

# JUnit A Cook's Tour

: JUnit 3.8.x .

1.

(Test Infected : Programmers Love Writing Tests, Java Report, July 1998, Volume 3, Number 7 )

가

가

JUnit

가      가

가

$$\left( \quad , \quad \right)$$

2.

```
JUnit      ?
```

가 가 .

가

가

가

가

가

가

가

?

, PM !!

가

가

가

1

5

가

가

Setup	Fixture	Fixture
-------	---------	---------

3. JUnit

JUnit ("Patterns Generate Architectures", Kent Beck Ralph Johnson, ECOOP 94 ) 가 JUnit

3.1 - TestCase

TestCase

- 
- 
- 

가

( )

Command (Gamma, E., et al. Design Patterns : Elements of Reusable Object-Oriented Software, Addison-Wesley, Reading, MA, 1995 )

"

"execute"

TestCase

```
public abstract class TestCase implements Test
{
    ...
}
```

Test "public abstract"

TestCase TestCase class 가

```
public abstract class TestCase implements Test
{
    private final String fName;

    public TestCase (String name) {
        fName = name;
    }
}
```

```
}

public abstract void run ();
...
}
```

JUnit  
가  
가  
가  
(Gamma, E., Applying Design Patterns in Java, in Java Gems, SIGS Reference Library, 1997 )  
1 TestCase



3.2 Blanks to fill in - run()

fixture  
" TestCase abstract 가 subclassing TestCase  
가 super class  
test fixture 가 fixture  
fixture 가 fixture 가  
가  
" 가  
가 fixture(setup and teardown)  
fixture 가 가

```
public void run()
{
    setUp();
    runTest();
    tearDown();
}
```

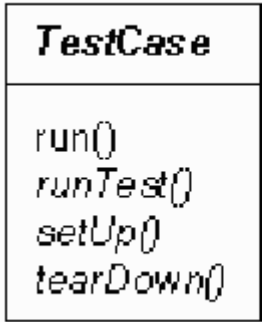
```
protected void runTest()
{
    ...
}
```

```
protected void setUp()
{
    ...
}
```

```
protected void tearDown()
{
    ...
}
```

setUp     tearDown

2

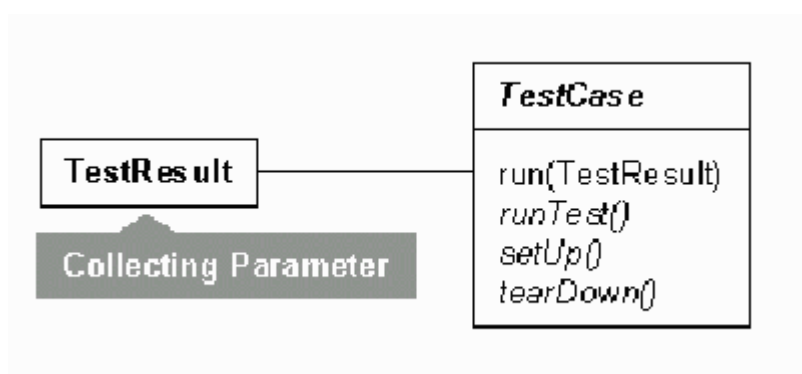


Template Method

3.3 Reporting results - TestResult

TestCase가 forest	가	?	.
가	.	.	.
가		TestCase	flag
가	flag	.	.





가

가

가

JUnit  
가

ArrayIndexOutOfBoundsException  
AssertionFailedError

가 catch (1)

(2)

```

public void run (TestResult result) {
    result.startTest (this);
    {
        runTest ();
    }
    catch (AssertionFailedError e) { // 1
        result.addFailure (this, e);
    }
    catch (Throwable e) { // 2
        result.addError (this, e);
    }
    {
        tearDown ();
    }
}

```

AssertionFailedError TestCase assert  
JUnit assert  
가

```

protected void assertTrue (boolean condition) {
    if (! condition)
        throw new AssertionFailedError ();
}

```

```
AssertionFailedError (TestCase)가
TestCase.run () . AssertionFailedError .
```

```
AssertionFailedError {
public AssertionFailedError () {}
}
```

```
. TestResult
```

```
addError ( , Throwable t) {
fErrors.addElement (new TestFailure (test, t));
}
```

```
addFailure ( , Throwable t) {
fFailures.addElement (new TestFailure (test, t));
}
```

