

Name: E. A. D. NIMNAKA

Task A: Input Validation

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
01	Enter valid day, month, and year	Day = 15, Month = 08, Year = 2020	return 15-08-2020	Pass

```
Please enter the day of the survey in the format DD: 15  
Please enter the month of the survey in the format MM: 8  
Please enter the year of the survey in the format YYYY: 2020
```

```
Attempting to open file: traffic_data15082020.csv  
Error: File 'traffic_data15082020.csv' not found. Please check the date and try again.  
Could not process data because the file was not found or another error occurred.
```

```
Do you want to load another dataset? (Y/N): |
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
02	Enter invalid day (out of range)	Day = 32	Out of range - values must be between 1 and 31.	Pass

```
Please enter the day of the survey in the format DD: 32  
Out of range - values must be between 1 and 31.  
Please enter the day of the survey in the format DD: |
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
03	Enter invalid month (out of range)	Month = 13	Out of range - values must be between 1 and 12.	Pass

Please enter the day of the survey in the format DD: 20
 Please enter the month of the survey in the format MM: 13
 Out of range - values must be between 1 and 12.
 Please enter the month of the survey in the format MM: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
04	Enter invalid year	Year = 1999	Out of range - year must be between 2000 and 2024.	Pass

Please enter the day of the survey in the format DD: 20
 Please enter the month of the survey in the format MM: 13
 Out of range - values must be between 1 and 12.
 Please enter the month of the survey in the format MM: 12
 Please enter the year of the survey in the format YYYY: 1999
 Out of range - year must be between 2000 and 2024.
 Please enter the year of the survey in the format YYYY: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
05	Input non-numeric value for day	Day = "abc"	Integer required! Please enter valid numbers.	Pass

Please enter the day of the survey in the format DD: abc
 Integer required! Please enter valid numbers.

Please enter the day of the survey in the format DD: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
06	Input non-numeric value for month	Month = "bbb"	Integer required! Please enter valid numbers.	Pass

Please enter the day of the survey in the format DD: abc
 Integer required! Please enter valid numbers.

Please enter the day of the survey in the format DD: 11
 Please enter the month of the survey in the format MM: bbb
 Integer required! Please enter valid numbers.

Please enter the month of the survey in the format MM: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
07	Input non-numeric value for year	Year = "202r"	Integer required! Please enter valid numbers.	Pass

Please enter the day of the survey in the format DD: abc
 Integer required! Please enter valid numbers.
 Please enter the day of the survey in the format DD: 11
 Please enter the month of the survey in the format MM: bbb
 Integer required! Please enter valid numbers.
 Please enter the month of the survey in the format MM: 09
 Please enter the year of the survey in the format YYYY: 202r
 Integer required! Please enter valid numbers.
 Please enter the year of the survey in the format YYYY: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
08	User inputs invalid date combination	Day = 31, Month = 02, Year = 2022	Invalid date 31-02-2022. Please try again.	Pass

Please enter the day of the survey in the format DD: 31
 Please enter the month of the survey in the format MM: 2
 Please enter the year of the survey in the format YYYY: 2022
 Invalid date 31-02-2022. Please try again.
 Please enter the day of the survey in the format DD: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
09	User inputs 'Y' to load another dataset	Input = Y	Proceed to load another dataset	Pass

```
Please enter the day of the survey in the format DD: 12
Please enter the month of the survey in the format MM: 03
Please enter the year of the survey in the format YYYY: 2023
Attempting to open file: traffic_data12032023.csv
Error: File 'traffic_data12032023.csv' not found. Please check the date and try again.
Could not process data because the file was not found or another error occurred.
Do you want to load another dataset? (Y/N): y
Please enter the day of the survey in the format DD:
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
10	User inputs 'N' to stop loading datasets	Input = N	End the program loop & print End of Run! Goodbye!	Pass

```
Please enter the day of the survey in the format DD: 22
Please enter the month of the survey in the format MM: 12
Please enter the year of the survey in the format YYYY: 2021
Attempting to open file: traffic_data22122021.csv
Error: File 'traffic_data22122021.csv' not found. Please check the date and try again.
Could not process data because the file was not found or another error occurred.
Do you want to load another dataset? (Y/N): n
End of Run! Goodbye!
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
11	User inputs invalid response	Input = "abc"	INVALID input. Please enter 'Y' or 'N'.	Pass

```

Please enter the day of the survey in the format DD: 23
Please enter the month of the survey in the format MM: 2
Please enter the year of the survey in the format YYYY: 2024
Attempting to open file: traffic_data23022024.csv
Error: File 'traffic_data23022024.csv' not found. Please check the date and try again.
Could not process data because the file was not found or another error occurred.
Do you want to load another dataset? (Y/N): abc
INVALID input. Please enter 'Y' or 'N'.
Do you want to load another dataset? (Y/N): |

