

Managing Test Reporting

Understanding the Importance of Test Reports



Jim Weaver

Developer, Trainer and Author

www.codeweaver.org



Sample Maven Test Report

```
[INFO] T E S T S
[INFO] -----
[INFO] Running rxwriter.prescription.DurationParserTest
[INFO] Tests run: 4, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0.06 s - in rxwriter.prescription.DurationParserTest
[INFO] Running rxwriter.prescription.DurationUnitTest
[INFO] Tests run: 3, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0 s - in rxwriter.prescription.DurationUnitTest
[INFO] Running rxwriter.drug.DrugServiceTest
[ERROR] Tests run: 3, Failures: 1, Errors: 0, Skipped: 0, Time elapsed: 0.007 s <<< FAILURE! - in
rxwriter.drug.DrugServiceTest
[ERROR] throwsExceptionOnEmptyStartsWith Time elapsed: 0.005 s <<< FAILURE!
org.opentest4j.AssertionFailedError: Expected java.lang.IllegalArgumentException to be thrown, but nothing was thrown.
    at rxwriter.drug.DrugServiceTest	throwsExceptionOnEmptyStartsWith(DrugServiceTest.java:32)

[INFO] Running rxwriter.drug.DrugConceptTest
[INFO] Tests run: 2, Failures: 0, Errors: 0, Skipped: 0, Time elapsed: 0 s - in rxwriter.drug.DrugConceptTest
[INFO] Running rxwriter.drug.LifecycleTest
[WARNING] Tests run: 1, Failures: 0, Errors: 0, Skipped: 1, Time elapsed: 0 s - in rxwriter.drug.LifecycleTest
[INFO]
[INFO] Results:
[INFO]
[ERROR] Failures:
[ERROR]   DrugServiceTest	throwsExceptionOnEmptyStartsWith:32 Expected java.lang.IllegalArgumentException to be thrown, but
nothing was thrown.
[INFO]
[ERROR] Tests run: 13, Failures: 1, Errors: 0, Skipped: 1
```



Test Report Guidelines

Keep console output in tests to a minimum

What a test is for – what it's testing – should be as clear as possible in the report

- We'll cover display names and nested tests in this module

When there's a failure, the failure message in the report should be clear

- We'll cover using custom failure messages in this module



Providing Failure Messages



```
assertEquals(int expected, int actual)
```

```
assertEquals(int expected, int actual, String message)
```

```
assertEquals(int expected, int actual, Supplier<String> messageSupplier)
```

JUnit Failure Message Options

- **No failure message**
- **A String failure message**
- **A String Supplier functional interface implementation, or lambda expression**
- **Lambda expression not evaluated unless the assertion fails, so may save time if the failure message construction is expensive**

You'll only see the failure message when a test fails

It doesn't replace the normal expected vs. actual message JUnit provides – it's in addition to



Common Reasons to Use a Failure Message

To make what the test is for more clear when there is a failure

To detail the scenario and arguments

When there's a failure, the failure message in the report should be clear

- We'll cover using custom failure messages in this module



Leveraging Display Names



Nesting Tests



Up Next:

Running Unit Tests as Part of a Build Pipeline

