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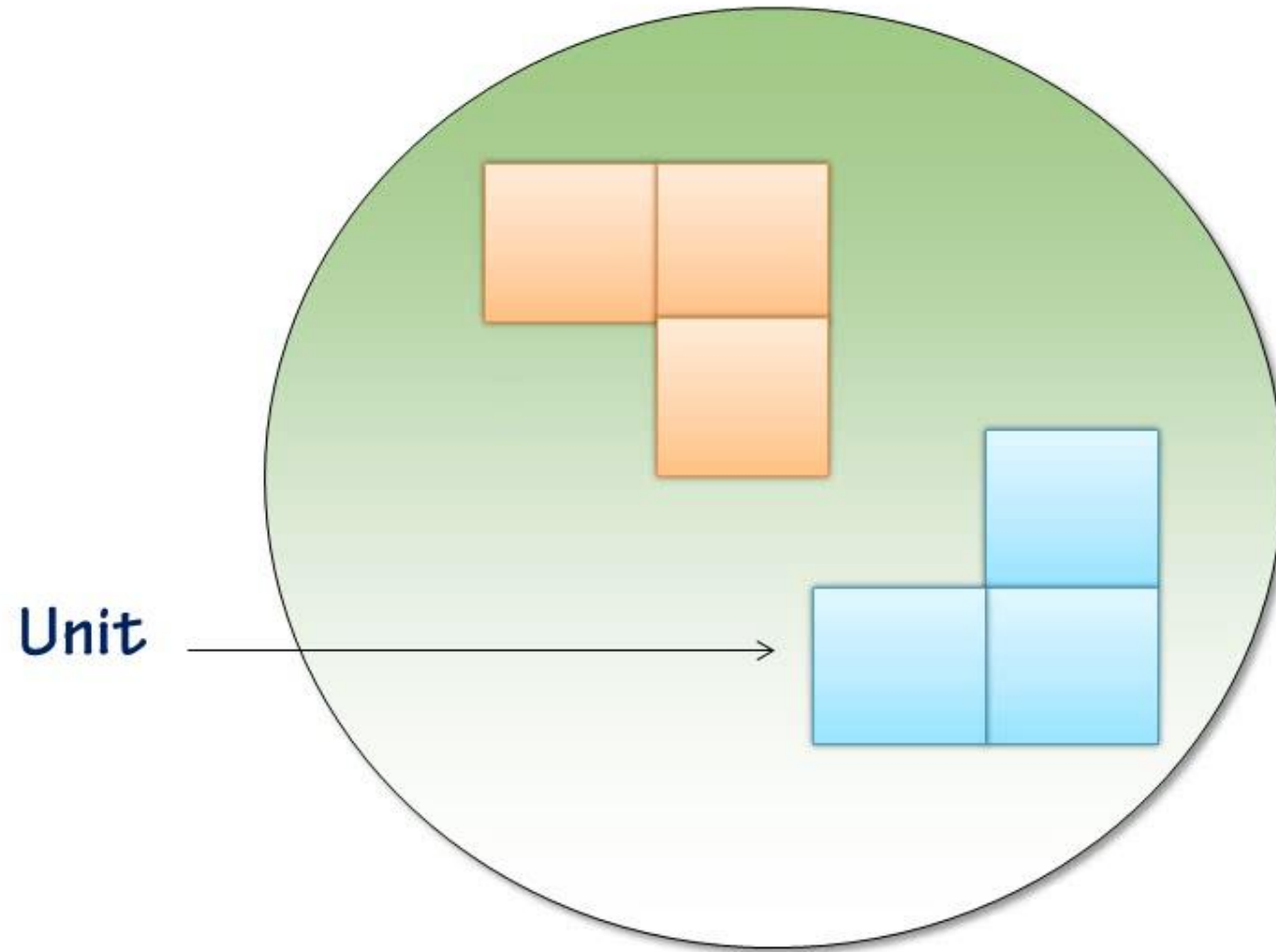