```

Task B: Process CSV Data

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
01	Input a valid CSV file with expected data	Day = 15, Month = 06, Year = 2024	Process data successfully and return computed statistics	Pass

```
Please enter the day of the survey in the format DD: 15
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024
Attempting to open file: traffic_data15062024.csv
```

```
Data file selected is traffic_data15062024.csv
The total number of vehicles recorded for this date is 1037
The total number of trucks recorded for this date is 109
The total number of electric vehicles for this date is 368
The total number of two-wheeled vehicles for this date is 401
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
The total number of vehicles through both junctions not turning left or right is 363
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 7
The total number of vehicles recorded as over the speed limit for this date is 205
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
The total number of vehicles recorded through Hanley Highway/Westway junction is 543
11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 39
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 0
Do you want to load another dataset? (Y/N): |
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
02	Input a valid CSV file with expected data	Day = 16, Month = 06, Year = 2024	Process data successfully and return computed statistics	Pass

Please enter the day of the survey in the format DD: 16
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024
 Attempting to open file: traffic_data16062024.csv

Data file selected is traffic_data16062024.csv
 The total number of vehicles recorded for this date is 101
 The total number of trucks recorded for this date is 11
 The total number of electric vehicles for this date is 29
 The total number of two-wheeled vehicles for this date is 29
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
 The total number of vehicles through both junctions not turning left or right is 38
 The percentage of total vehicles recorded that are trucks for this date is 11%
 The average number of bicycles per hour for this date is 0
 The total number of vehicles recorded as over the speed limit for this date is 20
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
 The total number of vehicles recorded through Hanley Highway/Westway junction is 49
 6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 5
 The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
 The number of hours of rain for this date is 3
 Do you want to load another dataset? (Y/N): |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
03	Input a valid CSV file with expected data	Day = 21, Month = 06, Year = 2024	Process data successfully and return computed statistics	Pass

Please enter the day of the survey in the format DD: 21
 Please enter the month of the survey in the format MM: 06
 Please enter the year of the survey in the format YYYY: 2024
 Attempting to open file: traffic_data21062024.csv

```
Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 503
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 10
The total number of vehicles recorded as over the speed limit for this date is 250
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between 18:00 and 19:00
The number of hours of rain for this date is 6
Do you want to load another dataset? (Y/N): |
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
04	Input an invalid CSV file with expected data	Day = 02, Month = 05, Year = 20232	Error: File 'traffic_data02052023.csv' not found. Please check the date and try again. Could not process data because the file was not found or another error occurred.	Pass

```

Please enter the day of the survey in the format DD: 02
Please enter the month of the survey in the format MM: 05
Please enter the year of the survey in the format YYYY: 2023
Attempting to open file: traffic_data02052023.csv
Error: File 'traffic_data02052023.csv' not found. Please check the date and try again.
Could not process data because the file was not found or another error occurred.
Do you want to load another dataset? (Y/N): |

```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
05	Input a valid CSV file with two expected data	Day = 15, Month = 06, Year = 2024 / Day = 16, Month = 06, Year = 2024 / Input = N	Process data successfully and return computed statistics	Pass

```

Please enter the day of the survey in the format DD: 15
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024
Attempting to open file: traffic_data15062024.csv

Data file selected is traffic_data15062024.csv
The total number of vehicles recorded for this date is 1037
The total number of trucks recorded for this date is 109
The total number of electric vehicles for this date is 368
The total number of two-wheeled vehicles for this date is 401
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
The total number of vehicles through both junctions not turning left or right is 363
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 7
The total number of vehicles recorded as over the speed limit for this date is 205
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
The total number of vehicles recorded through Hanley Highway/Westway junction is 543
11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 39
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 0
Do you want to load another dataset? (Y/N): y
Please enter the day of the survey in the format DD: 16
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024
Attempting to open file: traffic_data16062024.csv

Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 0
The total number of vehicles recorded as over the speed limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
The number of hours of rain for this date is 3
Do you want to load another dataset? (Y/N): n
End of Run! Goodbye!

```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
06	Input a valid CSV file with three expected data	Day = 15, Month = 06, Year = 2024 / Day = 16, Month = 06, Year = 2024 / Day = 21, Month = 06, Year = 2024 / Input = N	Process data successfully and return computed statistics	Pass

Please enter the day of the survey in the format DD: 15
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024
 Attempting to open file: traffic_data15062024.csv

Data file selected is traffic_data15062024.csv
 The total number of vehicles recorded for this date is 1037
 The total number of trucks recorded for this date is 103
 The total number of electric vehicles for this date is 368
 The total number of two-wheeled vehicles for this date is 401
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
 The total number of vehicles through both junctions not turning left or right is 363
 The percentage of total vehicles recorded that are trucks for this date is 11%
 The average number of bicycles per hour for this date is 7
 The total number of vehicles recorded as over the speed limit for this date is 205
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
 The total number of vehicles recorded through Hanley Highway/Westway junction is 543
 11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 39
 The most vehicles through Hanley Highway/Westway were recorded between 18:00 and 19:00
 The number of hours of rain for this date is 0
 Do you want to load another dataset? (Y/N): n
 Please enter the day of the survey in the format DD: 16
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024
 Attempting to open file: traffic_data16062024.csv

Data file selected is traffic_data16062024.csv
 The total number of vehicles recorded for this date is 101
 The total number of trucks recorded for this date is 11
 The total number of electric vehicles for this date is 29
 The total number of two-wheeled vehicles for this date is 29
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
 The total number of vehicles through both junctions not turning left or right is 38
 The percentage of total vehicles recorded that are trucks for this date is 11%
 The total number of vehicles recorded as over the speed limit for this date is 20
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
 The total number of vehicles recorded through Hanley Highway/Westway junction is 49
 61% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 5
 The most vehicles through Hanley Highway/Westway were recorded between 01:00 and 2:00
 The number of hours of rain for this date is 3
 Do you want to load another dataset? (Y/N): n
 Please enter the day of the survey in the format DD: 21
 Please enter the month of the survey in the format MM: 06
 Please enter the year of the survey in the format YYYY: 2024
 Attempting to open file: traffic_data21062024.csv

Data file selected is traffic_data21062024.csv
 The total number of vehicles recorded for this date is 1334
 The total number of trucks recorded for this date is 138
 The total number of electric vehicles for this date is 442
 The total number of two-wheeled vehicles for this date is 509
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
 The total number of vehicles through both junctions not turning left or right is 494
 The percentage of total vehicles recorded that are trucks for this date is 10%
 The average number of bicycles per hour for this date is 10
 The total number of vehicles recorded as over the speed limit for this date is 250
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
 The total number of vehicles recorded through Hanley Highway/Westway junction is 683
 10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 71
 The most vehicles through Hanley Highway/Westway were recorded between 18:00 and 19:00
 The number of hours of rain for this date is 6
 Do you want to load another dataset? (Y/N): n
 End of Run! Goodbye!

