Introduction

In this lab, I am going to ensure that the tests designed in one of our past labs will achieve full mutation coverage, or add tests until it does. This will ensure that the test suite will fail if almost any small part of the behavior is changed in the source file.

Mutation scores:

All initially live mutants:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Line # | Code segment | Mutation description | Analysis | After |
| 44 | **if** (name.length() <= 0) | changed conditional boundary | LIVE | STUBBORN Will still throw exception, but with slightly different error message |
| 63 | **if** (age <= 0) | changed conditional boundary | LIVE | SQUASHED w/testSingleAgeZero() |
| 95 | **if** (name.length() < 0) | changed conditional boundary | LIVE | STUBBORN Will still throw exception, but with slightly different error message |
| 118 | **if** (spouseAge <= 0) | changed conditional boundary | LIVE | SQUASHED w/testSpouseAgeZero() |
| 156 | } **else** **if** ((age < 65) | changed conditional boundary | EQUIVALENT | EQUIVALENT |
| 157 | (**this**.spouseAge >= 65) | changed conditional boundary | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 159 | } **else** **if** ((age >= 65) | changed conditional boundary | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 160 | (**this**.spouseAge < 65) | changed conditional boundary | EQUIVALENT | EQUIVALENT |
| 260 | **if** (**this**.filingStatus == TaxCalculatorInterface.***MARRIED\_FILING\_JOINTLY***) { | removed conditional | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 263 | } **else** **if** (((age < 65) | changed conditional boundary | EQUIVALENT | EQUIVALENT |
| 263 | negated conditional | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 264 | (spouseAge >= 65)) | changed conditional boundary | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 265 | ((age >= 65) | changed conditional boundary | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 266 | (spouseAge < 65) | changed conditional boundary | EQUIVALENT | EQUIVALENT |
| 266 | (spouseAge < 65) | negated conditional | LIVE | SQUASHED w/testMarriedJointAgeBounds() |
| 323 | retVal = **this**.grossIncome - **this**.getStandardDeduction(); | replaced double sub with add | EQUIVALENT | EQUIVALENT |
| 325 | **if** (**this**.grossIncome - **this**.getStandardDeduction() > 0) { | replaced double sub with add | LIVE | SQUASHED w/testTaxableIncomeBounds() |
| 326 | changed conditional boundary | EQUIVALENT | EQUIVALENT |
| 328 | } **else** **if** (**this**.grossIncome - **this**.getStandardDeduction() < 0) { | replaced double sub with add | LIVE | SQUASHED w/testTaxableIncomeBounds() |
| 329 | changed conditional boundary | LIVE | SQUASHED w/testTaxableIncomeBounds() |
| 329 | negated conditional | EQUIVALENT | EQUIVALENT |
| 346 | **if** (grossIncome < 0) { | changed conditional boundary | LIVE | SQUASHED w/testGrossIncomeReset() |
| 349 | } **else** **if** (grossIncome == 0.0) | removed conditional | EQUIVALENT | EQUIVALENT |
| 402 | **if** (remainingTaxableSalary > taxTable[startingOffset + index]) { | changed conditional boundary | EQUIVALENT | EQUIVALENT |

Results:

|  |  |
| --- | --- |
| Total mutants | 114 |
| Equivalent mutants | 9 |
| Initial killed mutants | 90 |
| Initial mutation score | 85.7% |
| Final killed mutants | 103 |
| Final mutation score | 98.1% |

* Equivalent Identification
  + We were able to determine if a mutant was equivalent or not through a few processes. The first pass would involve looking over the mutants, and finding any obviously equivalent mutants. Then, pick a cluster of mutants in one function and write an automated test to try to eliminate some right away. We would look at the remaining mutants in the cluster and consider them more closely for equivalency. For mutants in complicated if-else structures with multi-clause Boolean arithmetic, I would reduce the expression to pure logic and see if the certain mutant could be shown to be logically equivalent to the pre-mutated code. For other mutants, I would look to see if the program code could possibly be caused to take a different path than it was meant to with the mutant. These methods proved to be effective in finding equivalent mutants. We found 9 equivalent mutants out of 24 live mutants.
  + I noticed that the same pattern of mutants appeared twice, in the age and spouse age if-else structure; most specifically where a clause was constructed to try to find if one of the members was above 65. The clause could be simplified to (!AB)+(A!B), or (!A+!B)(A+B). This appeared in an if-else-if structure, after the clause (AB) had already been checked for. So it could be assumed that !(AB), or (!A + !B), was already true, allowing the secondary expression in the if-else-if structure to be simplified to (A+B). This was a handy little proof. To sum it all up in one expression: Assuming !(AB), (!AB)+(A!B) 🡪 (A+B).