KRISHNA M. SADASIVAM

# UNIT TESTING USING JUNIT

by Syed Mohammad Sualeh Ali

# What Is Unit Testing?

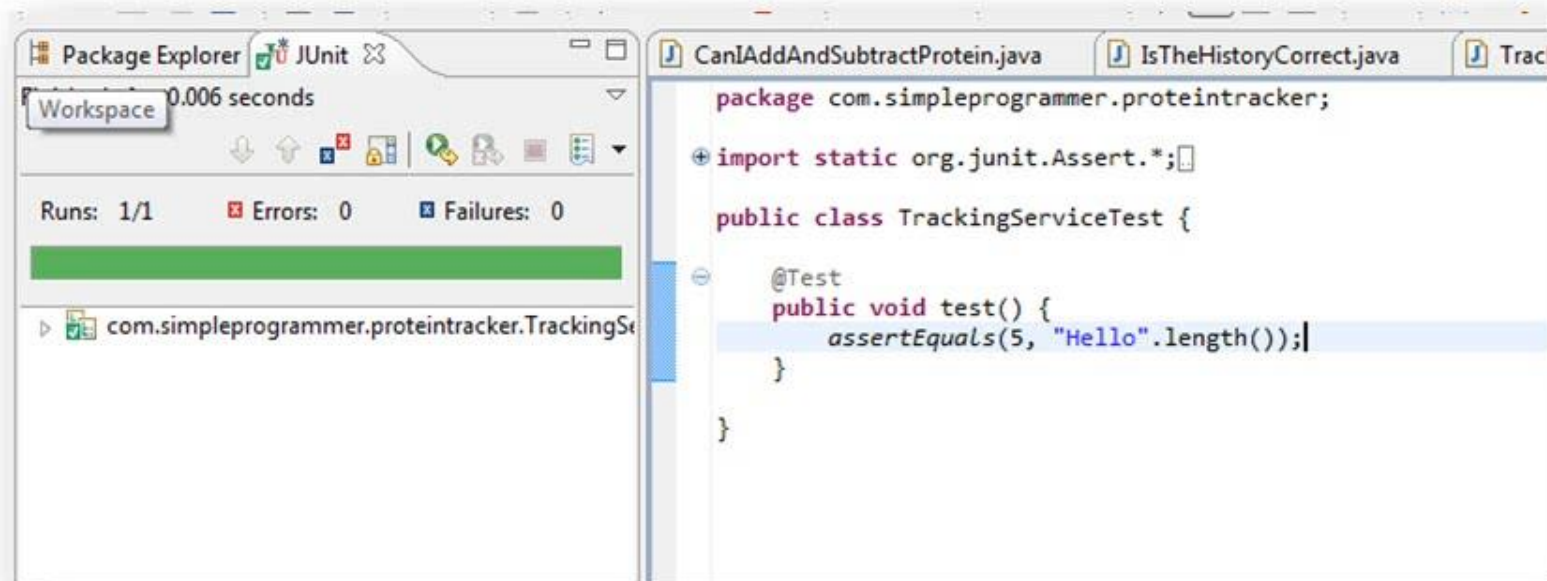


*In Java the smallest "unit" is a class*



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# JUnit



*Write tests, run them, see results!*



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# JUnit Features

- Asserts
- Test setup and teardown
- Exception testing
- Test suites
- Parameterized testing
- Assumptions
- Rules
- Theories
- Integration with popular build systems