Task C: Save Results to Text File

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
01	Save results successfully to results.txt file	Day = 15, Month = 06, Year = 2024 / Day = 16, Month = 06, Year = 2024 / Day = 21, Month = 06, Year = 2024 / Input = N	Save data to results.txt. Results saved successfully.	Pass

```
results.txt
=====
Data file selected is traffic_data15062024.csv
The total number of vehicles recorded for this date is 1037
The total number of trucks recorded for this date is 109
The total number of electric vehicles for this date is 368
The total number of two-wheeled vehicles for this date is 483
The total number of vehicles recorded through Elm Avenue/Rabbit Road heading North is 15
The total number of vehicles through both junctions not turning left or right is 363
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 1
The total number of vehicles recorded are at the limit for this date is 285
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
The total number of vehicles recorded through Hanley Highway/Westway junction is 543
1% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles on an hour on Hanley Highway/Westway is 39
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 0
*****
Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of vehicles recorded through Elm Avenue/Rabbit Road heading North is 8
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 20
The total number of vehicles recorded are at the limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
0% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles on an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
The number of hours of rain for this date is 3
*****
Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 593
The total number of vehicles recorded through Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 1
The total number of vehicles recorded are at the limit for this date is 250
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles on an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 6
*****
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
02	Test if random date and check it run and save the text file	Day = 13, Month = 04, Year = 2024 / Input = N	Do not write anything to the results.txt file	Pass



Task D: Histogram Display (using tkinter Canvas) & Task E: Code Loops to Handle Multiple CSV Files

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
01	Provide a valid input CSV file with appropriate data	Day = 15, Month = 06, Year = 2024 / Input = N	File is successfully loaded and data is processed without errors.	Pass

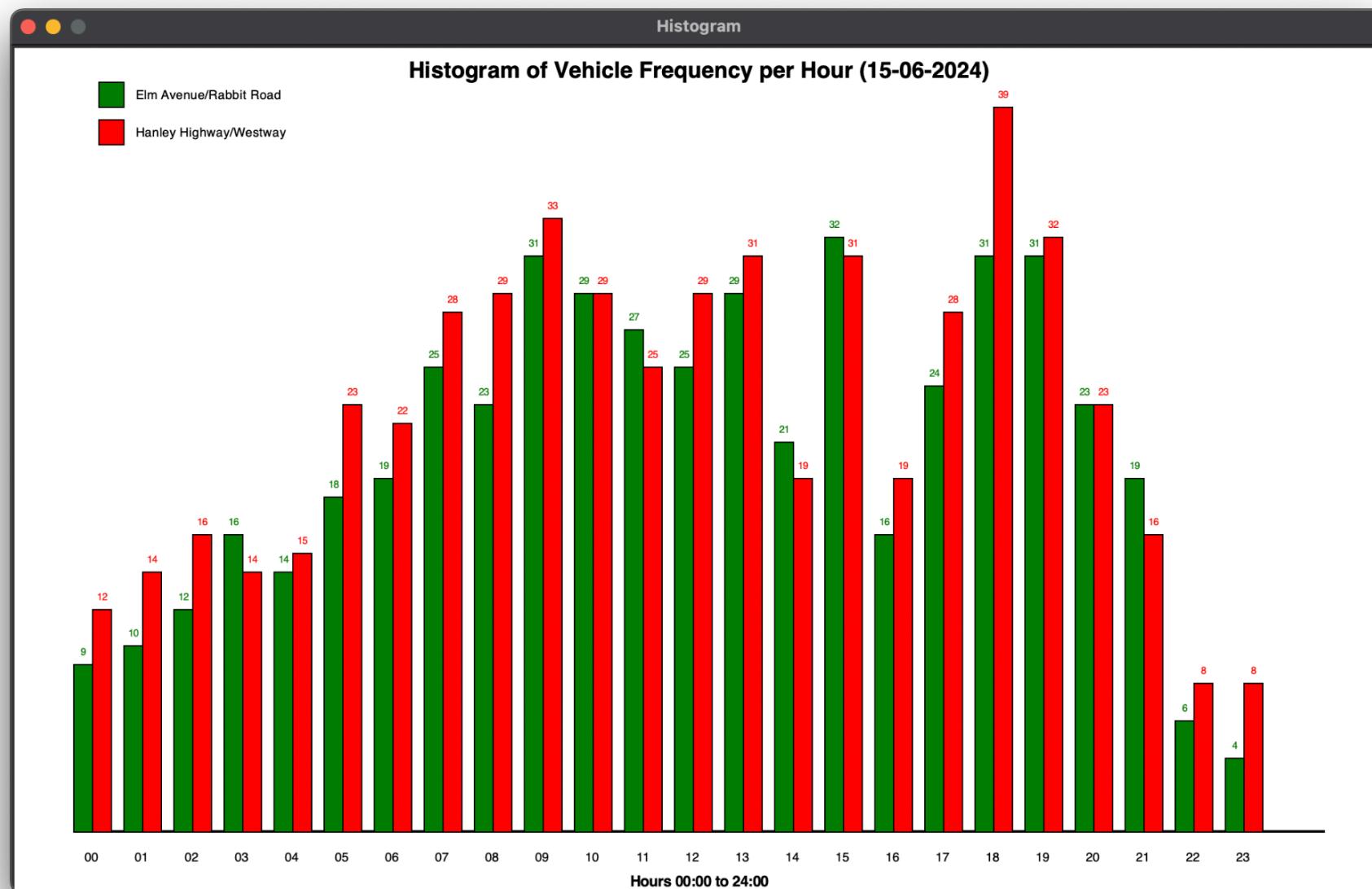
```
Please enter the day of the survey in the format DD: 15
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024

