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Module Two Journal

CS-320 Software Test Automation & QA

Prompt: In this journal assignment, you will explore dynamic and static testing techniques. You will explain what each is, the difference between the two, and why it’s important to use both. Address the following questions:

* What is static testing?

Static testing is a software testing technique that does not require executing any code. Instead, the testing is focused on early stage and analyzes the code. These techniques could be code reviews, inspections, walkthroughs, and analysis via static analysis tools. The main purpose of static testing is to preemptively catch errors and poor design in the software.

* What is dynamic testing?

Dynamic testing involves running code to test the software. Code is executed during runtime in the form of “test cases” which are predefined tasks that need to pass a certain criterion. The test cases include unit testing, integration testing, system testing, and acceptance testing. These various methods validate the software and return any data that could pass or fail within the system.

* What are the differences between static and dynamic testing?

Static testing is for earlier development and is used to ensure that the starting design and system structure is assembled well. It is also done prior to testing the software at runtime. Dynamic is executed during runtime and is designed to test the software’s function using test cases.

* Why is it important to use both static and dynamic testing?

Using both static and dynamic techniques is beneficial and important to development as they approach different ends of the entire package. Static testing allows for code reviews and structural integrity of the system design to be reviewed and improved upon. Dynamic testing ensures that once the design is together in a proper manner, it can be tested to ensure functionality. With these two combined testing techniques, the software will be designed well, and will run well. This is very important for future proofing and for software that requires large updates frequently as the developers will have well documented, organized, and functional code to pick up and work on.