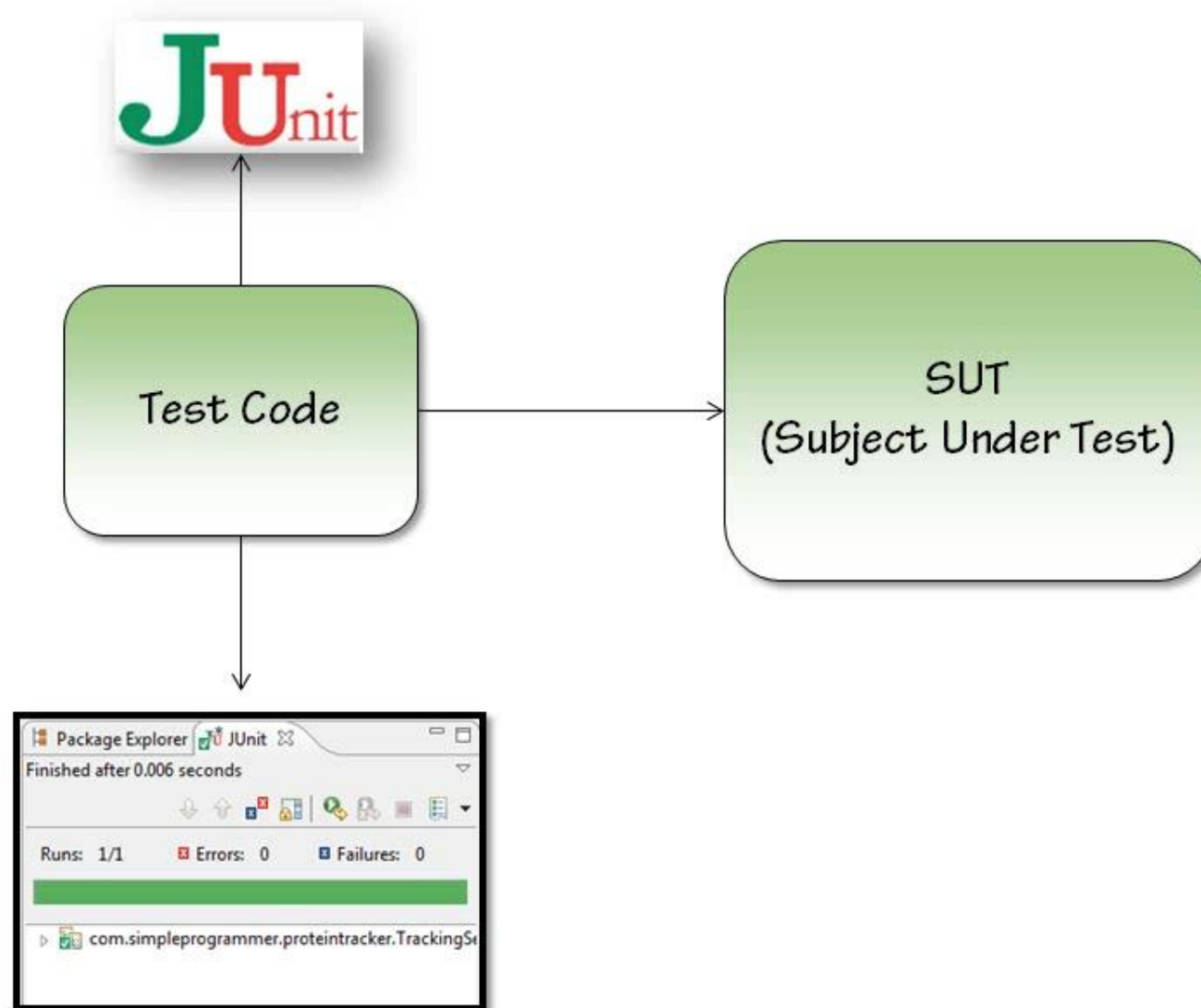


# JUnit Features

- Asserts
  - Test setup and teardown
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- ➔ Integration with popular build systems



# JUnit



# JUnit Test Methods

@Test

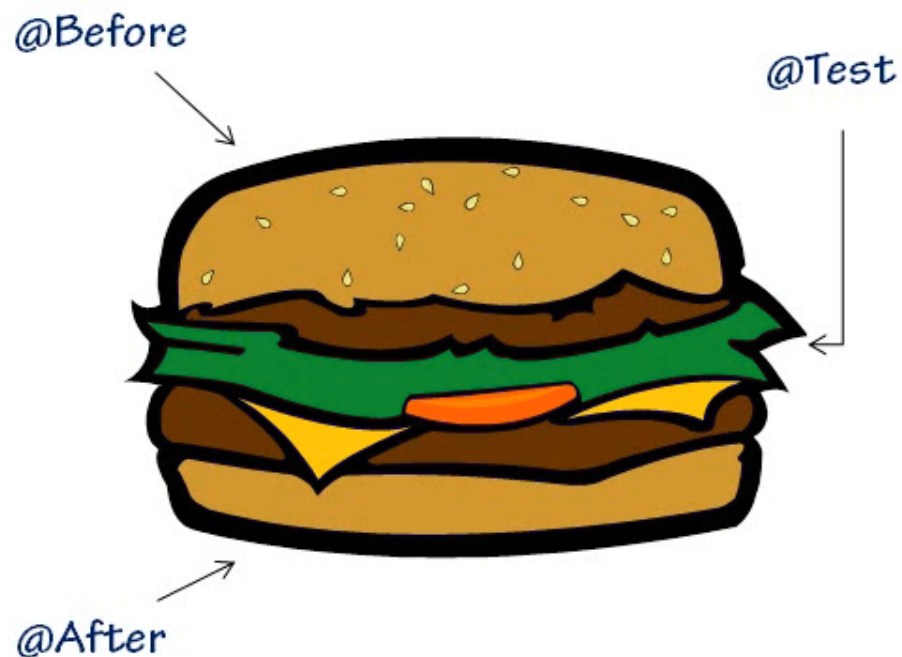
Test Method



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# JUnit Annotations (Basic)

- `@Test`
- `@Before`
- `@After`
- `@BeforeClass`
- `@AfterClass`
- `@Ignore`
- `@Test(expected = Exception.class)`
- `@Test(timeout = 100)`



*It's like a JUnit burger!*



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# Before And After

@Before

Method

@Test

Test Method

@After

Method



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# BeforeClass and AfterClass

@BeforeClass

Static Method

@Before

Method

@Test

(annotation)