Data file selected is traffic_data15062024.csv
The total number of vehicles recorded for this date is 1037
The total number of trucks recorded for this date is 109
The total number of electric vehicles for this date is 368
The total number of two-wheeled vehicles for this date is 401
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
The total number of vehicles through both junctions not turning left or right is 363
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 7
The total number of vehicles recorded as over the speed limit for this date is 205
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
The total number of vehicles recorded through Hanley Highway/Westway junction is 543
11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 39
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 0
```

```
2024-12-24 02:10:39.903 Python[4145:231412] +[IMKClient subclass]: chose IMKClient_Modern
2024-12-24 02:10:39.903 Python[4145:231412] +[IMKInputSession subclass]: chose IMKInputSession_Modern
Do you want to load another dataset? (Y/N): n
```

End of Run! Thank you for using the Traffic Data Processor!

>>>



```
results.txt

Data file selected is traffic_data15062024.csv
The total number of vehicles recorded for this date is 1037
The total number of trucks recorded for this date is 109
The total number of electric vehicles for this date is 368
The total number of two-wheeled vehicles for this date is 401
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
The total number of vehicles through both junctions not turning left or right is 363
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 7
The total number of vehicles recorded as over the speed limit for this date is 205
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
The total number of vehicles recorded through Hanley Highway/Westway junction is 543
11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 39
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 0

*****
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
02	Provide a valid input CSV file with appropriate data	Day = 16, Month = 06, Year = 2024 / Input = N	File is successfully loaded and data is processed without errors.	Pass

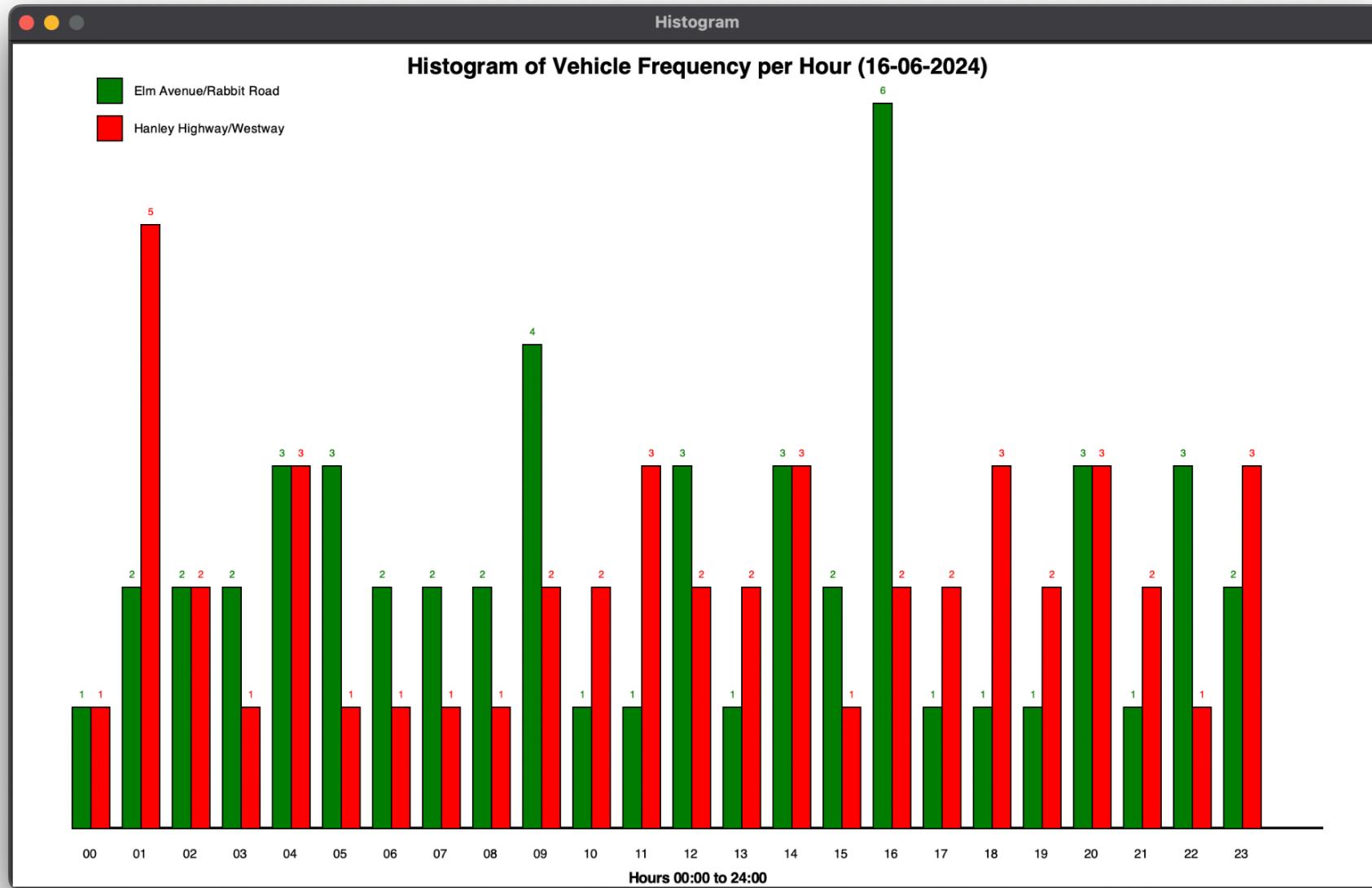
```
Please enter the day of the survey in the format DD: 16
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024
```

```
Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 0
The total number of vehicles recorded as over the speed limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
The number of hours of rain for this date is 3
```

```
2024-12-24 02:15:39.777 Python[4210:235694] +[IMKClient subclass]: chose IMKClient_Modern
2024-12-24 02:15:39.777 Python[4210:235694] +[IMKInputSession subclass]: chose IMKInputSession_Modern
Do you want to load another dataset? (Y/N): n
```

End of Run! Thank you for using the Traffic Data Processor!

