Software Testing Report

Traffic Data Analyzer

Joshua Thomas, Roger Harley

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# Unit Tests

NOTE: These software unit tests are a hypothetical. We were unable to deliver the final product within specifications so these are the tests that would have taken place, had the software been properly completed.

| **No** | **Test Case** | **Expected Results** | **Actual Results** |
| --- | --- | --- | --- |
| **1.0** | **Database upload** |  |  |
| 1.1 | Test files other than a .db file | File explorer does not allow a user to select a file other than .db | File explorer does not allow a user to select a file other than .db |
| 1.2 | Test empty database | Display error message and exit | Display error message and exit |
| **2.0** | **Data selection options** |  |  |
| 2.1 | Testing incorrect parameters | Inform the user that there is no data matching the criteria and return to selection screen | Inform the user that there is no data matching the criteria and return to selection screen |
| 2.2 | Testing data selection | The user should be presented with a diagram or table of the selected data within the selected parameters | The user is presented with a diagram or table of the selected data within the selected parameters |
| 2.3 | Testing main menu return | After viewing the selected data and/or saving the result, the user should be returned to the main menu | After viewing the selected data and/or saving the result, the user should be returned to the main menu |
| 2.4 | SQL injection techniques should be tested | The program correctly sanitises any free user input and the SQL search parameters don’t respond to the query | The program correctly sanitises any free user input and the SQL search parameters don’t respond to the query |
| 2.5 | Testing the generated visual graphs | The program displays the correct graph type, with an accurate representation of the selected data. | The program displays the correct graph type, with an accurate representation of the selected data. |
| **3.0** | **Data selection options** |  |  |
| 3.1 | Testing data update function | The program should fetch the latest version of the .csv file and subsequently create a local database based off the data | The program is unable to fetch the .csv file as there is no static download link that can be implemented into the code |

# 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) |  |  |  |