Test Method

@After

Method

@Before

Method

@Test

(annotation)

Test Method

@After

Method

@AfterClass

Static Method



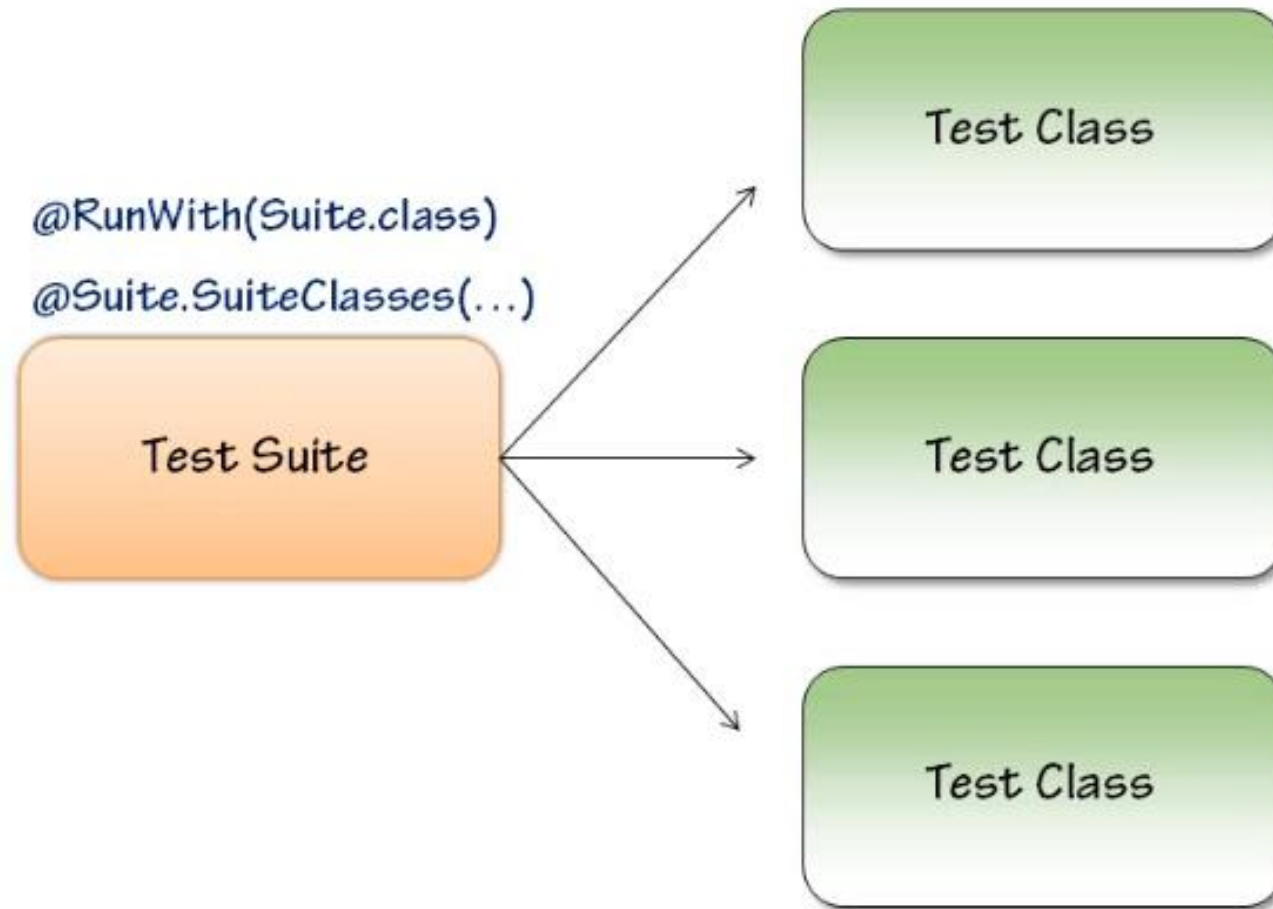
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## Assertions (Basic)

- `assertArrayEquals`
- `assertEquals`
- `assertTrue`
- `assertFalse`
- `assertNull`
- `assertNotNull`
- `assertSame`
- `assertNotSame`
- `fail`