>>> |



```
results.txt

Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 0
The total number of vehicles recorded as over the speed limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between 01:00 and 2:00
The number of hours of rain for this date is 3

*****
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
03	Provide a valid input CSV file with appropriate data	Day = 21, Month = 06, Year = 2024 / Input = N	File is successfully loaded and data is processed without errors.	Pass

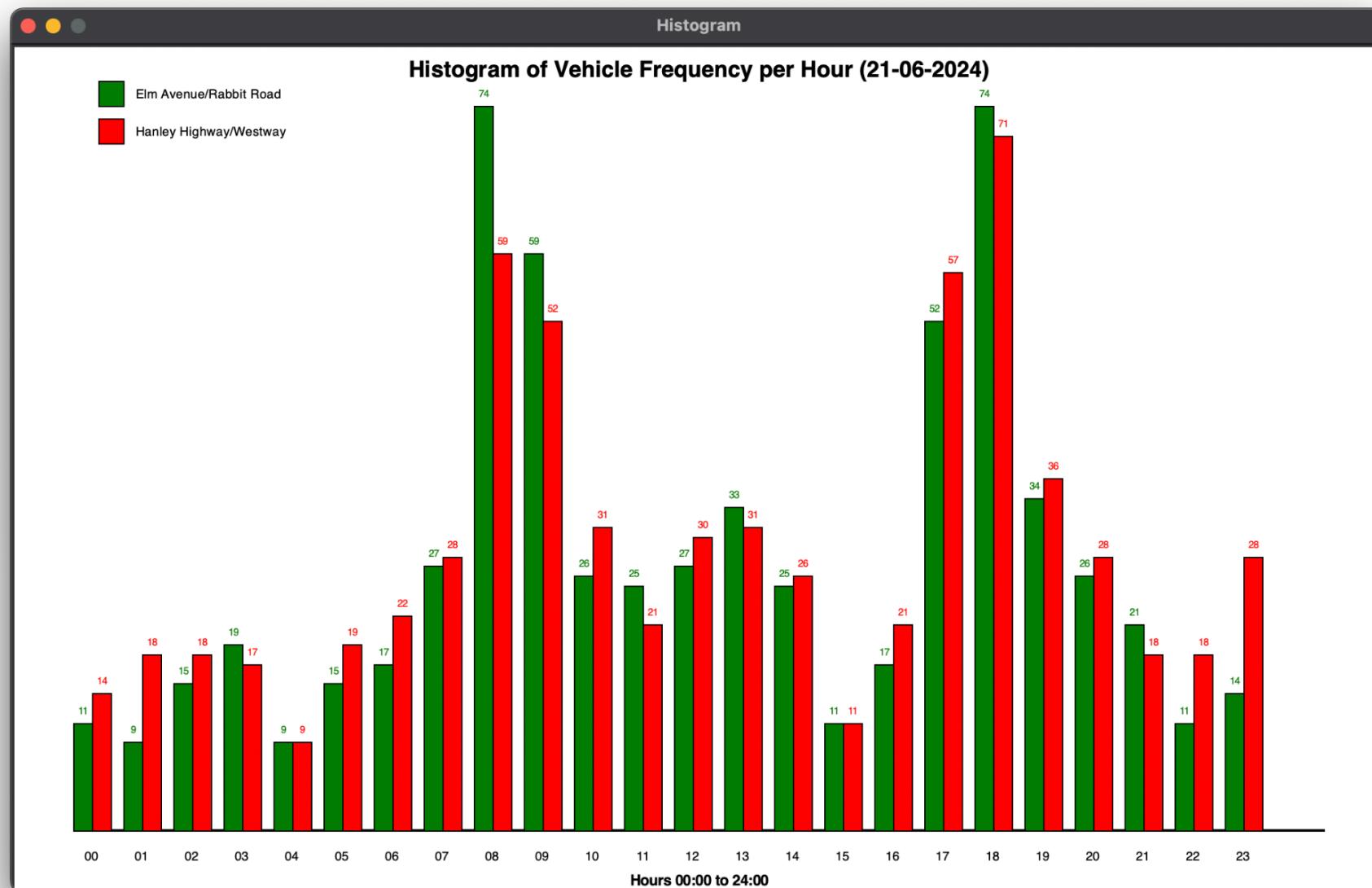
Please enter the day of the survey in the format DD: 21
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024

Data file selected is traffic_data21062024.csv
 The total number of vehicles recorded for this date is 1334
 The total number of trucks recorded for this date is 138
 The total number of electric vehicles for this date is 442
 The total number of two-wheeled vehicles for this date is 503
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
 The total number of vehicles through both junctions not turning left or right is 494
 The percentage of total vehicles recorded that are trucks for this date is 10%
 The average number of bicycles per hour for this date is 10
 The total number of vehicles recorded as over the speed limit for this date is 250
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
 The total number of vehicles recorded through Hanley Highway/Westway junction is 683
 10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 71
 The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
 The number of hours of rain for this date is 6

2024-12-24 02:19:40.602 Python[4256:238502] +[IMKClient subclass]: chose IMKClient_Modern
 2024-12-24 02:19:40.602 Python[4256:238502] +[IMKInputSession subclass]: chose IMKInputSession_Modern
 Do you want to load another dataset? (Y/N): n

End of Run! Thank you for using the Traffic Data Processor!

>>> |



