Comparison of JavaScript and jQuery

JavaScript and jQuery are very similar in looks and origin and at the same time very different in implementation and code structure. It is arguable that learning JS prior to jQuery is beneficial in terms of understanding the core of JavaScript as a scripting language. At the same time due to the complexity of JS, it is easier to make mistakes writing code, it takes more time to write it and JS can possibly be less beginner friendly.

jQuery is easy to learn and overall very powerful tool for creating complex web pages. In my experience, I enjoyed working with jQuery more than with pure JS. The level of modularity, simplicity, clear code and general robustness are the factors that make for a comfortable and fast development process.

During the development of the FMA, the most noticeable difference between JS and jQuery is on the level of optimisation. For the comparison, my JS file has 4475 characters and the jQuery file has 2399 characters which equate to more than 50% more efficiency in terms of size. jQuery code is capable of processing simple functions using fewer lines of code.

On the other hand, jQuery is sometimes overcomplicated which can lead to reduced performance of the web pages. For example, the jQuery validation tool that was used during the development has a huge library of functions.

There are many ways of implementing the same function. For my jQuery file, there was a choice of importing a package of additional methods or coding custom methods from scratch. Having chosen the latter, the file ended up being longer and potentially less efficient. In this particular example, there was no significant performance dip but it can be much more noticeable in bigger and more complex projects.

One more disadvantage of having a big library is an increased loading time of web pages. jQuery library itself is around 80 KB of data. Once again it did not reflect on this FMA but it can potentially be a bottleneck for bigger projects.

During the research, I found a very interesting online tool which provided the performance comparison of jQuery and JS. It can be found here. It shows that in some cases pure JS can be as much as 80% faster than jQuery. Overall it can be seen that script written in JS is on average 4-5 times faster. For the average user nowadays, however, such differences are barely noticeable.

In terms of browser, compatibility jQuery is also performing better than pure JS. During the development of the JS file, several issues were encountered which sometimes showed up on the Firefox browser but did not on the Chrome browser and vice versa. However, such issues were not present during the jQuery file development. This was mostly caused by the functions native to JS that are not supported by all browsers.

Finally, it can be deduced that for the small-scale projects like this FMA jQuery seems like a more appropriate tool to use.