# Test Suites

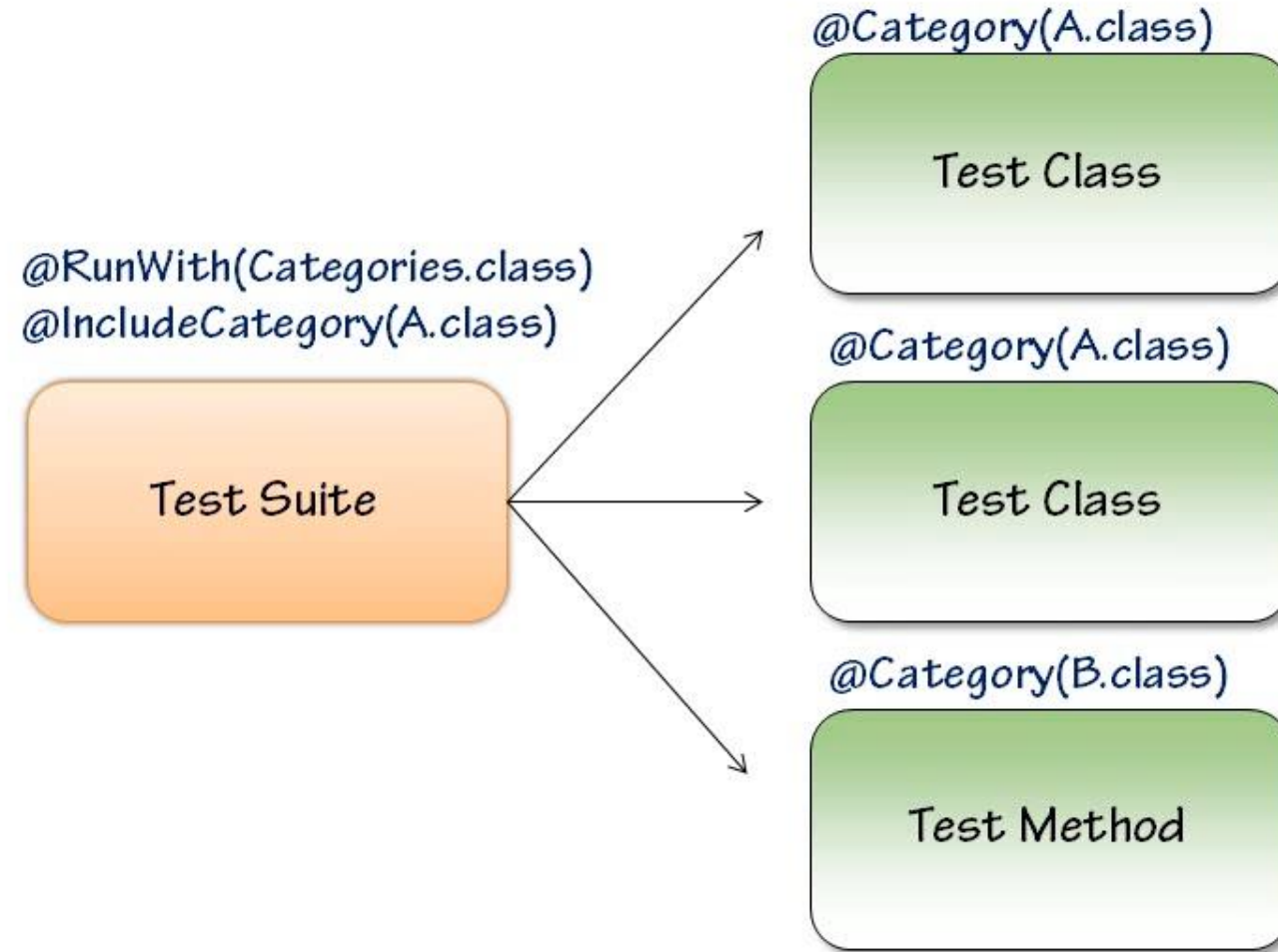


*Test suites are sweet!*

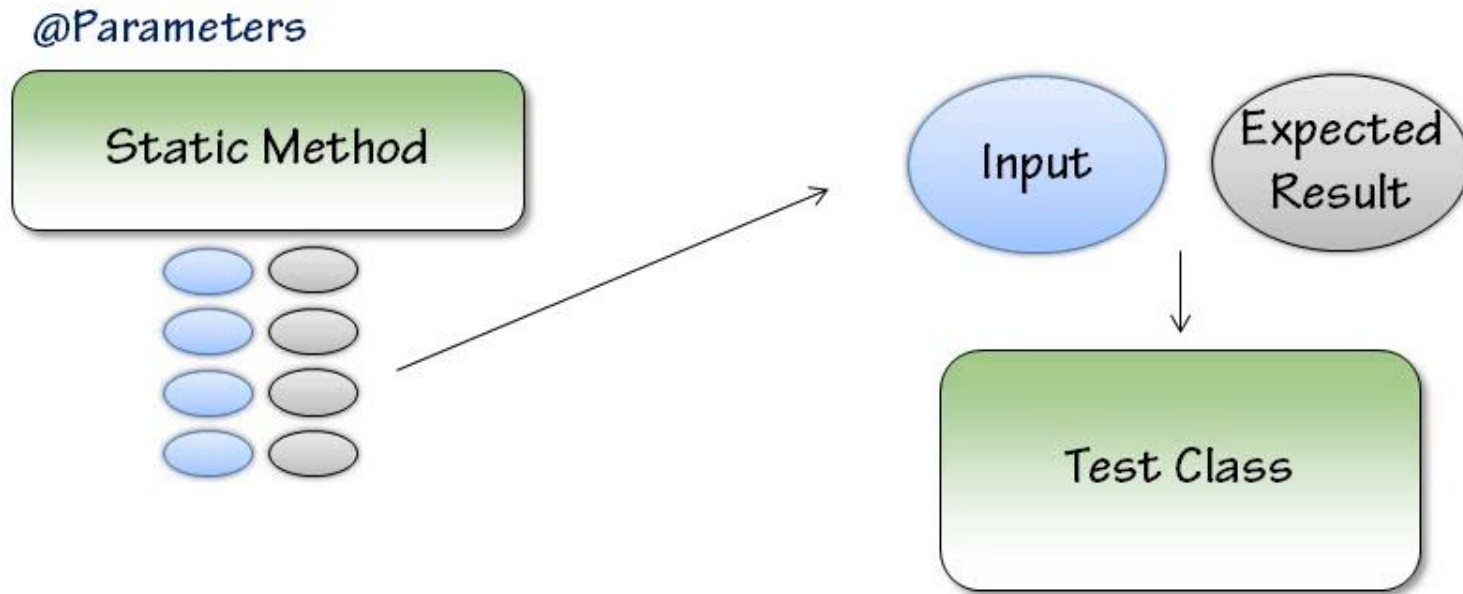


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# Categories