```
results.txt

Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 503
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 10
The total number of vehicles recorded as over the speed limit for this date is 250
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 6

*****
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
04	Provide a valid input CSV file with appropriate data	Day = 15, Month = 06, Year = 2024 , Input = Y/ Day = 16, Month = 06, Year = 2024, Input = Y/ Day = 15, Month = 06, Year = 2024, Input = N	File is successfully loaded and data is processed without errors.	Pass

Please enter the day of the survey in the format DD: 15
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024

Data file selected is traffic_data15062024.csv
 The total number of vehicles recorded for this date is 1037
 The total number of trucks recorded for this date is 109
 The total number of electric vehicles for this date is 368
 The total number of two-wheeled vehicles for this date is 401
 The total number of buses leaving Elm Avenue/Rabbit Road heading North is 15
 The total number of vehicles through both junctions not turning left or right is 363
 The percentage of total vehicles recorded that are trucks for this date is 11%
 The average number of bicycles per hour for this date is 7
 The total number of vehicles recorded as over the speed limit for this date is 205
 The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 494
 The total number of vehicles recorded through Hanley Highway/Westway junction is 543
 11% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
 The highest number of vehicles in an hour on Hanley Highway/Westway is 39
 The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
 The number of hours of rain for this date is 0

2024-12-24 02:22:35.576 Python[4287:240448] +[IMKClient subclass]: chose IMKClient_Modern
 2024-12-24 02:22:35.576 Python[4287:240448] +[IMKInputSession subclass]: chose IMKInputSession_Modern
 Do you want to load another dataset? (Y/N): y
 Please enter the day of the survey in the format DD: 16
 Please enter the month of the survey in the format MM: 6
 Please enter the year of the survey in the format YYYY: 2024

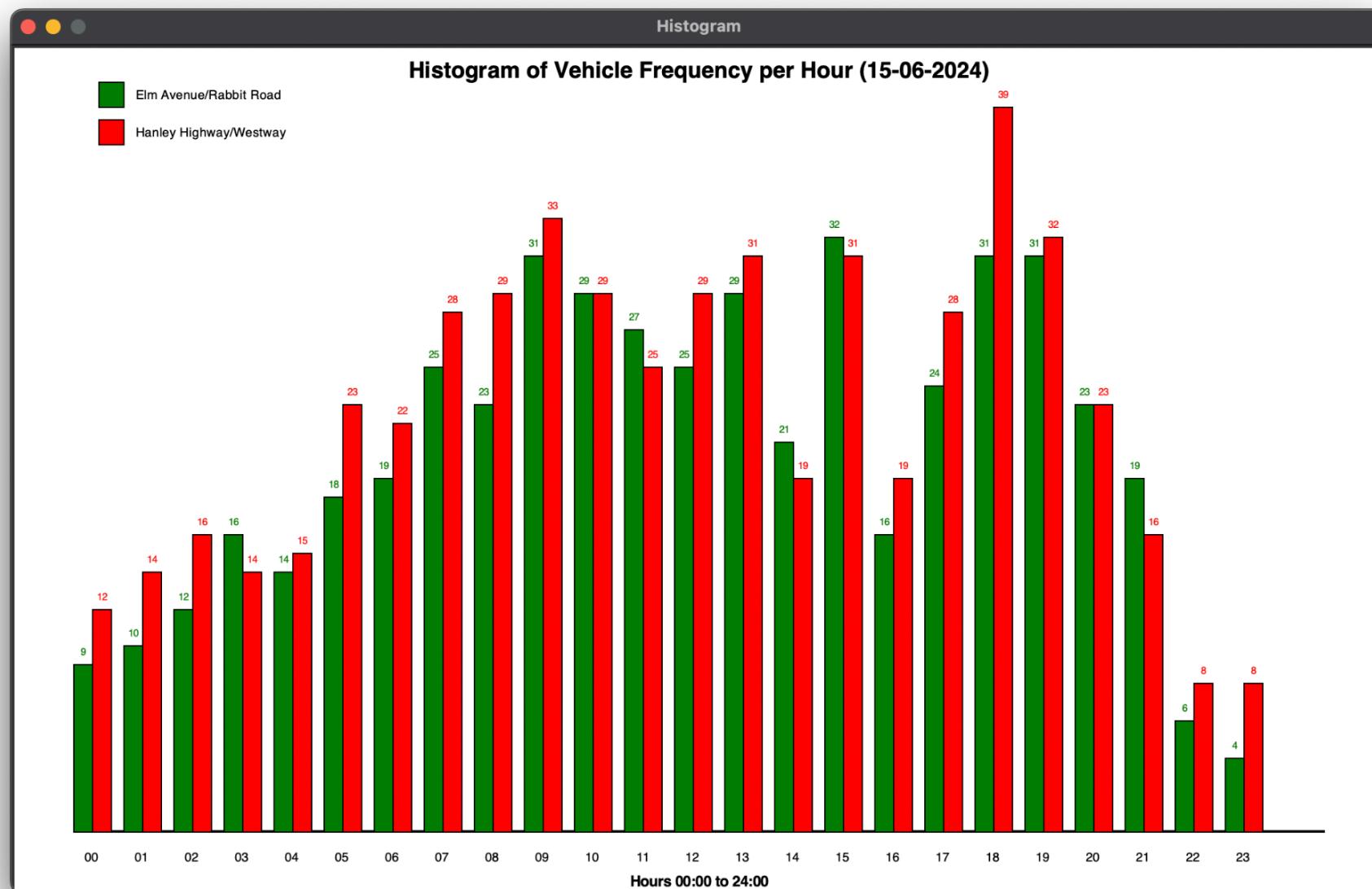
```
Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 0
The total number of vehicles recorded as over the speed limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
The number of hours of rain for this date is 3
```