* Test Construction
  + To construct a test, I would first consider what state would cause the certain mutant to exhibit different behavior, aka, introduce an infection. Then I would construct a test to create an object with that state, and run the object through the motions to call the function in which the target mutant is. In many cases, I could group multiple mutants together in the same function, meaning we ended up creating only 3 new methods.
* Things gone right/wrong
  + Everything went quickly, the mutants were easy to squash.
* Conclusions
  + Through achieving nearly full mutation coverage, I have learned how to use code mutating tools and how to better apply symbolic logic to code segments

After:

**TaxCalculator.java**

|  |  |  |
| --- | --- | --- |
| 1 |  | package edu.msoe.se2832.taxRateCalculator.wschilling; |
| 2 |  |  |
| 3 |  | // Note: The following code specifically has been modified for code coverage analysis. |
| 4 |  |  |
| 5 |  | /\*\* |
| 6 |  | \* @author schilling This class will calculate a users tax bill based upon their |
| 7 |  | \* gross income and their status. It assumes no dependents and the user |
| 8 |  | \* only uses the standard deduction (i.e. no itemization.) It is based |
| 9 |  | \* upon the 2008 tax tables. |
| 10 |  | \*/ |
| 11 |  | public class TaxCalculator implements TaxCalculatorInterface { |
| 12 |  | private String name; // This holds the name of the tax payer. |
| 13 |  | private int filingStatus; // This holds the filing status of the tax payer. |
| 14 |  | private int age; // This is the age of the tax payer. |
| 15 |  | private int spouseAge; // This is the age of the spouse. |
| 16 |  | private double grossIncome; // This is the gross income for the taxpayer. |
| 17 |  |  |
| 18 |  | public String getName() { |
| 19 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_19) 1. getName : mutated return of Object value for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getName to ( if (x != null) null else throw new RuntimeException ) → KILLED | return name; |
| 20 |  | } |
| 21 |  |  |
| 22 |  | public void setName(String name) { |
| 23 |  | this.name = name; |
| 24 |  | } |
| 25 |  |  |
| 26 |  | /\*\* |
| 27 |  | \* @param name |
| 28 |  | \* This is the name of the taxpayer. It must be a non-empty |
| 29 |  | \* string. |
| 30 |  | \* @param filingStatus |
| 31 |  | \* This is the filing status for the person. Single, Head of |
| 32 |  | \* Household, and Qualifying widower may use this constructor. |
| 33 |  | \* @param age |
| 34 |  | \* This is the age of the taxpayer. Must be greater than 0 years. |
| 35 |  | \* @throws Exception |
| 36 |  | \* An exception will be thrown if any parameter is out of bounds |
| 37 |  | \* or the filing status is incorrect (i.e. the status requires a |
| 38 |  | \* spouse.) Exception will also be thrown if there is not a |
| 39 |  | \* first and last name provided. |
| 40 |  | \*/ |
| 41 |  | public TaxCalculator(String name, int filingStatus, int age) |
| 42 |  | throws Exception { |
| 43 |  | // Check the validity of all parameters. |
| 44 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_44) 1. : changed conditional boundary → SURVIVED 2. : negated conditional → KILLED | if (name.length() <= 0) { |
| 45 |  | throw new Exception( |
| 46 |  | "Name must be longer than 0 characters in length. "); |
| 47 |  | } |
| 48 |  |  |
| 49 |  | // Check to make certain that a first and last name is provided. |
| 50 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_50) 1. : changed conditional boundary → KILLED 2. : negated conditional → KILLED | if (name.split("\\s+").length < 2) { |
| 51 |  | throw new Exception( |
| 52 |  | "Name must have at least a first and last name."); |
| 53 |  | } |
| 54 |  |  |
| 55 |  | // Check that the filing status is valid for a person who does not have |
| 56 |  | // a spouse. |
| 57 | [4](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_57) 1. : negated conditional → KILLED 2. : negated conditional → KILLED 3. : removed conditional → KILLED 4. : removed conditional → KILLED | if ((filingStatus != SINGLE) && (filingStatus != HEAD\_OF\_HOUSEHOLD) |
| 58 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_58) 1. : negated conditional → KILLED 2. : removed conditional → KILLED | && (filingStatus != QUALIFYING\_WIDOWER)) { |
| 59 |  | throw new Exception("Invalid filing status for this constructor."); |
| 60 |  | } |
| 61 |  |  |
| 62 |  | // Check that the age is valid. |
| 63 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_63) 1. : changed conditional boundary → KILLED 2. : negated conditional → KILLED | if (age <= 0) { |
| 64 |  | throw new Exception("Invalid age."); |
| 65 |  | } |
| 66 |  |  |
| 67 |  | // Set the appropriate attributes of the class. |
| 68 |  | this.name = name; |
| 69 |  | this.filingStatus = filingStatus; |
| 70 |  | this.age = age; |
| 71 |  | } |
| 72 |  |  |
| 73 |  | /\*\* |
| 74 |  | \* @param name |
| 75 |  | \* This is the name of the taxpayer. It must be a non-empty |
| 76 |  | \* string. |
| 77 |  | \* @param filingStatus |
| 78 |  | \* This is the filing status for the person. Single, Head of |
| 79 |  | \* Household, and Qualifying widower may not use this |
| 80 |  | \* constructor. |
| 81 |  | \* @param age |
| 82 |  | \* This is the age of the taxpayer. Must be greater than 0 years. |
| 83 |  | \* @param spouseAge |
| 84 |  | \* This is the age of the spouse. Must be greater than 0 years |
| 85 |  | \* old. |
| 86 |  | \* @throws Exception |
| 87 |  | \* An exception will be thrown if any parameter is out of bounds |
| 88 |  | \* or the filing status is incorrect (i.e. the status does not |
| 89 |  | \* require a spouse.) Exception will also be thrown if there is |
| 90 |  | \* not a first and last name provided. |
| 91 |  | \*/ |
| 92 |  | public TaxCalculator(String name, int filingStatus, int age, int spouseAge) |
| 93 |  | throws Exception { |
| 94 |  | // Check the validity of all parameters. |
| 95 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_95) 1. : changed conditional boundary → SURVIVED 2. : negated conditional → KILLED | if (name.length() < 0) { |
| 96 |  | throw new Exception( |
