I chose Mocha as the test framework that I would like to discuss. In this thread I will talk about the core features of Mocha. I also want to establish if Mocha supports test driven development (TDD) and if behavior driven development (BDD) is supported. As well, I want to discuss when a developer should create unit tests, before or after development and what unit tests are important. So, what is Mocha?

Mocha is “a feature-rich JS test framework running on node and the browser, making asynchronous testing simple and fun. Mocha test run serially, allowing for flexible and accurate reporting, while mapping uncaught exceptions to the correct test cases.” (*What is Known as Mocha*, 2012).

Some of the core features of Mocha are:

* Various methods of installation – can be installed locally or globally by running specific commands while testing framework for NodeJS.
* Supports asynchronous testing – other JavaScript frameworks do not.
* Runs in the web browser – Mocha JS is compatible with almost all major web browsers.
* Compatible with several JS assertion libraries – helps testers to curtail testing costs
* Works in both TDD and BDD environments

(Admin, 2018).

Because Mocha can test code asynchronously, it is welcomed in behavior driven development. “Mocha can handle asynchronous code and promises, as well it can give useful reports for how the tests went and allow developers to specify certain behaviors before or after the tests. (*BDD Testing with Mocha* – PCS, 2015). Although it may be more challenging to use TDD with Mocha in JavaScript because of the event driven environment of JS, it can be done. The decision of which to use really comes down to what the developer is most comfortable in using.

In my opinion unit tests should be completed before development as opposed to after a project is completed. My reasons for this opinion are thus:

1. Unit testing isolates a section of code and validates its correctness.
2. It helps in identifying and fixing the bugs at the early stage of the SDLC process.
3. Assures to reduce the cost as bugs are resolved at the earliest find.
4. Helps the developers to improve the design by allowing refactoring of the code.
5. Assures in simplifying the debugging process.
6. With the proper unit testing, components that are integrated after the build can assure in achieving a quality product.

(2022).

In conclusion we can see what Mocha is and how using Mocha can benefit us in the testing of the code that we write. There are many features that can be ascertained when using Mocha. Mocha can be used in both TDD and BDD, whichever the developer or development team is more comfortable with. Mocha is an excellent way to perform unit testing in JavaScript.

References:

*What is Known as Mocha*. (2012, December 13). Stack Overflow. Retrieved August 9, 2022, from <https://stackoverflow.com/questions/13854029/what-is-known-as-mocha>

Admin. (2018, March 15). *What is Mocha JS*/ *Mocha Testing Framework*/ *JavaScript Testing*. All About Testing. Retrieved August 9, 2022, from <http://www.allabouttestingbiz/what-is-mocha-js/>

BDD Testing with Mocha – PCS. (2015, August 26). JavaScript Immersion. Retrieved August 9, 2022, from <http://portlandcodeschool.github.io/jsi/2015/08/26/mocha-testing/>

S. (2022, July 20). Unit Testing- What is Its Importance in Software Testing? Testing Experts. Retrieved August 9, 2022, from <https://www.testingxperts.com/blog/unit-testing>