Software Testing Report

<2810ICT, Part B>

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# Unit Tests

| **No** | **Test Case** | **Expected Results** | **Actual Results** |
| --- | --- | --- | --- |
| **1.0** | **Dataset Tests** |  |  |
| 1.1 | test\_loadCSVData | Tests if the dataset loadcsvdata method can accept an invalid path. | Tests the dataset loadcsvdata method and whether it can accept an invalid path. |
| 1.2 | test\_getData | Tests if the program can handle a request to return the dataset even if it is not in memory. | Tests the program to handle a request to return the dataset even if it is not in memory. |
| **2.0** | **ReportTest** |  |  |
| 2.1 | test\_getReportDataEmpty | To Test the program to determine whether the report Data is Empty within the Data frame. | Tests the program to determine whether the report Data is Empty within the Data frame. |
| 2.2 | test\_getReportDataFull | To Test whether a Data frame has been filled with Report Data. | Tests whether a Data frame has been filled with Report Data. |
| 2.3 | test\_generatePlot | To Test the generatePlot method without data and no trend function | Tests generatePlot method without data and no trend function |
| 2.4 | test\_generatePlotIsTrend | To Test the generatePlot method without data and trend function | Tests generatePlot method without data and trend function |
| 2.5 | test\_generatePlotWithValues | To Test the generatePlot method with data and no trend function | Tests generatePlot method with data and no trend function |
| 2.6 | test\_generatePlotIsTrendWithValues | To Test the generatePlot method with data and trend function | Tests generatePlot method with data and trend function |
| 2.7 | test\_reset | To Test the reset method for clearing the dataframe | Tests reset method for clearing the dataframe |
| **3.0** | **AlgorithmAllOffenceTest** |  |  |
| 3.1 | test\_allOffenceIncorrectTypeStartDate | Test incorrect type on start date input for allOffence method in Algorithm class | Tests incorrect type on start date input for allOffence method in Algorithm class |
| 3.2 | test\_allOffenceIncorrectTypeEndDate | Test incorrect type on end date input for allOffence method in Algorithm class | Tests incorrect type on end date input for allOffence method in Algorithm class |
| 3.3 | test\_allOffenceIncorrectTypeIsMobile | Test incorrect type on isMobile input for allOffence method in Algorithm class | Tests incorrect type on isMobile input for allOffence method in Algorithm class |
| **4.0** | **AlgorithmDistributionTest** |  |  |
| 4.1 | test\_distributionIncorrectTypeStartDate | Test incorrect type on start date input for distribution method in Algorithm class | Tests incorrect type on start date input for distribution method in Algorithm class |
| 4.2 | test\_distributionIncorrectTypeEndDate | Test incorrect type on end date input for distribution method in Algorithm class | Tests incorrect type on end date input for distribution method in Algorithm class |
| 4.3 | test\_distributionIncorrectTypeIsMobile | Test incorrect type on isMobile input for distribution method in Algorithm class | Tests incorrect type on isMobile input for distribution method in Algorithm class |
| **5.0** | **AlgorithmInvolvingRadCam** |  |  |
| 5.1 | test\_involveRadCamInvalidTypeStartDate | Test incorrect type on start date input for involveRadCam method in Algorithm class | Tests incorrect type on start date input for involveRadCam method in Algorithm class |
| 5.2 | test\_involveRadCamInvalidTypeEndDate | Test incorrect type on end date input for involveRadCam method in Algorithm class | Tests incorrect type on end date input for involveRadCam method in Algorithm class |
| 5.3 | test\_involveRadCamInvalidTypeIsMobile | Test incorrect type on isMobile input for involveRadCam method in Algorithm class | Tests incorrect type on isMobile input for involveRadCam method in Algorithm class |
| **6.0** | **AlgorithmSingleOffenceTrend** |  |  |
| 6.1 | test\_singleOffenceTrendInvalidTypeStartDate | Test incorrect type on start date input for singleOffenceTrend method in Algorithm class | Tests incorrect type on start date input for singleOffenceTrend method in Algorithm class |