| 97 |  | "Name must be longer than 0 characters in length. "); |
| 98 |  | } |
| 99 |  |  |
| 100 |  | // Check to make certain that a first and last name is provided. |
| 101 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_101) 1. : changed conditional boundary → KILLED 2. : negated conditional → KILLED | if (name.split("\\s+").length < 2) { |
| 102 |  | throw new Exception( |
| 103 |  | "Name must have at least a first and last name."); |
| 104 |  | } |
| 105 |  |  |
| 106 |  | // Check to make certain that the status is correct. |
| 107 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_107) 1. : negated conditional → KILLED 2. : removed conditional → KILLED | if ((filingStatus != MARRIED\_FILING\_JOINTLY) |
| 108 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_108) 1. : negated conditional → KILLED 2. : removed conditional → KILLED | && (filingStatus != MARRIED\_FILING\_SEPARATELY)) { |
| 109 |  | throw new Exception("Invalid filing status for this constructor."); |
| 110 |  | } |
| 111 |  |  |
| 112 |  | // Check that the age is valid. |
| 113 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_113) 1. : changed conditional boundary → KILLED 2. : negated conditional → KILLED | if (age <= 0) { |
| 114 |  | throw new Exception("Invalid age."); |
| 115 |  | } |
| 116 |  |  |
| 117 |  | // Check that the spouse age is valid. |
| 118 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_118) 1. : changed conditional boundary → KILLED 2. : negated conditional → KILLED | if (spouseAge <= 0) { |
| 119 |  | throw new Exception("Invalid Age."); |
| 120 |  | } |
| 121 |  |  |
| 122 |  | // Set the attributes. |
| 123 |  | this.name = name; |
| 124 |  | this.filingStatus = filingStatus; |
| 125 |  | this.age = age; |
| 126 |  | this.spouseAge = spouseAge; |
| 127 |  | } |
| 128 |  |  |
| 129 |  | /\* |
| 130 |  | \* (non-Javadoc) |
| 131 |  | \* |
| 132 |  | \* @see TaxCalculatorInterface#getStandardDeduction() |
| 133 |  | \*/ |
| 134 |  | public double getStandardDeduction() { |
| 135 |  | double baseStandardDeduction = 0; |
| 136 |  | // Based on the filing status, select the right value with the case |
| 137 |  | // statement. |
| 138 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_138) 1. getStandardDeduction : Switch mutation → KILLED | switch (this.filingStatus) { |
| 139 |  | case SINGLE: |
| 140 |  | baseStandardDeduction = 5450; |
| 141 |  | // If the filer is older than 65, the standard deduction increases |
| 142 |  | // as |
| 143 |  | // well. |
| 144 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_144) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | if (age >= 65) { |
| 145 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_145) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 146 |  | } |
| 147 |  |  |
| 148 |  | break; |
| 149 |  | case MARRIED\_FILING\_JOINTLY: |
| 150 |  | baseStandardDeduction = 10900; |
| 151 |  | // If the filer is older than 65, the standard deduction increases |
| 152 |  | // as |
| 153 |  | // well. |
| 154 | [4](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_154) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : changed conditional boundary → KILLED 3. getStandardDeduction : negated conditional → KILLED 4. getStandardDeduction : negated conditional → KILLED | if ((age >= 65) && (this.spouseAge >= 65)) { |
| 155 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_155) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 2100; |
| 156 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_156) 1. getStandardDeduction : changed conditional boundary → SURVIVED 2. getStandardDeduction : negated conditional → KILLED | } else if ((age < 65) && |
| 157 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_157) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | (this.spouseAge >= 65)) { |
| 158 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_158) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 159 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_159) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | } else if ((age >= 65) && |
| 160 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_160) 1. getStandardDeduction : changed conditional boundary → SURVIVED 2. getStandardDeduction : negated conditional → KILLED | (this.spouseAge < 65)) { |
| 161 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_161) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 162 |  | } else {/\* Add nothing extra.\*/} |
| 163 |  | break; |
| 164 |  | case QUALIFYING\_WIDOWER: |
| 165 |  | baseStandardDeduction = 10900; |
| 166 |  | // If the filer is older than 65, the standard deduction increases |
| 167 |  | // as |
| 168 |  | // well. |
| 169 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_169) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | if (age >= 65) { |
| 170 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_170) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 171 |  | } |
| 172 |  | break; |
| 173 |  | case MARRIED\_FILING\_SEPARATELY: |
| 174 |  | baseStandardDeduction = 5450; |
| 175 |  | // If the filer is older than 65, the standard deduction increases |
| 176 |  | // as |
| 177 |  | // well. |
| 178 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_178) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | if (age >= 65) { |
| 179 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_179) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 180 |  | } |
| 181 |  | break; |
| 182 |  | case HEAD\_OF\_HOUSEHOLD: |
| 183 |  | baseStandardDeduction = 8000; |
| 184 |  | // If the filer is older than 65, the standard deduction increases |
| 185 |  | // as |
| 186 |  | // well. |
| 187 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_187) 1. getStandardDeduction : changed conditional boundary → KILLED 2. getStandardDeduction : negated conditional → KILLED | if (age >= 65) { |
| 188 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_188) 1. getStandardDeduction : Replaced double addition with subtraction → KILLED | baseStandardDeduction += 1050; |
| 189 |  | } |
| 190 |  | break; |
| 191 |  | default: |
| 192 |  | break; |
| 193 |  | } |
| 194 |  |  |