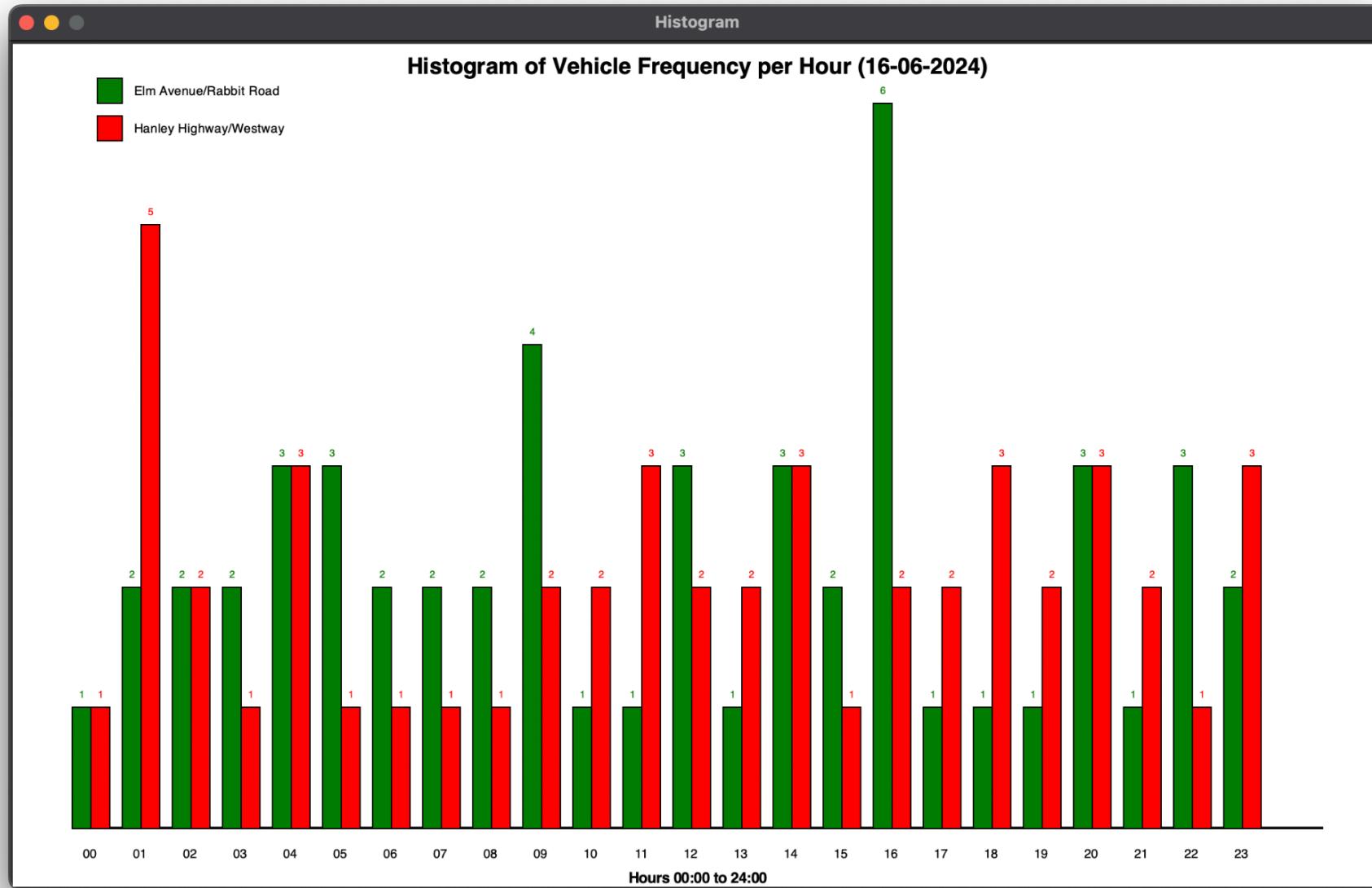
```
Do you want to load another dataset? (Y/N): y
Please enter the day of the survey in the format DD: 21
Please enter the month of the survey in the format MM: 6
Please enter the year of the survey in the format YYYY: 2024
```

