handles all these cross-browser inconsistencies and provides a consistent interface that works across different browsers.
•**Extensible**: jQuery makes extending the framework very simple. New events, elements, and methods can be easily added and then reused as a plugin.