| 195 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_195) 1. getStandardDeduction : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getStandardDeduction → KILLED | return baseStandardDeduction; |
| 196 |  | } |
| 197 |  |  |
| 198 |  | /\* |
| 199 |  | \* (non-Javadoc) |
| 200 |  | \* |
| 201 |  | \* @see TaxCalculatorInterface#isReturnRequired() |
| 202 |  | \*/ |
| 203 |  | public boolean isReturnRequired() { |
| 204 |  |  |
| 205 |  | double currentThreshold; |
| 206 |  |  |
| 207 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_207) 1. isReturnRequired : changed conditional boundary → KILLED 2. isReturnRequired : negated conditional → KILLED | if (age < 65) { |
| 208 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_208) 1. isReturnRequired : Switch mutation → KILLED | switch (this.filingStatus) { |
| 209 |  |  |
| 210 |  | case SINGLE: |
| 211 |  | currentThreshold = 8950; |
| 212 |  | break; |
| 213 |  |  |
| 214 |  | case HEAD\_OF\_HOUSEHOLD: |
| 215 |  | currentThreshold = 11500; |
| 216 |  | break; |
| 217 |  |  |
| 218 |  | case MARRIED\_FILING\_JOINTLY: |
| 219 |  | currentThreshold = 17900; |
| 220 |  | break; |
| 221 |  |  |
| 222 |  | case MARRIED\_FILING\_SEPARATELY: |
| 223 |  | currentThreshold = 3500; |
| 224 |  | break; |
| 225 |  |  |
| 226 |  | case QUALIFYING\_WIDOWER: |
| 227 |  | currentThreshold = 14400; |
| 228 |  | break; |
| 229 |  | default: |
| 230 |  | currentThreshold = Double.MAX\_VALUE; |
| 231 |  | } |
| 232 |  |  |
| 233 |  | } else { |
| 234 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_234) 1. isReturnRequired : Switch mutation → KILLED | switch (this.filingStatus) { |
| 235 |  |  |
| 236 |  | case SINGLE: |
| 237 |  | currentThreshold = 10300; |
| 238 |  | break; |
| 239 |  |  |
| 240 |  | case HEAD\_OF\_HOUSEHOLD: |
| 241 |  | currentThreshold = 12850; |
| 242 |  | break; |
| 243 |  |  |
| 244 |  | case MARRIED\_FILING\_JOINTLY: |
| 245 |  | currentThreshold = 20000; |
| 246 |  | break; |
| 247 |  |  |
| 248 |  | case MARRIED\_FILING\_SEPARATELY: |
| 249 |  | currentThreshold = 3500; |
| 250 |  | break; |
| 251 |  |  |
| 252 |  | case QUALIFYING\_WIDOWER: |
| 253 |  | currentThreshold = 15450; |
| 254 |  | break; |
| 255 |  | default: |
| 256 |  | currentThreshold = Double.MAX\_VALUE; |
| 257 |  | } |
| 258 |  | } |
| 259 |  | // Adjust for married filing jointly exceptions. \*/ |
| 260 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_260) 1. isReturnRequired : negated conditional → KILLED 2. isReturnRequired : removed conditional → KILLED | if (this.filingStatus == TaxCalculatorInterface.MARRIED\_FILING\_JOINTLY) { |
| 261 | [4](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_261) 1. isReturnRequired : changed conditional boundary → KILLED 2. isReturnRequired : changed conditional boundary → KILLED 3. isReturnRequired : negated conditional → KILLED 4. isReturnRequired : negated conditional → KILLED | if ((age >= 65) && (spouseAge >= 65)) { |
| 262 |  | currentThreshold = 20000; |
| 263 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_263) 1. isReturnRequired : changed conditional boundary → SURVIVED 2. isReturnRequired : negated conditional → KILLED | } else if (((age < 65) && |
| 264 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_264) 1. isReturnRequired : changed conditional boundary → KILLED 2. isReturnRequired : negated conditional → KILLED | (spouseAge >= 65)) || |
| 265 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_265) 1. isReturnRequired : changed conditional boundary → KILLED 2. isReturnRequired : negated conditional → KILLED | ((age >= 65) && |
| 266 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_266) 1. isReturnRequired : changed conditional boundary → SURVIVED 2. isReturnRequired : negated conditional → KILLED | (spouseAge < 65))) { |
| 267 |  | currentThreshold = 18950; |
| 268 |  | } else { |
| 269 |  | currentThreshold = 17900; |
| 270 |  | } |
| 271 |  | } |
| 272 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_272) 1. isReturnRequired : changed conditional boundary → KILLED 2. isReturnRequired : negated conditional → KILLED | if (this.grossIncome < currentThreshold) { |
| 273 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_273) 1. isReturnRequired : replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED | return false; |
| 274 |  | } else { |
| 275 |  |  |
| 276 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_276) 1. isReturnRequired : replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED | return true; |
| 277 |  | } |
| 278 |  | } |
| 279 |  |  |
| 280 |  | /\* |
| 281 |  | \* (non-Javadoc) |
| 282 |  | \* |
| 283 |  | \* @see TaxCalculatorInterface#getFilingStatus() |
| 284 |  | \*/ |
| 285 |  | public int getFilingStatus() { |
| 286 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_286) 1. getFilingStatus : replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED | return filingStatus; |
| 287 |  | } |
| 288 |  |  |
| 289 |  | /\* |
| 290 |  | \* (non-Javadoc) |
| 291 |  | \* |
| 292 |  | \* @see TaxCalculatorInterface#getAge() |
| 293 |  | \*/ |
| 294 |  | public int getAge() { |
| 295 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_295) 1. getAge : replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED | return age; |
| 296 |  | } |
| 297 |  |  |
| 298 |  | /\* |
| 299 |  | \* (non-Javadoc) |
| 300 |  | \* |
| 301 |  | \* @see TaxCalculatorInterface#getSpouseAge() |
| 302 |  | \*/ |
| 303 |  | public int getSpouseAge() { |
| 304 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_304) 1. getSpouseAge : replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED | return spouseAge; |
| 305 |  | } |
| 306 |  |  |
| 307 |  | /\* |
| 308 |  | \* (non-Javadoc) |
| 309 |  | \* |
| 310 |  | \* @see TaxCalculatorInterface#getGrossIncome() |
| 311 |  | \*/ |
| 312 |  | public double getGrossIncome() { |
| 313 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_313) 1. getGrossIncome : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getGrossIncome → KILLED | return grossIncome; |
| 314 |  | } |
| 315 |  |  |
| 316 |  | /\* |
| 317 |  | \* (non-Javadoc) |
| 318 |  | \* |
| 319 |  | \* @see TaxCalculatorInterface#getTaxableIncome() |
| 320 |  | \*/ |