TestFailure

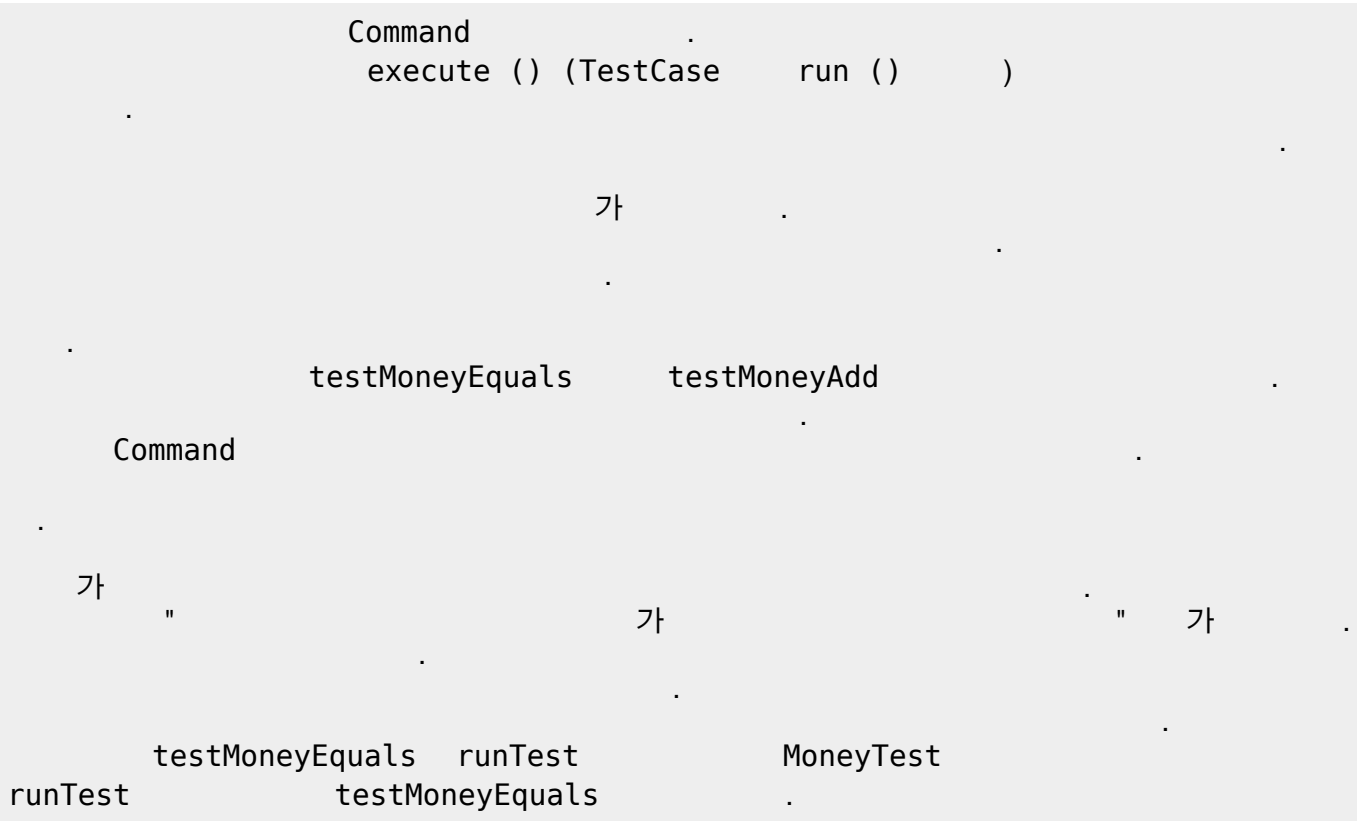
```
TestFailure Object {
protected Test fFailedTest
Throwable fThrownException;
}
```

```
TestResult 가
" "
TestResult
throw
MoneyTest
TestResult 가
```

