Software Design Document

NSW Traffic Penalty Analysis Software

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# Unit Tests

| **No** | **Test Case** | **Expected Results** | **Actual Results** |
| --- | --- | --- | --- |
| **1.0** | **All Date Range Functions** |  |  |
| 1.1 | A letter hasn’t been inputted | Passed | Passed |
| 1.2 | A letter was inputted | Warning message | Warning message |
| 1.3 | The before date is greater than the end date | Warning message | Warning message |
| 1.4 | The before date is not greater than the end date | Passed | Passed |
| 1.5 | The input is in a date format | Passed | Passed |
| 1.6 | The input isn’t in a date format | Warning message | Warning message |

# Coverage Report

The Coverage Module reported a 99% success with 2 things missing, these errors where for nested ‘if’ statements where an ‘else’ would suffice. These errors were fixed and no others where found. We manually tested input validity before running a unittest and fixed all errors we found from them.

Function Coverage

The program is small and it would be difficult to have a function that would not be called. Coverage and the pycharm IDE both show there are no uncalled functions in the program, for good measure we also manually checked since the program is so small.

Statement Coverage

All statements have been executed. Coverage returned nothing but pycharm IDE returned a lot of errors concerning the “frame” variable which is stated multiple times, this variable is used by wxpython to display a new frame.

Branch coverage

A couple errors occurred from branch coverage from nested if statements where an if-else would work better for the situation. These errors were promptly fixed.

Condition Coverage

No results occurred from condition coverage as multiple conditions for if statements were very rarely used in the program.

# Requirements Acceptance Testing

| **Software  Requirement No** | **Test** | **Implemented (Full /Partial/ None)** | **Test Results (Pass/ Fail)** | **Comments (for partial implementation or failed test results)** |
| --- | --- | --- | --- | --- |
| 1 | The program shall be able to sort and distinguish data by types and content. | Full | Pass |  |
| 2 | The program shall be easy to follow/interpret | Partial | Fail | Was unable to make a grid to separate information in the functions: Date range, mobile phones or custom queries. Windows also don’t initialise at proper sizes so often need to be resized to properly read data and data often is displayed wrong until the window is resized. |
| 3 | The program shall be able to display and organise the data. | Full | Full |  |
| 4 | The program shall be able to generate a graph. | Full | Full |  |