# Parameterized Tests

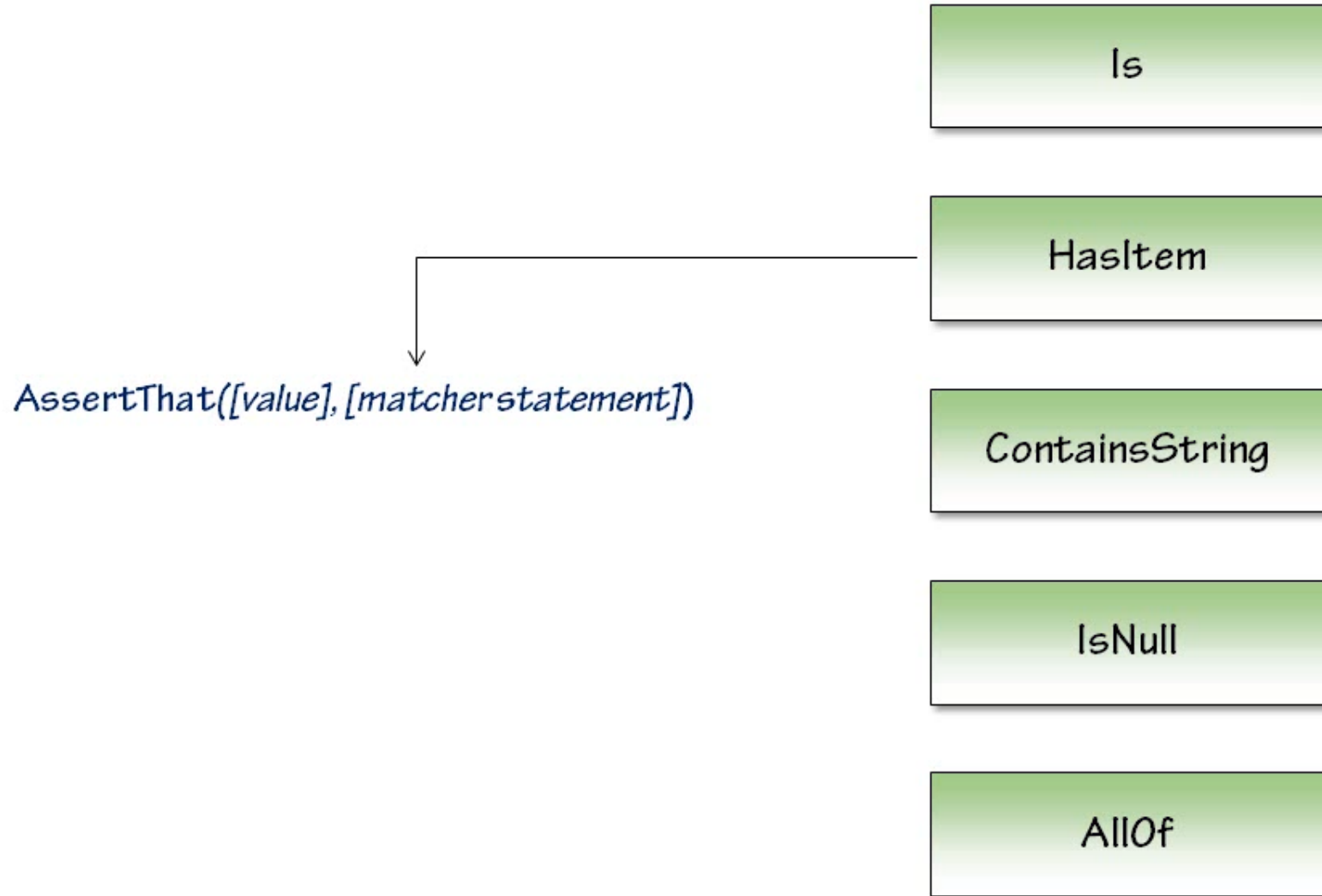


*Now you don't need 50 tests to test all your data!*



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# Advanced Assertions



# Rules

- TemporaryFolder
