

DIT636 / DAT560 - Assignment 3: Unit and Structural Testing

Date Submitted:

Group Number:

Group Members:

Test Descriptions (Problem 1)

Fill out the following table, with a row for each test you have created.

Test Name	Class-Under-Test	Test Purpose

Instructions for Running Tests (Problems 1 and 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.

Faults Found (Problem 1)

For each fault discovered:

- Indicate where the code is in the code (e.g., class::method::line number(s)).
- Explain what the fault is.
- Explain how you would fix the fault.
 - If the fault is simple, include a code fix.
 - If the fault requires a fundamental redesign of large parts of the codebase, you may just explain how it could be fixed rather than providing a fix.
- List the test cases that exposed the fault.

Coverage Explanations (Problem 2.1)

Either design new unit tests to achieve full Branch Coverage over these four methods, or if you already have achieved full Branch Coverage over these methods in Problem 1, identify the subset of tests that achieve this coverage. In either case, describe what specific code elements each test covers, and explain exactly why the chosen inputs cover those elements in the manner needed for Branch Coverage.

For each test:

- Test name
- Method partially covered (e.g., `CoffeeMaker::makeCoffee`)
- Branches covered in method (indicated by `line number:T` or `line number:F` for true/false)
- Explanation of why those branches are covered by the test input.

Coverage Explanations (Problem 2.3)

If Line Coverage cannot be fully achieved, explain why.