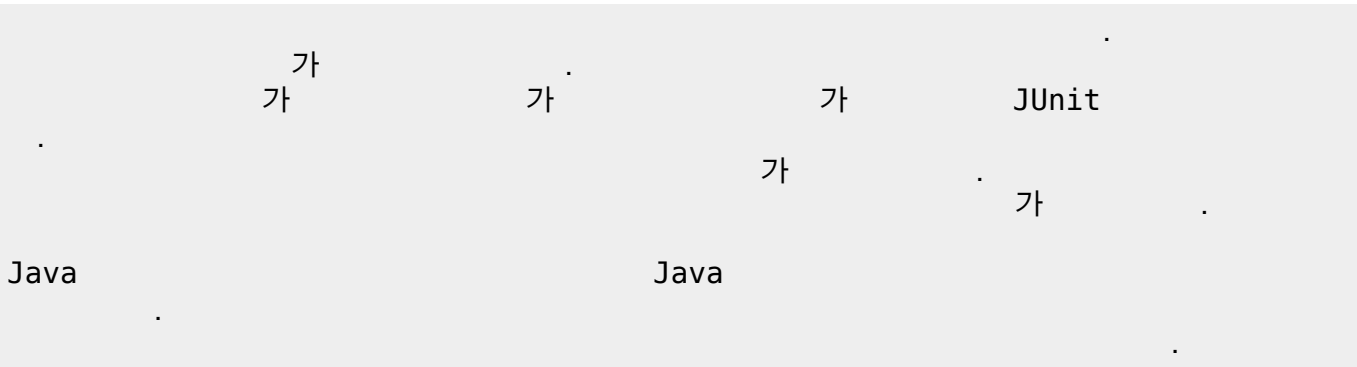
```
public void testMoneyEquals () {
assertTrue (! f12CHF.equals (null));
assertEquals (f12CHF, f12CHF);
assertEquals (f12CHF, new Money (12, "CHF"));
assertTrue (! f12CHF.equals (f14CHF));
}
```

```
JUnit TestResult
TextTestResult
UITestResult JUnit Test Runner
TestResult
TestResult
HTMLTestResult HTML
```

### 3.4 -TestCase



```
TestMoneyEquals MoneyTest {
public TestMoneyEquals () {super ( "testMoneyEquals"); }
    runTest () {testMoneyEquals (); }
}
```



```
TestCase test = new MoneyTest ( "testMoneyEquals" ) {
    protected void runTest () {testMoneyEquals (); }
};
```



