Mentor/HOD.

6 Write a pandas program to Create a Scatter plot of the trading Volume / stock prices of Alphabet Inc. stock between two specific dates.

Aim:-

To Visualize the relationship between the trading Volume and stock prices of Alphabet inc. over a specific time period using a scatter plot.

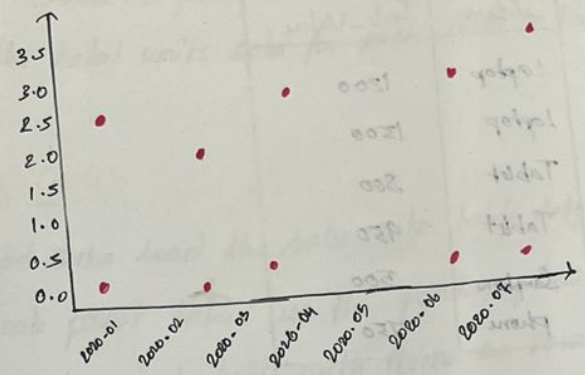
Pseudo Code:-

→ Import the pandas and necessary libraries.
→ Load the data, trading volume / stockprices of Alphabet Inc.
→ filter the Dataframe by the range of Data.
→ Label the axis and title plot the Scatter plot.
→ Display the plot.

Sample input:-

Date	Open	High	Low	Close	Volume
01-6-2018	112	1129.69	1097.45	1105.62	232100
02-04-2020	1098.26	1126.86	1096.4	1120.84	1964900
.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....
10-05-2020	1328.5	1352.87	1311	1320.61	2012500

Sample output :



Result :

The code is executed successfully and got the output

7. Write a pandas program to create a pivot table and find the maximum and minimum sale value of the items.

Aim :

To create a pivot table using pandas to find the maximum and minimum sales values of items in a sales data table.

pseudo Code :

⇒ Import the pandas library

⇒ Load the sales data into the pandas dataframe

⇒ Use pandas pivot_table function to create a pivot table

⇒ Display the pivot table.

```python
import pandas as pd
import matplotlib.pyplot as plt

# Load the CSV file containing stock data
alphabet_stock_data = pd.read_csv("C:/Users/abhip/OneDrive/Documents/DSA05 LAB/alphabet.csv")

# Convert 'Date' to datetime format
alphabet_stock_data['Date'] = pd.to_datetime(alphabet_stock_data['Date'], dayfirst=True)

# Filter data between specific dates
start_date = '2020-04-01'
end_date = '2020-05-01'
filtered_data = alphabet_stock_data[(alphabet_stock_data['Date'] >= start_date) & (alphabet_stock_data['Date'] <= end_date)]

# Create a scatter plot of trading volume vs stock price (Close)
plt.figure(figsize=(10, 6))
plt.scatter(filtered_data['Volume'], filtered_data['Close'], alpha=0.5)
plt.title('Alphabet Inc. Stock: Trading Volume vs Stock Price (April 2020)')
plt.xlabel('Trading Volume')
plt.ylabel('Stock Price (Close)')
plt.grid(True)
plt.show()
```