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What is static testing?

A method of testing a program that can find issues without running the program. Static testing looks through the program and any other files related to it that may be called to ensure there are no issues or errors in said file or code. Static testing is used to test the programs early on to prevent a costly issue. Because of this static testing is cheaper in the long run. This test also helps with the reliability and quality of the program.

What is dynamic testing?

A method of testing a program that is actively running. Dynamic testing is used to ensure that the program is running with no issues after the program has been installed. It is used when compiling and running the program in a test environment. It also helps you identify what features of the program need to be tested as well as making sure the user input and the output of the program are proper and doesn’t through errors. Dynamic testing can be used in any stage of the coding process, like unit testing or system testing. Dynamic testing can find vulnerabilities that static testing can struggle with but at the same time it can also generate false data.

What are the differences between static and dynamic testing?

Static testing is better used for smaller projects as it is more time-consuming to test. Static testing can only be used before the program is running therefore if there are any issues while the program is running it won’t be found. Dynamic testing can run a test before and while the program is running to insure there are no errors. Static testing is more so used for the verification process while dynamic testing is used for the validation process.

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

It is important to use both static and dynamic testing to ensure as minimal errors and issues as possible. If you were to just use static testing, you won’t be able to find errors in the running code. On the other side if you were to just use dynamic testing you could be getting false information back. Therefore, you should use static testing to verify dynamic testing and you should use dynamic testing to verify static testing.