DIT636 / DAT560 - Assignment 4 - Mutation Testing

Date Submitted:
Group Number:
Group Members:

Mutant Descriptions (Problem 1)

For each mutant:
- Indicate where the mutant is in the code (e.g., class::method::line number)
- Original code
- Mutated code
- Mutation operator applied
- Mutant category (invalid, equivalent, valid-but-not-useful, useful)
- Explain how the mutant is different from the original code and why it belongs to the indicated category.
- If the mutant is not invalid or equivalent, explain how it can be detected. Feel free to use example input to illuminate this explanation.

Mutant Assessment (Problem 2)

For the tests created in Assignment 3 and the mutants (useful, valid-but-not-useful) from Problem 1:

Mutant Number	Test Class:: Test Name	Explanation of why that test detects that mutant

For any non-equivalent or invalid mutants not detected by your existing test suite:

Mutant Number	Explanation of why that mutant was not detected

Instructions for Running Tests (Problem 2)

This section is optional. You only need to fill it out if you used any external libraries other than JUnit itself, or did anything non-obvious when creating your unit tests.

Test Suite Expansion (Problem 3)

For any new tests created to detect the mutants (useful, valid-but-not-useful) from Problem 1:

Mutant Number	Test Class:: Test Name	Explanation of why that test detects that mutant

If all mutants were detected by existing tests (i.e., no new tests were needed), then explain this in your answer.