

## JUnit 3.7

### Long Parameter List

| Sr. No | Class Name | Method Name | No. of Parameters | File Path (Location)                       |
|--------|------------|-------------|-------------------|--------------------------------------------|
| 1      | TestRunner | addGrid     | 8                 | \\junit-3.7\\src\\awt\\TestRunner.java     |
| 2      | TestRunner | addGrid     | 8                 | \\junit-3.7\\src\\swingui\\TestRunner.java |

### Long Method

| Sr. No | Class Name | Method Name                 | LOC | File Path (Location)                   |
|--------|------------|-----------------------------|-----|----------------------------------------|
| 1      | TestRunner | Protected Frame<br>createUI | 105 | \\junit-3.7\\src\\awt\\TestRunner.java |

### Lazy Class

| Sr. No | Class Name           | LOC | File Path (Location)                                   |
|--------|----------------------|-----|--------------------------------------------------------|
| 1      | AssertionFailedError | 3   | \\junit-3.7\\src\\framework\\AssertionFailedError.java |
| 2      | DoubleClickListener  | 3   | \\junit-3.7\\src\\swingui\\TestSelector.java           |
| 3      | ExceptionTestCase    | 15  | \\junit-3.7\\src\\extensions\\ExceptionTestCase.java   |

|            |                          |    |                                                         |
|------------|--------------------------|----|---------------------------------------------------------|
| 4          | KeySelectListener        | 2  | \\junit-3.7\\src\\swingui\\TestSelector.java            |
| 5          | ParallelSwapper          | 10 | \\junit-3.7\\src\\swingui\\TestSelector.java            |
| 6          | ReloadingTestSuiteLoader | 6  | \\junit-3.7\\src\\runner\\ReloadingTestSuiteLoader.java |
| 7          | RepeatedTest             | 15 | \\junit-3.7\\src\\extensions\\RepeatedTest.java         |
| 8          | SimpleTestCollector      | 6  | \\junit-3.7\\src\\runner\\SimpleTestCollector.java      |
| 9          | Sorter                   | 20 | \\junit-3.7\\src\\runner\\Sorter.java                   |
| 10         | StandardTestSuiteLoader  | 6  | \\junit-3.7\\src\\runner\\StandardTestSuiteLoader.java  |
| 11         | TestDecorator            | 14 | \\junit-3.7\\src\\extensions\\TestDecorator.java        |
| 12         | TestFailure              | 17 | \\junit-3.7\\src\\framework\\TestFailure.java           |
| 13         | TestRunner               | 2  | \\junit-3.7\\src\\ui\\TestRunner.java                   |
| 14         | TestSetup                | 15 | \\junit-3.7\\src\\extensions\\TestSetup.java            |
| 15         | Version                  | 4  | \\junit-3.7\\src\\runner\\Version.java                  |
| Middle Man |                          |    |                                                         |

| <b>Sr. No</b>           | <b>Class Name</b>           | <b>No. of Methods</b>         | <b>Method Called</b>                      | <b>Percentage</b> | <b>Class_Path</b>                                      |
|-------------------------|-----------------------------|-------------------------------|-------------------------------------------|-------------------|--------------------------------------------------------|
| 1                       | DoubleClickListener         | 1                             | 2                                         | 200%              | \\unit-3.7\\src\\swingui\\TestSelector.java            |
| 2                       | KeySelectListener           | 1                             | 2                                         | 200%              | \\unit-3.7\\src\\swingui\\TestSelector.java            |
| 3                       | ParallelSwapper             | 2                             | 2                                         | 100%              | \\unit-3.7\\src\\swingui\\TestSelector.java            |
| 4                       | ReloadingTestSuiteLoader    | 2                             | 3                                         | 150%              | \\unit-3.7\\src\\runner\\ReloadingTestSuiteLoader.java |
| 5                       | Sorter                      | 1                             | 1                                         | 100%              | \\unit-3.7\\src\\runner\\Sorter.java                   |
| 6                       | TestRunner                  | 21                            | 23                                        | 109.52%           | \\unit-3.7\\src\\textui\\TestRunner.java               |
| 7                       | TestRunner                  | 1                             | 1                                         | 100%              | \\unit-3.7\\src\\ui\\TestRunner.java                   |
| <b>Divergent Change</b> |                             |                               |                                           |                   |                                                        |
| <b>Sr. No</b>           | <b>Divergent Class Name</b> | <b>No of Methods Accessed</b> | <b>File Path (Location)</b>               |                   |                                                        |
| 1                       | TestRunner                  | 8                             | \\unit-3.7\\src\\awtui\\TestRunner.java   |                   |                                                        |
| 2                       | TestRunner                  | 8                             | \\unit-3.7\\src\\swingui\\TestRunner.java |                   |                                                        |