| 321 |  | public double getTaxableIncome() { |
| 322 |  | double retVal; |
| 323 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_323) 1. getTaxableIncome : Replaced double subtraction with addition → SURVIVED | retVal = this.grossIncome - this.getStandardDeduction(); |
| 324 |  |  |
| 325 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_325) 1. getTaxableIncome : Replaced double subtraction with addition → KILLED | if (this.grossIncome - this.getStandardDeduction() |
| 326 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_326) 1. getTaxableIncome : changed conditional boundary → SURVIVED 2. getTaxableIncome : negated conditional → KILLED | > 0) { |
| 327 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_327) 1. getTaxableIncome : Replaced double subtraction with addition → KILLED | retVal = this.grossIncome - this.getStandardDeduction(); |
| 328 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_328) 1. getTaxableIncome : Replaced double subtraction with addition → KILLED | } else if (this.grossIncome - this.getStandardDeduction() |
| 329 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_329) 1. getTaxableIncome : changed conditional boundary → SURVIVED 2. getTaxableIncome : negated conditional → KILLED | < 0) { |
| 330 |  | retVal = 0.0; |
| 331 | [3](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_331) 1. getTaxableIncome : Replaced double subtraction with addition → KILLED 2. getTaxableIncome : negated conditional → KILLED 3. getTaxableIncome : removed conditional → KILLED | } else if (this.grossIncome - this.getStandardDeduction() == 0) { |
| 332 |  | retVal = 0.0; |
| 333 |  | } else { |
| 334 |  | // A really strange thing has happened. I do not know what to do. |
| 335 |  | retVal = Double.NEGATIVE\_INFINITY; |
| 336 |  | } |
| 337 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_337) 1. getTaxableIncome : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getTaxableIncome → KILLED | return retVal; |
| 338 |  | } |
| 339 |  |  |
| 340 |  | /\* |
| 341 |  | \* (non-Javadoc) |
| 342 |  | \* |
| 343 |  | \* @see TaxCalculatorInterface#setGrossIncome(double) |
| 344 |  | \*/ |
| 345 |  | public void setGrossIncome(double grossIncome) { |
| 346 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_346) 1. setGrossIncome : changed conditional boundary → KILLED 2. setGrossIncome : negated conditional → KILLED | if (grossIncome < 0) { |
| 347 |  | // Do nothing. |
| 348 |  |  |
| 349 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_349) 1. setGrossIncome : removed conditional → SURVIVED 2. setGrossIncome : negated conditional → KILLED | } else if (grossIncome == 0.0) // NOTE: It is a very bad idea to check |
| 350 |  | // for exact equality when using |
| 351 |  | // floating point numbers. However, this |
| 352 |  | // is being done to aid in the |
| 353 |  | // understanding of the code coverage |
| 354 |  | // tool. DO NOT REPEAT THIS IN MSOE CODE |
| 355 |  | // FOR OTHER CLASSES. |
| 356 |  | { |
| 357 |  | this.grossIncome = 0.0; |
| 358 |  | } else { |
| 359 |  | this.grossIncome = grossIncome; |
| 360 |  | } |
| 361 |  | } |
| 362 |  |  |
| 363 |  | /\* |
| 364 |  | \* (non-Javadoc) |
| 365 |  | \* |
| 366 |  | \* @see TaxCalculatorInterface#getTaxDue() |
| 367 |  | \*/ |
| 368 |  | public double getTaxDue() { |
| 369 |  | double taxRate[] = { .1, .15, .25, .28, .33, .35 }; |
| 370 |  | double taxTable[] = { 0, 8025, 32550, 78850, 164550, 357700, 0, 11450, |
| 371 |  | 43650, 112650, 182400, 357700, 0, 16050, 65100, 131450, 200300, |
| 372 |  | 357700, 0, 8025, 32550, 65725, 100150, 178850, 0, 16050, 65100, |
| 373 |  | 131450, 200300, 357700 }; |
| 374 |  |  |
| 375 |  | int startingOffset; |
| 376 |  |  |
| 377 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_377) 1. getTaxDue : Switch mutation → KILLED | switch (this.filingStatus) { |
| 378 |  | case SINGLE: |
| 379 |  | startingOffset = 0; |
| 380 |  | break; |
| 381 |  | case HEAD\_OF\_HOUSEHOLD: |
| 382 |  | startingOffset = 6; |
| 383 |  | break; |
| 384 |  | case MARRIED\_FILING\_JOINTLY: |
| 385 |  | startingOffset = 12; |
| 386 |  | break; |
| 387 |  | case QUALIFYING\_WIDOWER: |
| 388 |  | startingOffset = 24; |
| 389 |  | break; |
| 390 |  | case MARRIED\_FILING\_SEPARATELY: |
| 391 |  | startingOffset = 18; |
| 392 |  | break; |
| 393 |  | default: |
| 394 |  | startingOffset = 0; |
| 395 |  | } |
| 396 |  |  |
| 397 |  | int index = 5; |
| 398 |  | double remainingTaxableSalary = this.getTaxableIncome(); |
| 399 |  | double totalTax = 0.00; |
| 400 |  |  |
| 401 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_401) 1. getTaxDue : changed conditional boundary → KILLED 2. getTaxDue : negated conditional → KILLED | while (index >= 0) { |
| 402 | [3](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_402) 1. getTaxDue : changed conditional boundary → SURVIVED 2. getTaxDue : Replaced integer addition with subtraction → KILLED 3. getTaxDue : negated conditional → KILLED | if (remainingTaxableSalary > taxTable[startingOffset + index]) { |
| 403 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_403) 1. getTaxDue : Replaced double subtraction with addition → KILLED | totalTax += (remainingTaxableSalary - taxTable[startingOffset |
| 404 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_404) 1. getTaxDue : Replaced integer addition with subtraction → KILLED | + index]) |
| 405 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_405) 1. getTaxDue : Replaced double multiplication with division → KILLED 2. getTaxDue : Replaced double addition with subtraction → KILLED | \* taxRate[index]; |
| 406 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_406) 1. getTaxDue : Replaced integer addition with subtraction → KILLED | remainingTaxableSalary = taxTable[startingOffset + index]; |
| 407 |  | } |
| 408 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_408) 1. getTaxDue : Changed increment from -1 to 1 → KILLED | index--; |
| 409 |  | } |
| 410 |  |  |
| 411 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_411) 1. getTaxDue : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getTaxDue → KILLED | return totalTax; |
| 412 |  | } |
| 413 |  |  |
| 414 |  | @Override |