| 6.2 | test\_singleOffenceTrendInvalidTypeEndDate | Test incorrect type on end date input for singleOffenceTrend method in Algorithm class | Tests incorrect type on end date input for singleOffenceTrend method in Algorithm class |
| 6.3 | test\_singleOffenceTrendInvalidTypeIsMobile | Test incorrect type on isMobile input for singleOffenceTrend method in Algorithm class | Tests incorrect type on isMobile input for singleOffenceTrend method in Algorithm class |
| 6.4 | test\_singleOffenceTrendInvalidTypeOffenceCode | Test incorrect type on offence code input for singleOffenceTrend method in Algorithm class | Tests incorrect type on offence code input for singleOffenceTrend method in Algorithm class |
| **7.0** | **ControllerTest** |  |  |
| 7.1 | test\_generateAllOffenceIsMobile | Test for generating all offence involving mobile report | Tests for generating all offence involving mobile report |
| 7.2 | test\_generateAllOffenceNotMobile | Test for generating all offence report | Tesst for generating all offence report |
| 7.3 | test\_generateRadCamIsMobile | Test for generating offences involving radar/cameras and involving mobile phones report | Tests for generating offences involving radar/cameras and involving mobile phones report |
| 7.4 | test\_generateRadCamNotMobile | Test for generating offences involving radar/cameras report | Tests for generating offences involving radar/cameras report |
| 7.5 | test\_generateDistIsMobile | Test for generating distribution of offences involving mobile report | Tests for generating distribution of offences involving mobile report |
| 7.6 | test\_generateDistNotMobile | Test for generating distribution of offences report | Tests for generating distribution of offences report |
| 7.7 | test\_generateTrendIsMobileOffenceCode | Test for generating trend of single offence involving mobiles report | Tests for generating trend of single offence involving mobiles report |
| 7.8 | test\_generateTrendIsMobileNoOffenceCode | Test for generating trend of all offences report | Tests for generating trend of all offences report |
| 7.9 | test\_generateTrendNotMobileOffenceTrend | Test for generating trend of one offence report | Tests for generating trend of one offence report |
| 7.10 | test\_generateTrendNotMobileNoOffenceCode | Test for generating trend of all offences involving mobile phone report | Tests for generating trend of all offences involving mobile phone report |
| 7.11 | test\_incorrectTypeReportID | Test for invalid input of report ID type | Tests for invalid input of report ID type |
| 7.12 | test\_outOfRangeReportID | Test for invalid input of report ID range | Tests for invalid input of report ID range |

# Coverage Report

A description of the coverage of your unit tests, including how you evaluated coverage (function, statement, branch, condition)

# Requirements Acceptance Testing

(You will need to fill out the column on the left with the requirements listed in software design documents and the columns on the right with the results of your own testing)

| **Software  Requirement No** | **Test** | **Implemented (Full /Partial/ None)** | **Test Results (Pass/ Fail)** | **Comments (for partial implementation or failed test results)** |
| --- | --- | --- | --- | --- |
| 1 | Accept multiple file names as arguments from the command line |  |  |  |
| 2 | Display the details of all valid files |  |  |  |
| 3 | Display an appropriate message if a file does not exist or if a file name is invalid |  |  |  |
| 4 | Display a message if an argument is a directory instead of a file |  |  |  |
| 5 | File name can be a simple file name or include the full path of the file with one or more levels |  |  |  |
| 6 | file names must start with an alphabetical character |  |  |  |
| 7 | Valid file name extensions must be 3 or 4 alphabetical characters preceded by a dot) |  |  |  |
| 8 | Directory/level names must start with an alphabetical character to be considered valid |  |  |  |
| 9 | The program should be able to accept as many levels for each file name as the user wants to input. This is limited only by the number of levels allowed in Windows (approximately 120) |  |  |  |