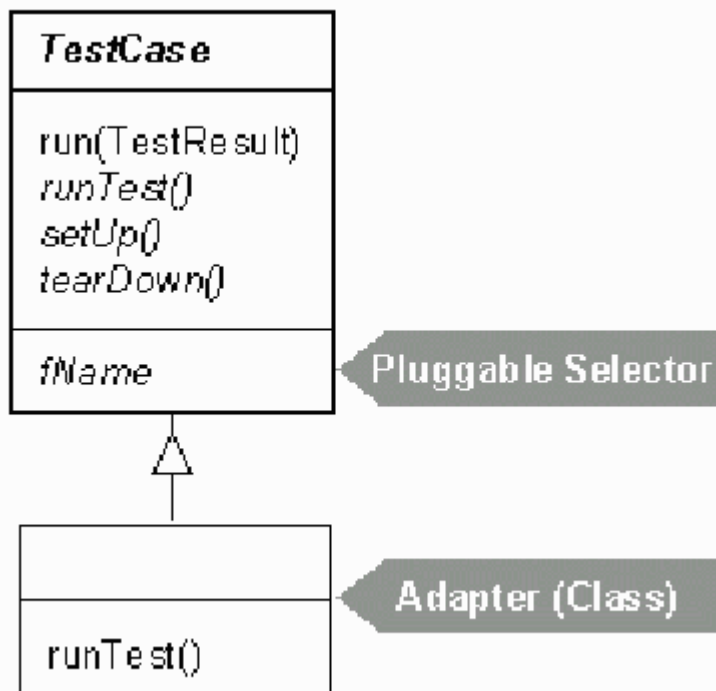


```

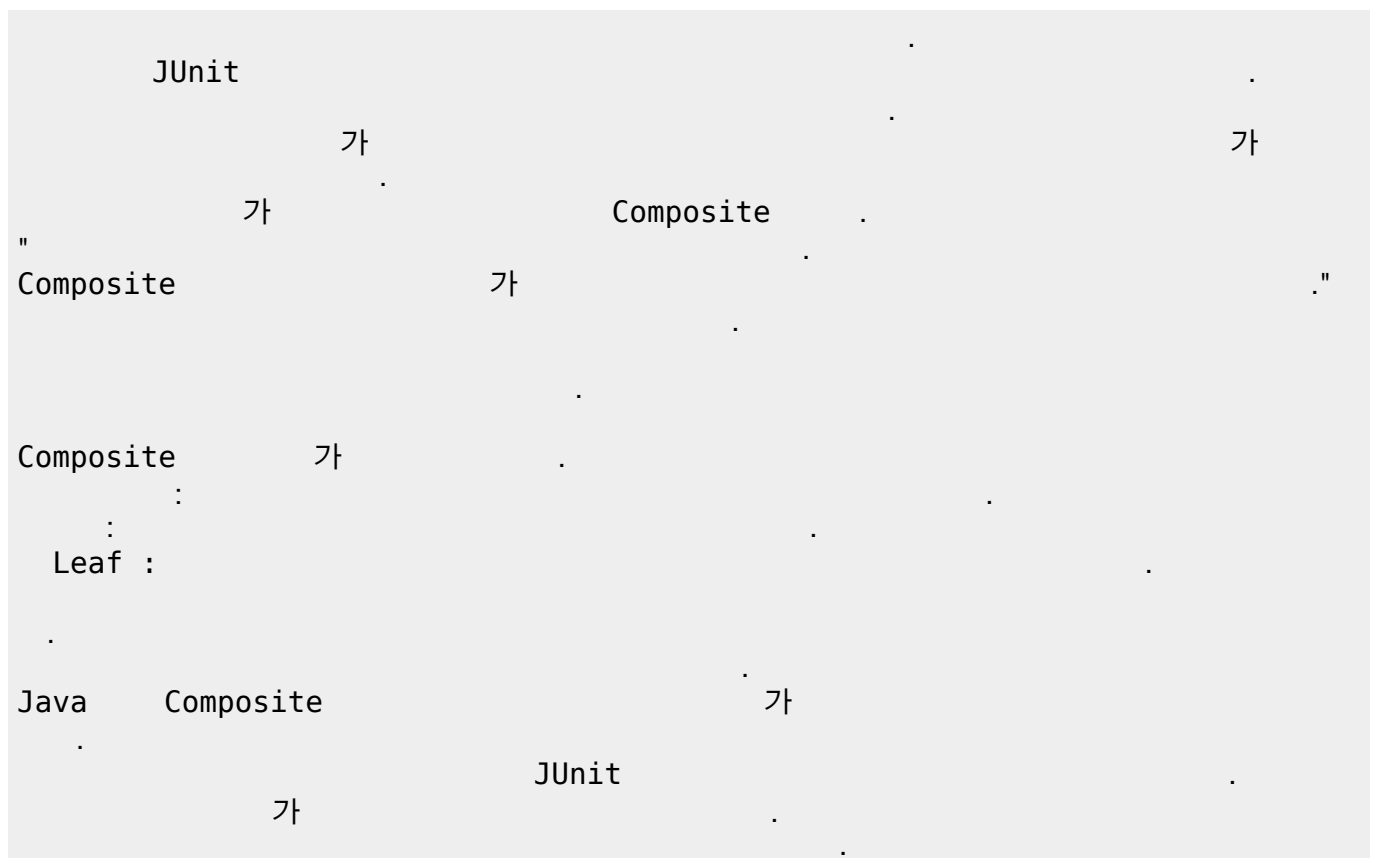
graph TD
    Java --> API
    JUnit --> runTest
    Java --> JUnit
    JUnit --> API
    JUnit --> runTest
    
```

```
protected void runTest () throws Throwable {
    Method runMethod = null;
    try {
        runMethod = getClass (). getMethod (fName, new Class [0]);
    } catch (NoSuchMethodException e) {
        assertTrue ( "Method \"" + fName + "\"          ", false);
    }
    try {
        runMethod.invoke (this, new Class [0]);
    }
    // InvocationTargetException    IllegalAccessException
}
```

```
JDK 1.1      API      public
NoSuchMethodException
가 가
```



