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New Features

1. Easy way to run TestNG tests alongside JUnit tests. Either by a simple conversion of JUnit syntax to TestNG, or a way of supporting JUnit syntax in TestNG. The motivation being that many java projects are already using JUnit, (and have a lot of tests they wouldn't want to rewrite) so if we want to get them to convert to TestNG, we should make the switch as easy as possible for them.

2. A feature we could design would be a code coverage functionality. Users could see some basic analytics of how many line of code were covered by the unit test and which test covered which files or package. This would be useful because testers already want to see how well their tests are checking their code, so it seems like a logical progression to build into testNG. This would be a small addition with reasonable amount of complexity to handle, but considering there are many standalone tools that already serve this purpose, there would be many example to draw from, which will ease the difficulty of designing it.

3. Add the ability to run suites in parallel. As far as I can tell, the current system can run multiple tests in a suite in parallel, but it cannot run multiple suites in parallel. This change would potentially speed up the process of running multiple test suites on a software system. The motivation is that large java projects are split up by subsystem or by functionality and have separate developers working on each part. If testNG has the ability to run many test suites in parallel, it will make the job of test engineers specifically in integration testing much easier.

4. A design feature that does not seem to be supported in TestNG that could help make testing simpler would be added features to parameterization tests. Running tests with the same data but different tests can be parameterized through an xml file or the @Parameter or @DataProvider annotations in testNG. A feature that exists in JUnit and misses on TestNG is the ability to use different combinations between several arguments. This provides a shortcut to long parameter list and being able to design testNG with this functionality would be beneficial.