## Shotgun Surgery

| Sr. No. | Shotgun Class Name  | Shotgun Method Name          | Effectuated No. of Methods | Shotgun Class Path                                |
|---------|---------------------|------------------------------|----------------------------|---------------------------------------------------|
| 1       | ProgressBar         | Public void start            | 3                          | \\unit-3.7\\src\\awtui\\ProgressBar.java          |
| 2       | TestCaseClassLoader | Public Class loadClass       | 4                          | \\unit-3.7\\src\\runner\\TestCaseClassLoader.java |
| 3       | TestResult          | Public int errorCount        | 5                          | \\unit-3.7\\src\\framework\\TestResult.java       |
| 4       | TestResult          | Protected void run           | 4                          | \\unit-3.7\\src\\framework\\TestResult.java       |
| 5       | TestResult          | Public void stop             | 3                          | \\unit-3.7\\src\\framework\\TestResult.java       |
| 6       | TestResult          | Public boolean wasSuccessful | 4                          | \\unit-3.7\\src\\framework\\TestResult.java       |
| 7       | TestRunner          | Public void run              | 3                          | \\unit-3.7\\src\\awtui\\TestRunner.java           |
| 8       | TestRunner          | Public void run              | 3                          | \\unit-3.7\\src\\swingui\\TestRunner.java         |
| 9       | TestRunner          | Public TestResult doRun      | 3                          | \\unit-3.7\\src\\textui\\TestRunner.java          |
| 10      | TestRunner          | Public void print            | 12                         | \\unit-3.7\\src\\textui\\TestRunner.java          |

|                        |                        |                            |                             |                                          |                                         |
|------------------------|------------------------|----------------------------|-----------------------------|------------------------------------------|-----------------------------------------|
| 11                     | TestRunner             | Public void<br>run         | 3                           | \junit-3.7\src\textui\TestRunner.java    |                                         |
| Message Chain          |                        |                            |                             |                                          |                                         |
| Sr.<br>No              | Class Name             | Method<br>Name             | Method<br>Chain<br>Count    | File Path (Location)                     |                                         |
| 1                      | TestRunner             | Public void<br>printErrors | 3                           | \junit-3.7\src\textui\TestRunner.java    |                                         |
| Inappropriate Intimacy |                        |                            |                             |                                          |                                         |
| Sr.<br>No.             | Intimate Class<br>Name | Calling<br>Class<br>Name   | Intimacy<br>Method<br>Value | Intimate Class Path                      | Calling Class Path                      |
| 1                      | TestResult             | TestRunner                 | 11                          | \junit-3.7\src\framework\TestResult.java | \junit-3.7\src\awtui\TestRunner.java    |
| 2                      | TestResult             | TestRunner                 | 13                          | \junit-3.7\src\framework\TestResult.java | \junit-3.7\src\swingui\TestRunner.java  |
| 3                      | TestRunner             | TestRunner                 | 18                          | \junit-3.7\src\textui\TestRunner.java    | \junit-3.7\src\textui\TestRunner.java   |
| 4                      | TestSuite              | TestSuite                  | 7                           | \junit-3.7\src\framework\TestSuite.java  | \junit-3.7\src\framework\TestSuite.java |
| Feature Envy           |                        |                            |                             |                                          |                                         |
| Sr.<br>No              | Class Name             | Method<br>Name             | Method Call                 | File Path                                |                                         |

|   |            |                           |   |                                           |
|---|------------|---------------------------|---|-------------------------------------------|
| 1 | TestRunner | Public void rerun         | 8 | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 2 | TestRunner | Private void rerunTest    | 8 | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 3 | TestRunner | Public void print         | 7 | \\unit-3.7\\src\\textui\\TestRunner.java  |
| 4 | TestRunner | Public void printErrors   | 7 | \\unit-3.7\\src\\textui\\TestRunner.java  |
| 5 | TestRunner | Public void printFailures | 8 | \\unit-3.7\\src\\textui\\TestRunner.java  |
| 6 | TestRunner | Public void printHeader   | 5 | \\unit-3.7\\src\\textui\\TestRunner.java  |

**Temporary Field**

| Sr. No | Class Name     | Attribute Name   | Class Methods | No. of Methods | Usage Percentage  | File Path                                    |
|--------|----------------|------------------|---------------|----------------|-------------------|----------------------------------------------|
| 1      | BaseTestRunner | fgFilterStack    | 19            | 1              | 5.26315789473684% | \\unit-3.7\\src\\runner\\BaseTestRunner.java |
| 2      | BaseTestRunner | SUITE_METHODNAME | 19            | 1              | 5.26315789473684% | \\unit-3.7\\src\\runner\\BaseTestRunner.java |
| 3      | TestResult     | fRunTests        | 21            | 1              | 4.76190476190476% | \\unit-3.7\\src\\framework\\TestResult.java  |
| 4      | TestRunner     | FAILEDDETAILVIEW | 68            | 1              | 1.47058823529412% | \\unit-3.7\\src\\swingui\\TestRunner.java    |