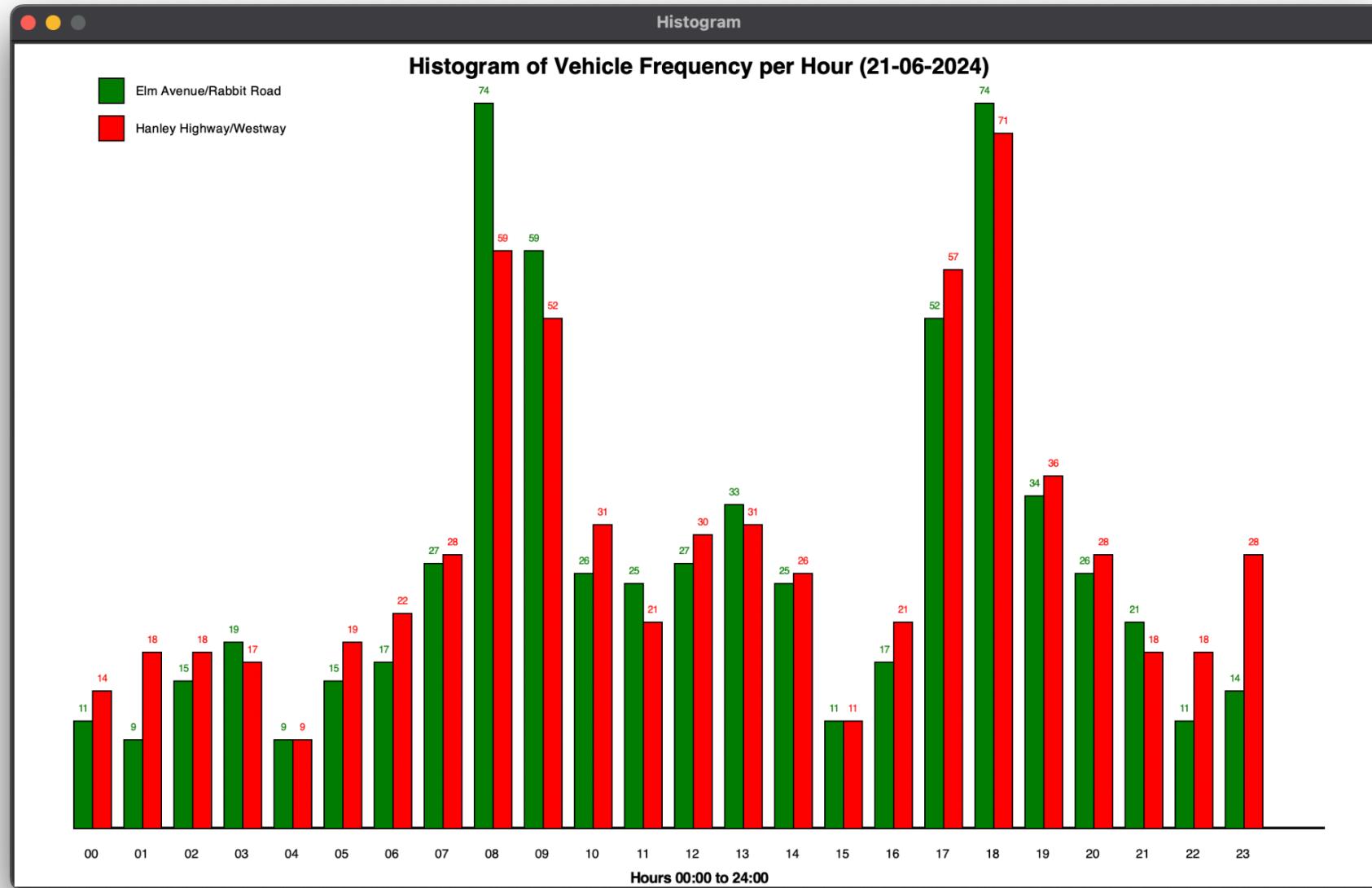
```
Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 503
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 10
The total number of vehicles recorded as over the speed limit for this date is 250
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 6
```

```
Do you want to load another dataset? (Y/N): n
End of Run! Thank you for using the Traffic Data Processor!
```

>>>







```
results.txt

Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 503
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 10
The total number of vehicles recorded as over the speed limit for this date is 250
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 651
The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 6

*****
Data file selected is traffic_data16062024.csv
The total number of vehicles recorded for this date is 101
The total number of trucks recorded for this date is 11
The total number of electric vehicles for this date is 29
The total number of two-wheeled vehicles for this date is 29
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 0
The total number of vehicles through both junctions not turning left or right is 38
The percentage of total vehicles recorded that are trucks for this date is 11%
The average number of bicycles per hour for this date is 0
The total number of vehicles recorded as over the speed limit for this date is 20
The total number of vehicles recorded through Elm Avenue/Rabbit Road junction is 52
The total number of vehicles recorded through Hanley Highway/Westway junction is 49
6% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 5
The most vehicles through Hanley Highway/Westway were recorded between Between 01:00 and 2:00
The number of hours of rain for this date is 3

*****
Data file selected is traffic_data21062024.csv
The total number of vehicles recorded for this date is 1334
The total number of trucks recorded for this date is 138
The total number of electric vehicles for this date is 442
The total number of two-wheeled vehicles for this date is 503
The total number of buses leaving Elm Avenue/Rabbit Road heading North is 19
The total number of vehicles through both junctions not turning left or right is 494
The percentage of total vehicles recorded that are trucks for this date is 10%
The average number of bicycles per hour for this date is 10
The total number of vehicles recorded as over the speed limit for this date is 250
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The total number of vehicles recorded through Hanley Highway/Westway junction is 683
10% of vehicles recorded through Elm Avenue/Rabbit Road are scooters.
The highest number of vehicles in an hour on Hanley Highway/Westway is 71
The most vehicles through Hanley Highway/Westway were recorded between Between 18:00 and 19:00
The number of hours of rain for this date is 6

*****
```

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
05	Provide a non-CSV file or a file with incorrect formatting.	Day = 25, Month = 05, Year = 2003	Error: File 'traffic_data25052003.csv' not found. Please enter another date.	Pass

Please enter the day of the survey in the format DD: 25
 Please enter the month of the survey in the format MM: 5
 Please enter the year of the survey in the format YYYY: 2003
 Error: File 'traffic_data25052003.csv' not found. Please enter another date.
 Please enter the day of the survey in the format DD: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
06	Enter an invalid date	Day = 30, Month = 02, Year = 2023	Invalid date 30-02-2023. Please try again.	Pass

Please enter the day of the survey in the format DD: 30
 Please enter the month of the survey in the format MM: 2
 Please enter the year of the survey in the format YYYY: 2023
 Invalid date 30-02-2023. Please try again.
 Please enter the day of the survey in the format DD: |

Test Case	Test Case Scenario	Inputs	Expected Outcome	Remarks
07	Test with a leap year date	Day = 29, Month = 02, Year = 2024	Error: File 'traffic_data29022024.csv' not found. Please enter another date.	Pass

Please enter the day of the survey in the format DD: 29

Please enter the month of the survey in the format MM: 2

Please enter the year of the survey in the format YYYY: 2024

Error: File 'traffic_data29022024.csv' not found. Please enter another date.

Please enter the day of the survey in the format DD: