

w2121917.py - C:\Users\jkear\Desktop\W2121917\w2121917.py (3.12.8)  
File Edit Format Run Options Window Help

```
#Task A
#Prompts the user to input a date

def validate_date_input():

    while True:
        #Date
        try:
            date = int(input("Please enter a date:"))
            if 1 <= date <= 31:
                date = f"{date:02d}"
                break
            else:
                print("Out of range")
        except ValueError:
            print("Integer required")

    while True:
```

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File Edit Shell Debug Options Window Help

```
File Edit Shell Debug Options Window Help
Python 3.12.8 (tags/v3.12.8:2dc476b, Dec  3 2024, 19:30:04) [MSC v.1942 64 bit (AMD64)]
on win32
Type "help", "copyright", "credits" or "license()" for more information.

>>> ===== RESTART: C:\Users\jkert\Desktop\W2121917\w2121917.py =====
Welcome to the Traffic Analysis Program!
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

Task B: Process Traffic Data

*****
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 360
The total number of two-wheeled vehicles for this date is 401
The total number of Busses 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 Bikes 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

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w2121917.py - C:\Users\jkert\Desktop\W2121917\w2121917.py (3.12.0)

File Edit Format Run Options Window Help

```
#Author: Akash
#Student ID: 20240420
import csv
import sys
sys.path.append('path_to_your_project/module')
from graphics import *

total_vehicles = 0
total_trucks = 0
total_electric_vehicles = 0
total_two_wheeled_vehicles = 0
total_bicycles = 0
total_busses_through_elm_to_N = 0
total_vehicles_without_turning = 0
total_vehicles_over_speed_limit = 0
total_vehicles_through_elm_only = 0
total_vehicles_through_hanley_only = 0
total_scooter_through_elm = 0
total_vehicles_in_peak_hanley = 0
per_hour_vehicles = [0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]
rain_hours = [0]*24
trucks_percentage = 0
hours = [0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]
average_bikes_per_hour = 0
scooter_percentage = 0
peak_time = []

#Task A
#Prompts the user to input a date.

def validate_date_input():

    while True:
        #Date
        try:
            date = int(input("Please enter the day of the survey in the format DD: "))
            if 1 <= date <= 31:
                date = f"{date:02d}"
                break
            else:
                print("Out of range - values must be in the range 1 and 31")
        except ValueError:
            print("Integer required")