| 415 |  | public double getNetTaxRate() { |
| 416 | [2](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_416) 1. getNetTaxRate : negated conditional → KILLED 2. getNetTaxRate : removed conditional → KILLED | if (this.getGrossIncome() != 0) { |
| 417 | [3](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_417) 1. getNetTaxRate : Replaced double multiplication with division → KILLED 2. getNetTaxRate : Replaced double division with multiplication → KILLED 3. getNetTaxRate : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getNetTaxRate → KILLED | return 100.0 \* this.getTaxDue() / this.getGrossIncome(); |
| 418 |  | } else { |
| 419 | [1](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#grouporg.pitest.mutationtest.report.html.SourceFile@5f14a673_419) 1. getNetTaxRate : replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getNetTaxRate → NO\_COVERAGE | return 0.0; |
| 420 |  | } |
| 421 |  | } |
| 422 |  | } |
|  |  | **Mutations** |
| [19](file:///D:\\MyDocs\\Dropbox\\workspace-EE\\.metadata\\.plugins\\org.pitest.pitclipse.core\\html_results\\201505131544\\edu.msoe.se2832.taxRateCalculator.wschilling\\TaxCalculator.java.html" \l "org.pitest.mutationtest.report.html.SourceFile@5f14a673_19) |  | 1.**1** **Location :** getName **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetAndSet(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) mutated return of Object value for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getName to ( if (x != null) null else throw new RuntimeException ) → KILLED |
| [44](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_44) |  | 1.**1** **Location :**  **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [50](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_50) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [57](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_57) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorSingle(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  3.**3** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorFailures(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED  4.**4** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorFailures(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [58](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_58) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredQualifyingWidower31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorFailures(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [63](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_63) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSingleAgeZero(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [95](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_95) |  | 1.**1** **Location :**  **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [101](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_101) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [107](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_107) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorWhichInvalidCombinations(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [108](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_108) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingSeparately31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorWhichInvalidCombinations(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [113](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_113) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [118](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_118) |  | 1.**1** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSpouseAgeZero(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :**  **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [138](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_138) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Switch mutation → KILLED |
| [144](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_144) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionSingle65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionSingle31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [145](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_145) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionSingle65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [154](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_154) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  3.**3** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  4.**4** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [155](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_155) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [156](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_156) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [157](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_157) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingJointly31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [158](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_158) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [159](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_159) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingJointly31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [160](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_160) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [161](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_161) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [169](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_169) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionQualifyingWidower31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [170](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_170) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [178](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_178) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriuedFilingSeparately65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingSeparately31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [179](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_179) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriuedFilingSeparately65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [187](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_187) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [188](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_188) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [195](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_195) |  | 1.**1** **Location :** getStandardDeduction **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getStandardDeduction → KILLED |