- ExternalResource
- ErrorCollector
- Verifier
- TestWatcher
- TestName
- Timeout
- ExpectedException
- RuleChain

@ClassRule



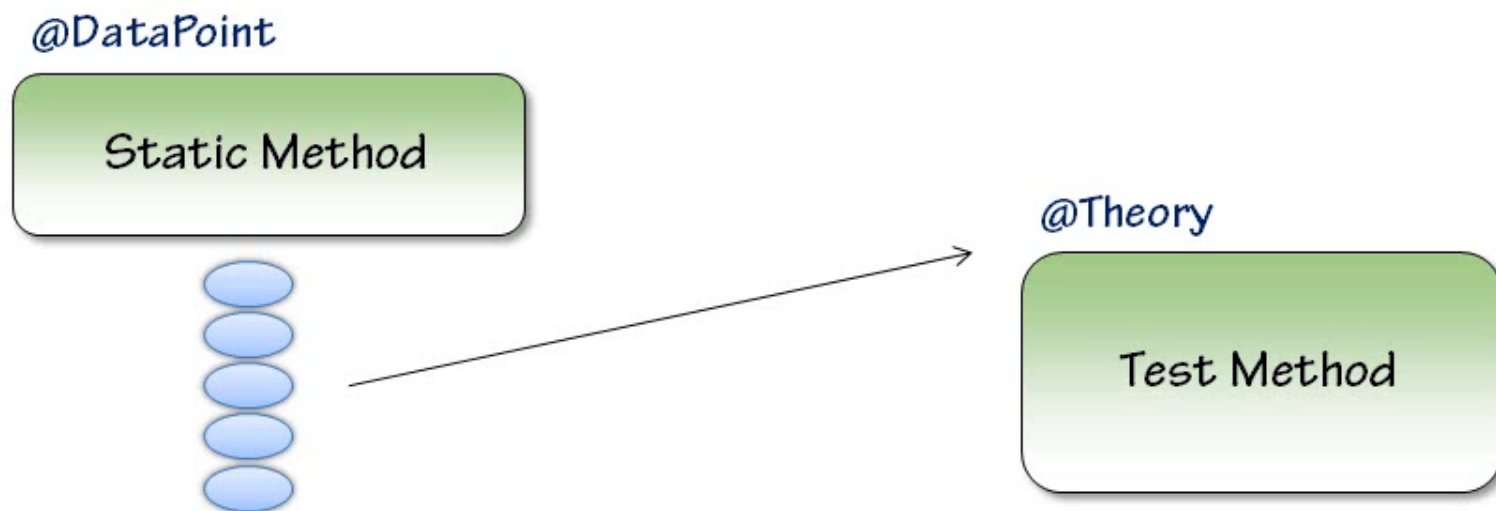
*Rules let you extend the functionality of JUnit*