### 3.5 -TestSuite



```

public interface Test {
    public abstract void run (TestResult result);
}
  
```

```

TestCase Composite Leaf
      가
      TestSuite
TestSuite

```

```

TestSuite Test {
    private Vector fTests = new Vector ();
}

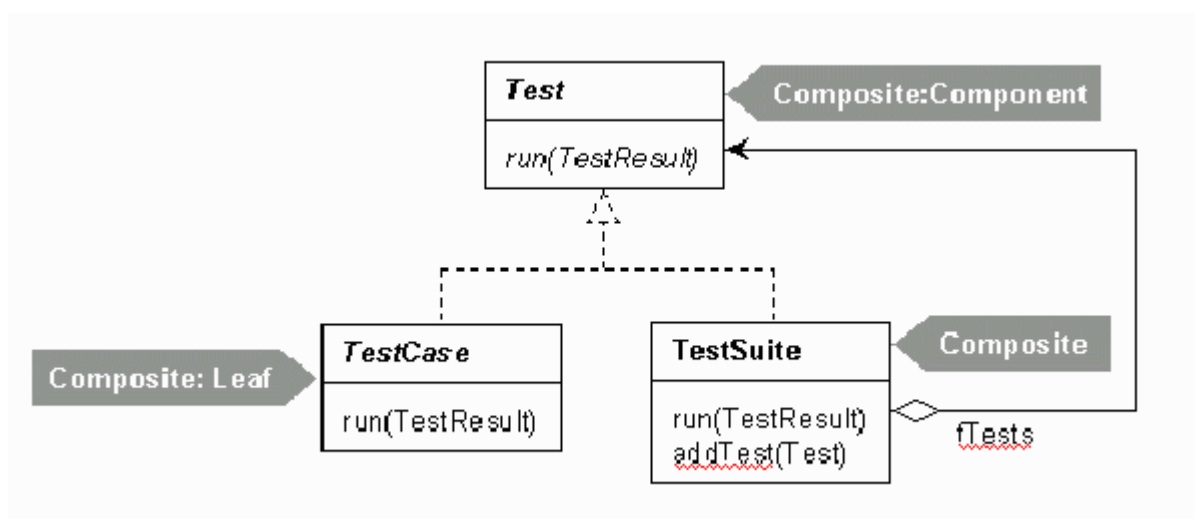
```

```
run ()
```

```

public void run (TestResult result) {
    for (Enumeration e = fTests.elements (); e.hasMoreElements ();) {
        Test test = (Test) e.nextElement ();
        test.run ();
    }
}

```



가 addTest

```

public void addTest (
    ) {
    fTests.addElement (test);
}

```

```

가
TestCase TestSuite Test
      TestSuite
      TestSuite
TestSuite

```

```

public static Test suite()
{
    TestSuite suite = new TestSuite ();
    suite.addTest (new MoneyTest ( "testMoneyEquals"));
}

```

```
suite.addTest (new MoneyTest ( "testSimpleAdd"));
}
```

JUnit

가

static suite () 가

TestSuite 가

"test"

가

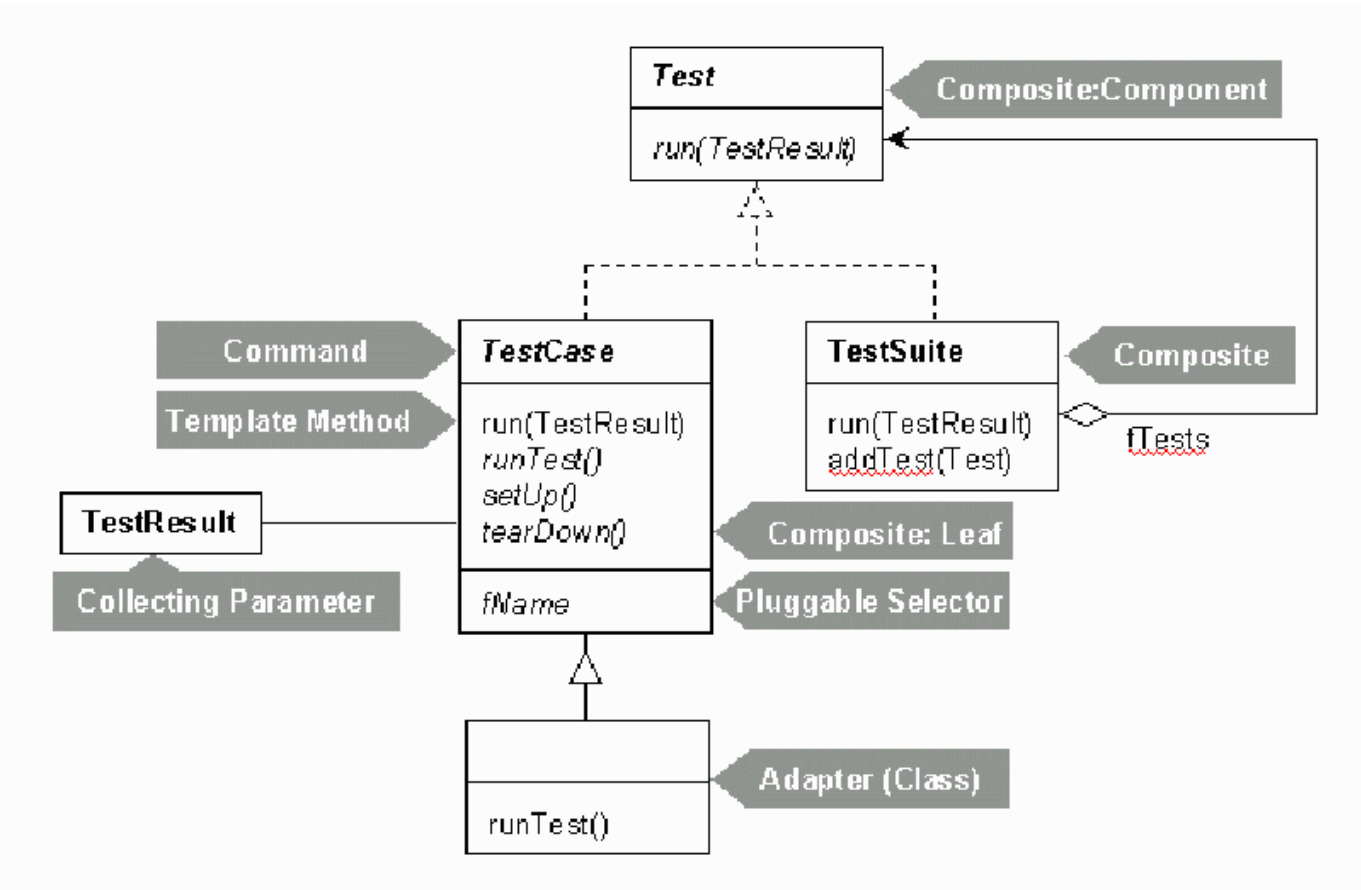
```
public static Test suite ()
{
    return new TestSuite (MoneyTest.class);
}
```

