Tech Talk Topic: TestNG

Abstract:

TestNG (Test **N**ext-**G**eneration) is a Java testing framework that was developed by Cédric Beust. It was inspired by the shortcomings of the very popular JUnit testing framework.[1] Some of these deficiencies in JUnit included *Poor configuration control*, *static programming model*, and *Complexity of managing different suites of tests*. The main functionality that TestNG provides similar to JUnit are automated testing, annotations for identifying testing file structure and assertion commands. In additions TestNG supports testing for dependent test methods, parallel testing, load testing, partial failure, and multi threaded testing. Moreover, TestNG introduced test groups, which allow you to test specific groups of your program (e.g "front-end group", "database group", "fast group", etc.).[2,9,10] The improvement on JUnit to TestNG has gave developers the ability to develop more flexible testing and powerful scripts. The only thing universally required to download and use TestNG is the JDK version 5 or above. TestNG is open source so once you have your JDK installed simply download TestNG to use the new features.[3] TestNG was first realized in 2004 with the latest stable release in August 2019.[4] A few notable companies who have reported to be using TestNG are WellsFargo, Apple, Aetna, and ServiceNow. TestNG is growing in popularity but is still being drowned out by the conventional JUnit.[5] In 2016 TestNG was ranked #20 in top 100 java libraries on GitHub while JUnit was ranked #1.[6] However TestNG is slowly being used more and more through other means like Selenium which is a testing framework for web applications. Selenium by itself cannot return proper test results and thus developers have used TestNG to generate these results. Consequently, in the top 100 java libraries on Github for 2018, Selenium has replaced TestNG in the top 20 (TestNG is still part of Selenium popularity) and JUnit is still the most popular testing framework ranked at #3.[7,8] TestNG is gradually growing in popularity. It is essentially the same thing as JUnit with added functionality and thus it is only a matter of time before it becomes more widely used than JUnit.

References:

[1]   https://testng.org/doc/
[2]   https://www.tutorialspoint.com/testng/index.htm
[3]   https://github.com/cbeust/testng
[4]   https://en.wikipedia.org/wiki/TestNG
[5]   https://discovery.hgdata.com/product/testng
[6]   https://blog.overops.com/the-top-100-java-libraries-in-2016-after-analyzing-47251-dependencies/
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