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# Theories



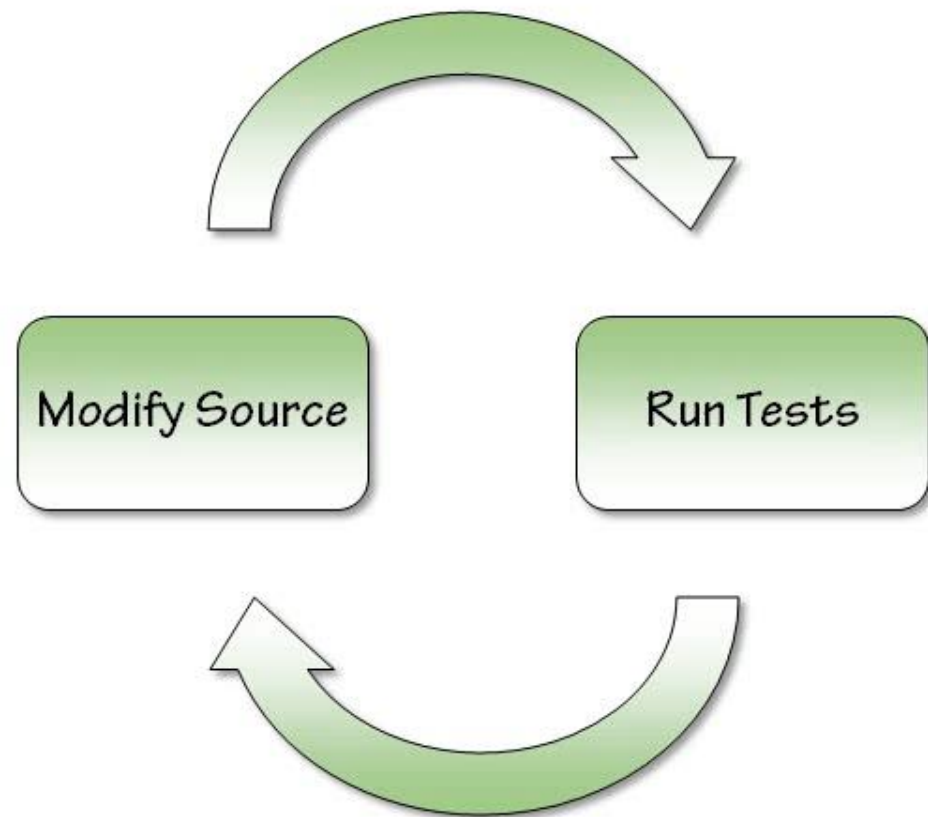
*Until it is proven, it is just a theory*

14\_Theories.flv



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# Continuous Testing

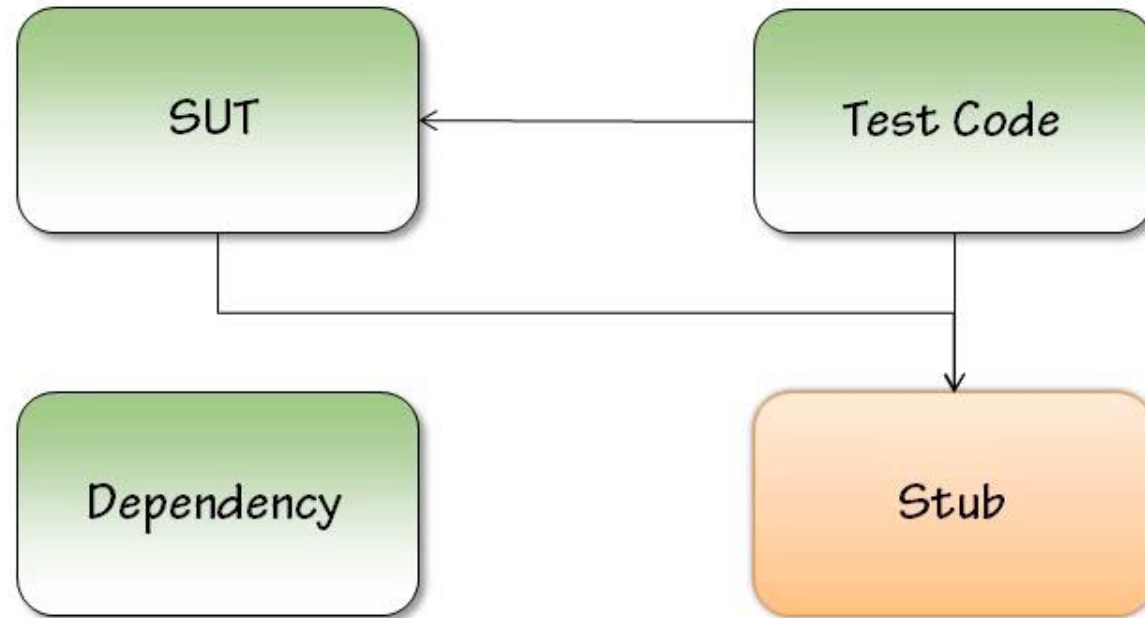


*It's all about the feedback loop, baby*



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# Stubs



# Mocks

