

Q 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 / stock prices of Alphabet Inc.
- filter the Dataprame by the range of Data.
- Label the axis and title plot the Scatter plot.
- Display the plot.

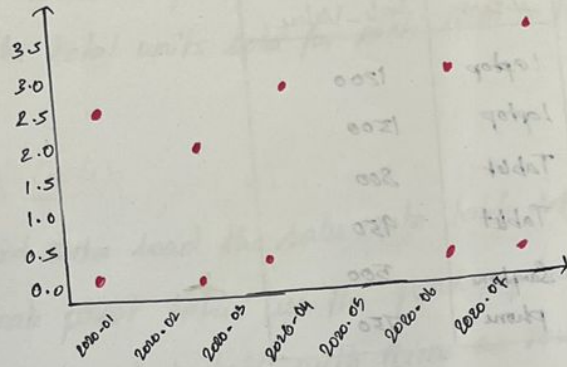
Sample input:-

Date	open	High	low	close	Volume
01-06-2020	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



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### 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 sales 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.

```
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()
```

```

File Edit View
Date,Open,High,Low,Close,Adj Close,Volume
01-04-2020,1122,1129.69,1097.45,1105.62,1105.62,2343100
02-04-2020,1098.26,1122.86,1092.12,1117.89,1117.89,2154900
03-04-2020,1119.015,1120.86,1079.88,1097.88,1097.88,1983800
06-04-2020,1138,1194.66,1130.94,1186.92,1186.92,2664700
07-04-2020,1165.61,1185.21,1150.61,1186.58,1186.58,2847300
08-04-2020,1183,1193,1172,1182.11,1182.11,1975100
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15-04-2020,1245.61,1280.46,1224.42,1262.47,1262.47,1671700
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17-04-2020,1288.35,1287,1259.37,1266.61,1266.61,1955800
20-04-2020,1271.1278.1261.71,1266.61,1266.61,1600000
Ln 24, Col 1 1,296 characters 100% Windows (CRLF) UTF-8

```