| [207](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_207) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [208](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_208) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Switch mutation → KILLED |
| [234](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_234) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Switch mutation → KILLED |
| [260](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_260) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [261](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_261) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  3.**3** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  4.**4** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [263](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_263) |  | 1.**1** **Location :** isReturnRequired **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [264](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_264) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [265](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_265) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [266](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_266) |  | 1.**1** **Location :** isReturnRequired **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [272](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_272) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [273](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_273) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED |
| [276](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_276) |  | 1.**1** **Location :** isReturnRequired **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED |
| [286](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_286) |  | 1.**1** **Location :** getFilingStatus **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorSingle(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED |
| [295](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_295) |  | 1.**1** **Location :** getAge **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorMarriedFilingJointly(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED |
| [304](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_304) |  | 1.**1** **Location :** getSpouseAge **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorMarriedFilingJointly(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of integer sized value with (x == 0 ? 1 : 0) → KILLED |
| [313](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_313) |  | 1.**1** **Location :** getGrossIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorMarriedFilingJointly(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getGrossIncome → KILLED |
| [323](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_323) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** none Replaced double subtraction with addition → SURVIVED |
| [325](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_325) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxableIncomeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double subtraction with addition → KILLED |
| [326](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_326) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [327](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_327) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double subtraction with addition → KILLED |
| [328](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_328) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxableIncomeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double subtraction with addition → KILLED |
| [329](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_329) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxableIncomeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [331](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_331) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double subtraction with addition → KILLED  2.**2** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  3.**3** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [337](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_337) |  | 1.**1** **Location :** getTaxableIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getTaxableIncome → KILLED |
| [346](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_346) |  | 1.**1** **Location :** setGrossIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGrossIncomeReset(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** setGrossIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSetIncome(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [349](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_349) |  | 1.**1** **Location :** setGrossIncome **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSetIncome(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :** setGrossIncome **Killed by :** none removed conditional → SURVIVED |
| [377](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_377) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationHeadOfHouseholdAge65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Switch mutation → KILLED |
| [401](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_401) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) changed conditional boundary → KILLED  2.**2** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [402](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_402) |  | 1.**1** **Location :** getTaxDue **Killed by :** none changed conditional boundary → SURVIVED  2.**2** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced integer addition with subtraction → KILLED  3.**3** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED |
| [403](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_403) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double subtraction with addition → KILLED |
| [404](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_404) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced integer addition with subtraction → KILLED |
| [405](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_405) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double multiplication with division → KILLED  2.**2** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double addition with subtraction → KILLED |
| [406](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_406) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced integer addition with subtraction → KILLED |
| [408](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_408) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Changed increment from -1 to 1 → KILLED |
| [411](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_411) |  | 1.**1** **Location :** getTaxDue **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getTaxDue → KILLED |
| [416](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_416) |  | 1.**1** **Location :** getNetTaxRate **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) negated conditional → KILLED  2.**2** **Location :** getNetTaxRate **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) removed conditional → KILLED |
| [417](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_417) |  | 1.**1** **Location :** getNetTaxRate **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double multiplication with division → KILLED  2.**2** **Location :** getNetTaxRate **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) Replaced double division with multiplication → KILLED  3.**3** **Location :** getNetTaxRate **Killed by :** edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getNetTaxRate → KILLED |
| [419](file:///D:\MyDocs\Dropbox\workspace-EE\.metadata\.plugins\org.pitest.pitclipse.core\html_results\201505131544\edu.msoe.se2832.taxRateCalculator.wschilling\TaxCalculator.java.html#org.pitest.mutationtest.report.html.SourceFile@5f14a673_419) |  | 1.**1** **Location :** getNetTaxRate **Killed by :** none replaced return of double value with -(x + 1) for edu/msoe/se2832/taxRateCalculator/wschilling/TaxCalculator::getNetTaxRate → NO\_COVERAGE |

**Active mutators**

* REMOVE\_CONDITIONALS\_EQUAL\_ELSE\_MUTATOR
* EXPERIMENTAL\_SWITCH\_MUTATOR
* INCREMENTS\_MUTATOR
* VOID\_METHOD\_CALL\_MUTATOR
* RETURN\_VALS\_MUTATOR
* MATH\_MUTATOR
* NEGATE\_CONDITIONALS\_MUTATOR
* INVERT\_NEGS\_MUTATOR
* CONDITIONALS\_BOUNDARY\_MUTATOR

**Tests examined**

* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredQualifyingWidower31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorMarriedFilingJointly(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorInvalidParameters(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingJointly31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationHeadOfHouseholdAge65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorHeadOfHousehold(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSingleAgeZero(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationMarriedFilingSeparatelyAge65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeSingleAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionQualifyingWidower31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testOnlyFirstName(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testEmptyName(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (20 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionSingle65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGrossIncomeReset(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationMarriedFilingJointlyAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionSingle31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testMarriedJointAgeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorWhichInvalidCombinations(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateMarriedFilingSeparately31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateHeadOfHouseholdAge65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSingleOnlyFirstName(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetAndSet(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriuedFilingSeparately65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSpouseAgeZero(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxableIncomeBounds(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredSingle65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationSingleAge20(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationMarriedFilingJointly(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testTaxCalculationMarriedFilingSeparatelyAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredQualifyingWidower65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetNetTaxRateSingleAge65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testLongConstructorMarriedFilingSeparately(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorSingle(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorFailures(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionHeadOfHousehold65(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSingleEmptyName(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testSetIncome(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testStandardDeductionMarriedFilingSeparately31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredMarriedFilingJointly31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (10 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testShortConstructorQualifyingWidower(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testGetTaxableIncomeHeadOfHouseholdAge31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)
* edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest.testReturnRequiredSingle31(edu.msoe.se2832.taxRateCalculator.wschilling.TaxCalculatorTest) (0 ms)

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