    while True:
        ...
```

\*IDLE Shell 3.12.8\*

File Edit Shell Debug Options Window Help

Python 3.12.8 (tags/v3.12.8:2dc476b, Dec 3 2024, 19:30:04) [MSC v.1942 64 bit (AMD64)]

on win32

Type "help", "copyright", "credits" or "license()" for more information.

>>>

===== RESTART: C:\Users\jkert\Desktop\W2121917\w2121917.py =====

Welcome to the Traffic Analysis Program!

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

Task B: Process Traffic Data

\*\*\*\*\*
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 Busses 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 Bikes 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 16:00 and 18:00

The number of hours of rain for this date is 0

\*\*\*\*\*
\*\*\*\*\*

Task D: Display Histogram

Do you want to select another data file for a different date? Y/N: y

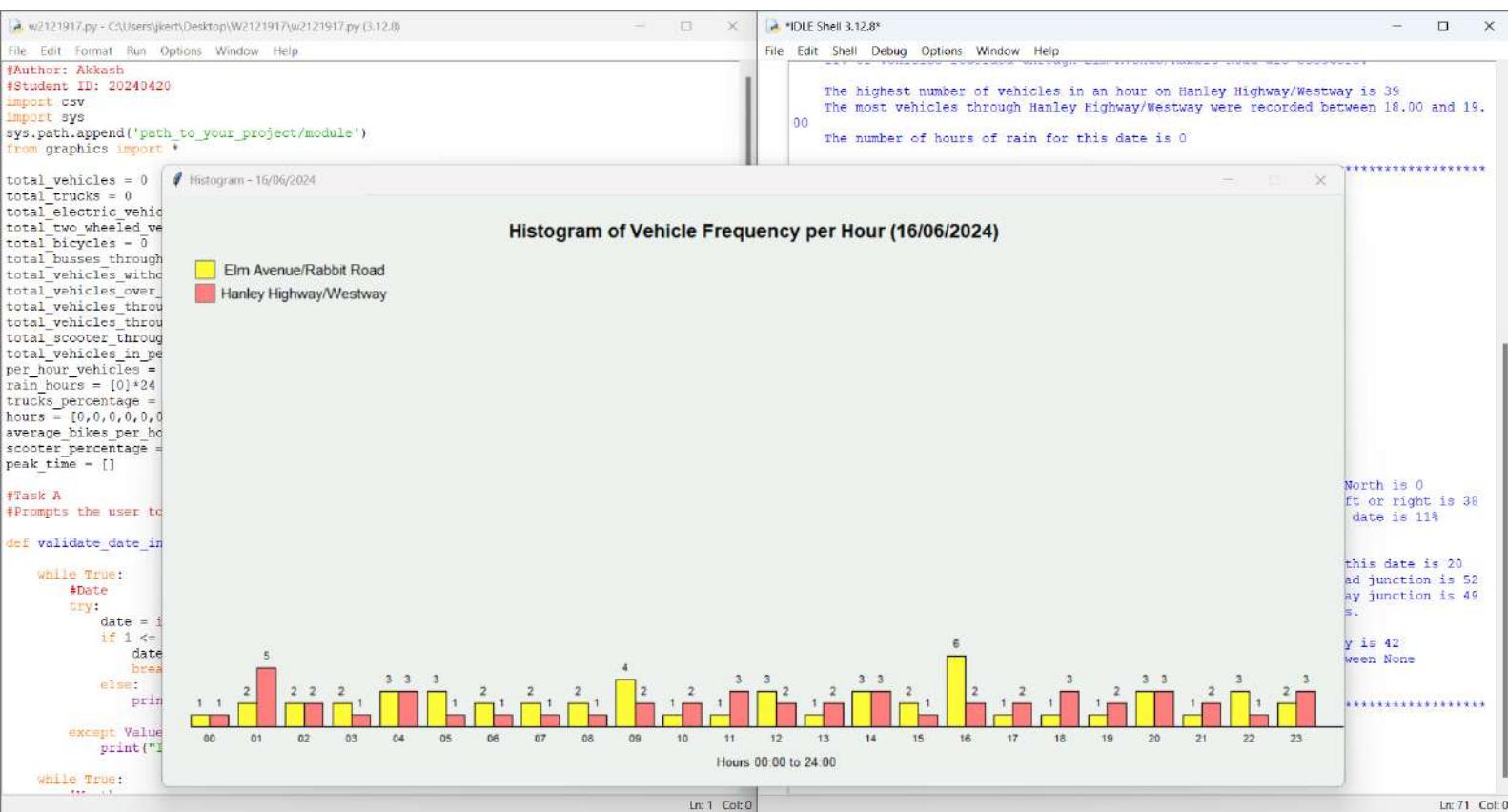
Please enter the day of the survey in the format DD: 16

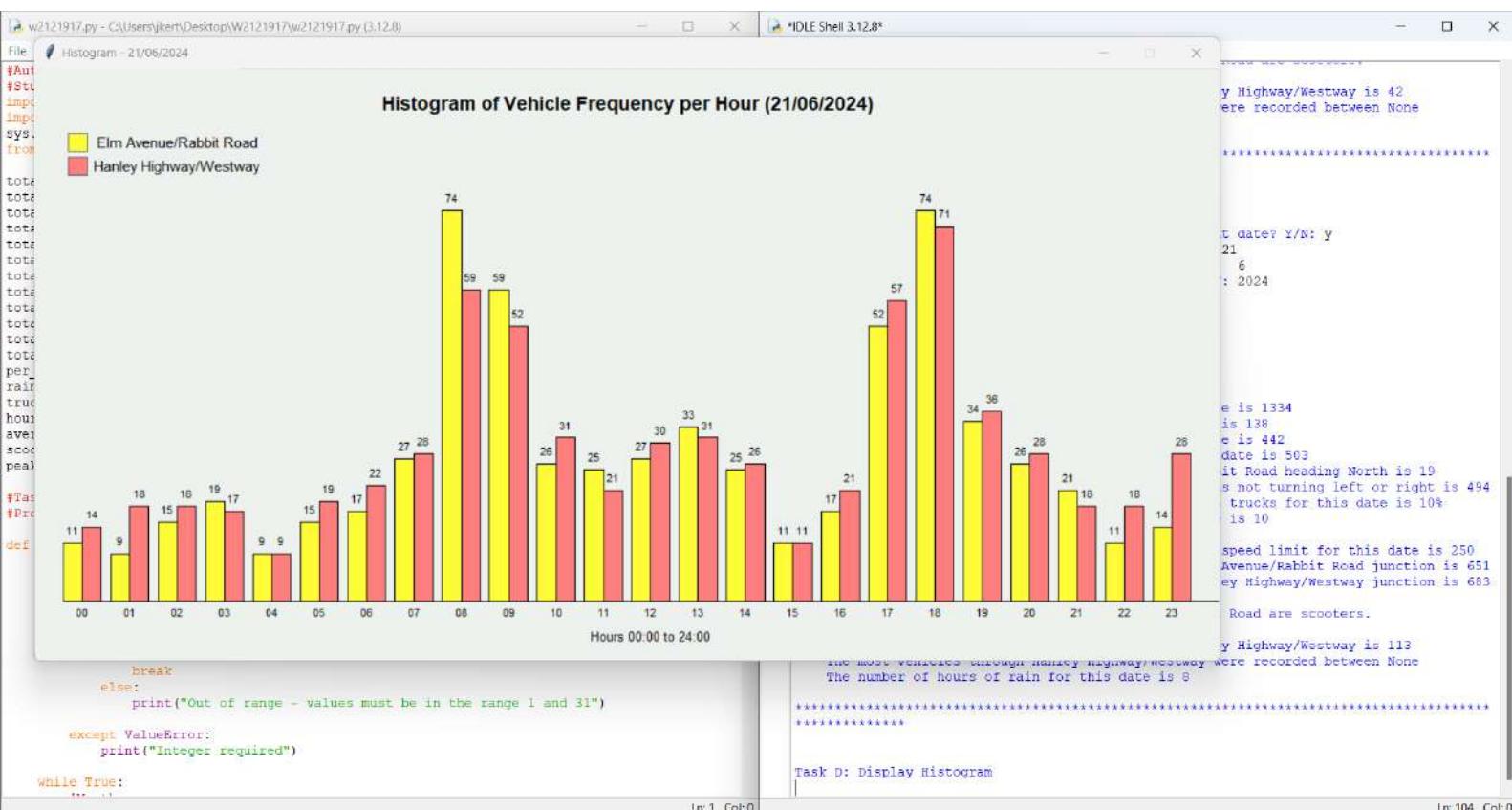
Please enter the month of the survey in the format MM: 6

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

In:1 Col:60

In:41 Col:60





```
IDLE Shell 3.12.8
File Edit Shell Debug Options Window Help
The most vehicles through Hanley Highway/Westway were recorded between None
The number of hours of rain for this date is 3

*****
Task D: Display Histogram
Do you want to select another data file for a different date? 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

Task B: Process Traffic Data

*****
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 Busses 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 Bikes 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 113
The most vehicles through Hanley Highway/Westway were recorded between None
The number of hours of rain for this date is 8

*****
Task D: Display Histogram
Do you want to select another data file for a different date? Y/N: n
Exiting the program. Goodbye!
```