|    |            |                   |    |   |                   |                                         |
|----|------------|-------------------|----|---|-------------------|-----------------------------------------|
|    |            | _KEY              |    |   |                   |                                         |
| 5  | TestRunner | fExceptions       | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 6  | TestRunner | fFailedTests      | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 7  | TestRunner | fFailures         | 68 | 4 | 5.88235294117647% | \\unit-3.7\\src\\swing\\TestRunner.java |
| 8  | TestRunner | fFrame            | 31 | 2 | 6.45161290322581% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 9  | TestRunner | fFrame            | 68 | 4 | 5.88235294117647% | \\unit-3.7\\src\\swing\\TestRunner.java |
| 10 | TestRunner | fLogo             | 68 | 1 | 1.47058823529412% | \\unit-3.7\\src\\swing\\TestRunner.java |
| 11 | TestRunner | fNumberOfErrors   | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 12 | TestRunner | fNumberOfFailures | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 13 | TestRunner | fNumberOfRuns     | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 14 | TestRunner | fQuitButton       | 31 | 1 | 3.2258064516129%  | \\unit-3.7\\src\\awt\\TestRunner.java   |
| 15 | TestRunner | fQuitButton       | 68 | 1 | 1.47058823529412% | \\unit-3.7\\src\\swing\\TestRunner.java |
| 16 | TestRunner | fRerunButton      | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awt\\TestRunner.java   |

|    |            |                   |    |   |                   |                                           |
|----|------------|-------------------|----|---|-------------------|-------------------------------------------|
| 17 | TestRunner | fRerunButton      | 68 | 3 | 4.41176470588235% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 18 | TestRunner | fRun              | 68 | 6 | 8.82352941176471% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 19 | TestRunner | fRunner           | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 20 | TestRunner | fRunner           | 68 | 4 | 5.88235294117647% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 21 | TestRunner | fStatusLine       | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 22 | TestRunner | fSuiteCombo       | 68 | 6 | 8.82352941176471% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 23 | TestRunner | fSuiteField       | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 24 | TestRunner | fTestViewTab      | 68 | 3 | 4.41176470588235% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 25 | TestRunner | fTraceArea        | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 26 | TestRunner | fUseLoadingRunner | 31 | 2 | 6.45161290322581% | \\unit-3.7\\src\\awtui\\TestRunner.java   |
| 27 | TestRunner | fUseLoadingRunner | 68 | 2 | 2.94117647058824% | \\unit-3.7\\src\\swingui\\TestRunner.java |
| 28 | TestRunner | fWriter           | 21 | 1 | 4.76190476190476% | \\unit-3.7\\src\\textui\\TestRunner.java  |
| 29 | TestRunner | GAP               | 31 | 1 | 3.2258064516129%  | \\unit-3.7\\src\\awtui\\TestRunner.java   |

|    |            |                |    |   |                   |                                            |
|----|------------|----------------|----|---|-------------------|--------------------------------------------|
| 30 | TestRunner | GAP            | 68 | 1 | 1.47058823529412% | \\unit-3.7\\src\\swingui\\TestRunner.java  |
| 31 | TestRunner | HISTORY_LENGTH | 68 | 1 | 1.47058823529412% | \\unit-3.7\\src\\swingui\\TestRunner.java  |
| 32 | TestRunner | PLAIN_FONT     | 31 | 3 | 9.67741935483871% | \\unit-3.7\\src\\awtui\\TestRunner.java    |
| 33 | TestSuite  | fName          | 20 | 2 | 10%               | \\unit-3.7\\src\\framework\\TestSuite.java |

### Primitive Obsession

| Sr. No | Class Name             | Primitive Data Types | Class Path                                           |
|--------|------------------------|----------------------|------------------------------------------------------|
| 1      | Assert                 | 175                  | \\unit-3.7\\src\\framework\\Assert.java              |
| 2      | BaseTestRunner         | 24                   | \\unit-3.7\\src\\runner\\BaseTestRunner.java         |
| 3      | ClassPathTestCollector | 14                   | \\unit-3.7\\src\\runner\\ClassPathTestCollector.java |
| 4      | DoubleClickListener    | 25                   | \\unit-3.7\\src\\swingui\\TestSelector.java          |
| 5      | KeySelectListener      | 25                   | \\unit-3.7\\src\\swingui\\TestSelector.java          |
| 6      | ParallelSwapper        | 25                   | \\unit-3.7\\src\\swingui\\TestSelector.java          |

|    |                     |    |                                                    |
|----|---------------------|----|----------------------------------------------------|
| 7  | ProgressBar         | 26 | \\junit-3.7\\src\\awtui\\ProgressBar.java          |
| 8  | Sorter              | 11 | \\junit-3.7\\src\\runner\\Sorter.java              |
| 9  | TestCaseClassLoader | 29 | \\junit-3.7\\src\\runner\\TestCaseClassLoader.java |
| 10 | TestRunner          | 53 | \\junit-3.7\\src\\awtui\\TestRunner.java           |
| 11 | TestRunner          | 72 | \\junit-3.7\\src\\swingui\\TestRunner.java         |
| 12 | TestSuite           | 10 | \\junit-3.7\\src\\framework\\TestSuite.java        |

### Data Clump

| Sr. No | Class Name | Data Types | Class Path                                 |
|--------|------------|------------|--------------------------------------------|
| 1      | Assert     | 175        | \\junit-3.7\\src\\framework\\Assert.java   |
| 2      | TestRunner | 72         | \\junit-3.7\\src\\swingui\\TestRunner.java |