

Lab 3: Unit Testing

JUnit Framework

- 1 Get an understanding of how the program works, the code is available at moodle.
- 2 Draw the flowgraph of method `run()` in `NextDate.java` program.
- 3 Prepare an initial set of TEN test cases aimed at achieving as high Instruction Coverage (IC) as possible. Report the test cases using the test case format shown in Appendix 1.
- 4 Execute these test cases, and report the result in the failure report shown in Appendix 2.
- 5 Report with JaCoCo screenshot what percentage of total instructions and branches were covered.
- 6 Add at least FIVE test cases aimed at increasing Branch Coverage (BC), and report them in the test case format shown in Appendix 1.
- 7 Execute the newly created test cases and report the result in the failure report shown in Appendix 2.
- 8 Report with JaCoCo screenshot whether BC and IC increased or not after adding the newly created test cases.

APPENDIX 1 - Sample Test Case

Test ID	Method Under Test	Input	Expe. Result
1	<code>isTwentyEightDayMonth()</code>	2	True

APPENDIX 2 - Sample Failure Report

Test ID	Method Under Test	Description of Failure	Expected Result	Actual Result	Remarks
1	<code>isTwentyEightDayMonth()</code>	When input is '2' output obtained is 'False', where the actual output should be 'True'.	True	False	Severe Problem