The original way is still useful when you want to run a subset of the test cases only.

3.6

JUnit A Cook's Tour

JUnit

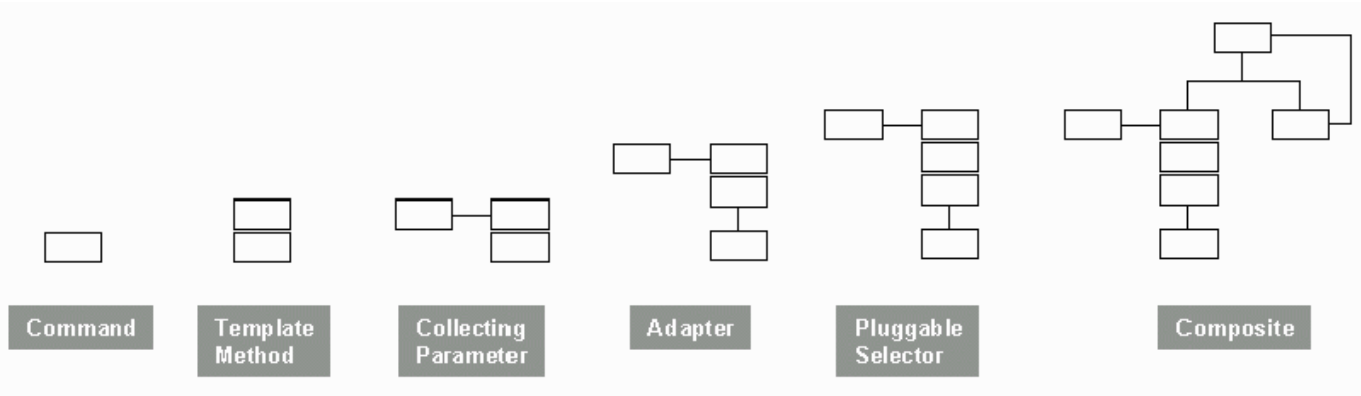


TestCase가 4가

JUnit

Command TestCase Templage Method run

(가 6.)



Composite

Composite가 " "

4.

가 .

Patterns

.

.

Pattern density

JUnit TestCase " "가 .

가 가 가 .

가 . " "

Eat your own dog food

TestTest 가 , .

## JUnit 가

## Intersection, not union

[illegible]

JUnit 가 ,  
가 가 .  
JUnit, , 가  
monomania  
( ).

JUnit <http://www.junit.org>

5.

John Vlissides, Ralph Johnson, Nick Edgar

From:  
<http://125.132.25.164/dokuwiki/> -

. - 2023.12

Permanent link:  
[http://125.132.25.164/dokuwiki/doku.php?id=wiki:java:junit:junit a cook s tour&rev=1598940750](http://125.132.25.164/dokuwiki/doku.php?id=wiki:java:junit:junit+a+cook+s+tour&rev=1598940750)

Last update: **2022/03/10 19:52**

