**Assignment 3.3 – Ideal vs Non-Ideal Testing Pyramids**

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Testing pyramids can be a great tool for developers when they meet the right testing circumstance. They can save the company time and money on a project when used correctly. Hopefully below when I go into detail on these ideal and non-ideal pyramids it will help you decide if these are right for you and why you should think about implementing these DevOps tools into your development practices.

The testing pyramid was an idea that was developed by a man named Mike Coen. (Roth, M.) So, you might be wondering what really this testing pyramid is and how does it help us as a developer. Well, the answer to that is it’s a tool that helps fix the problem of over-reliance on long running UI tests. (Roth, M.) With the pyramid you should run a lot more tests on the lower items on the pyramid such as any unit tests. The reason for this is because these tests are less expensive to write and maintain and the tests are also a lot faster to run. (Roth, M.) Then the top items such as any user interface (UI) should be ran a lot less because those tests tend to take longer and cost more to do them. (Roth, M.)

An ideal testing pyramid is an idea of what type of tests are ideal test suite should cover. These things include like user interface tests, API tests, integration tests, component tests and unit tests. Whenever possible these tests should be automated. (Kim, G., Debois, P., Willis, J., Humble, J., & Allspaw, J.) Like I mentioned before you really wanted to run more unit tests than any of the other types because they are quicker and less costly tests to write. Automated testing on any of these parts really helps to cut down on human error, as well as the time and costs for the project. (Kim, G. et. al) Also, you might be wondering what is a unit? A unit is the smallest testable item of any software program. (Stf.) Now you can understand why doing tests on these is faster than the rest.

A non-ideal testing pyramid is when there are like teams that do manual testing and then teams that do automated testing. The teams might have little trust in the test suite so its likely that regression is being tested more than once. (Cochran, T.) Likely with one test being automated and the other being a manual test. This can cost the company a lot of extra down time which leads to the project costing more money as well. (Cochran, T.) When a team starts to rely on less automated testing its pretty much an out of sight out of mind kind of thing for the developers. Normally its another team that is running the testing so something they shouldn’t have to worry about. When these automated tests aren’t maintained it becomes another problem as well. (Cochran, T.)

To sum it up I testing pyramids are a great tool suite for developers. With an ideal test pyramid that uses a lot of automated testing it can really help the company thrive and cut down a lot of wasted time and extra costs. However, when the testing pyramid isn’t ideal it can really cause a lot of issues both with the project and with the tests being ran on different parts of the project. I think given the choose implementing this testing pyramid is the right way to go.

**Bibliography**

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