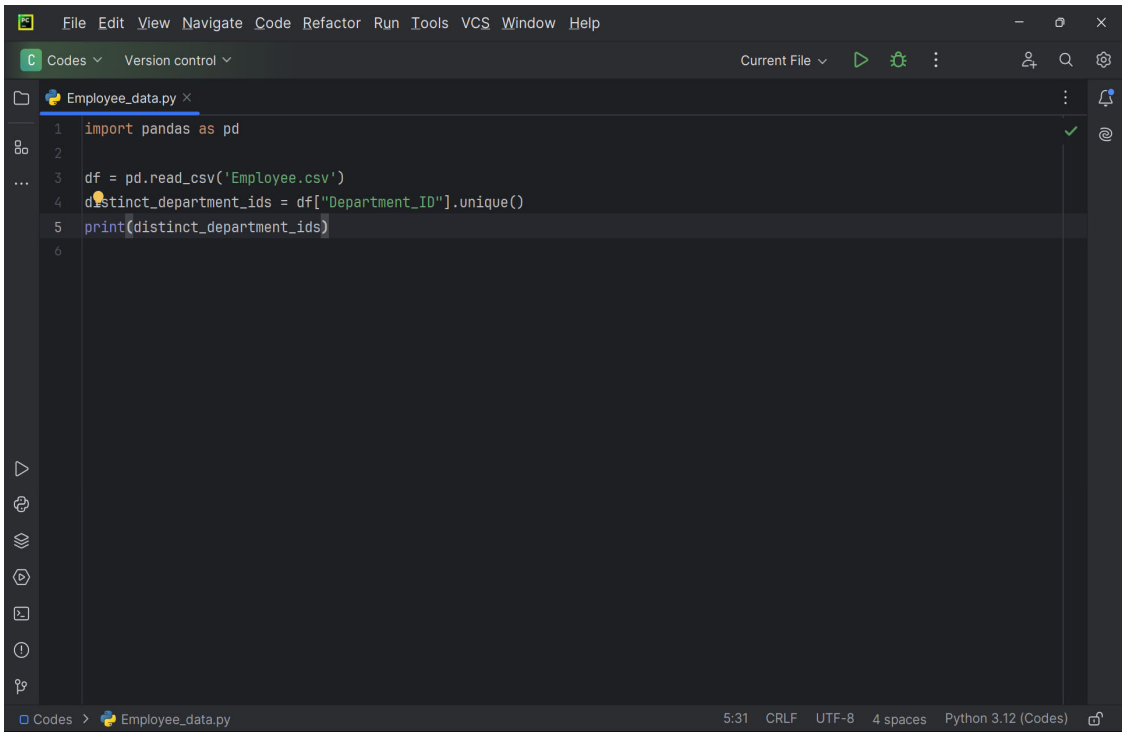
Experiment 1

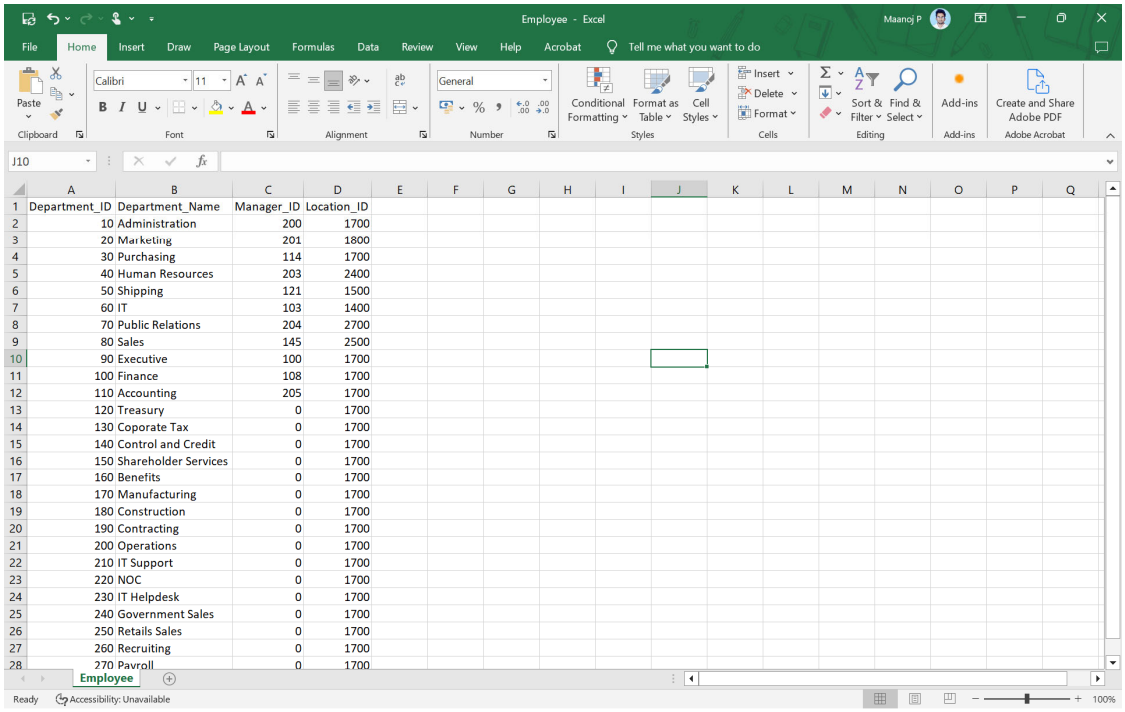
Aim:

Pandas Program to select distinct department id from employes file.

Code:

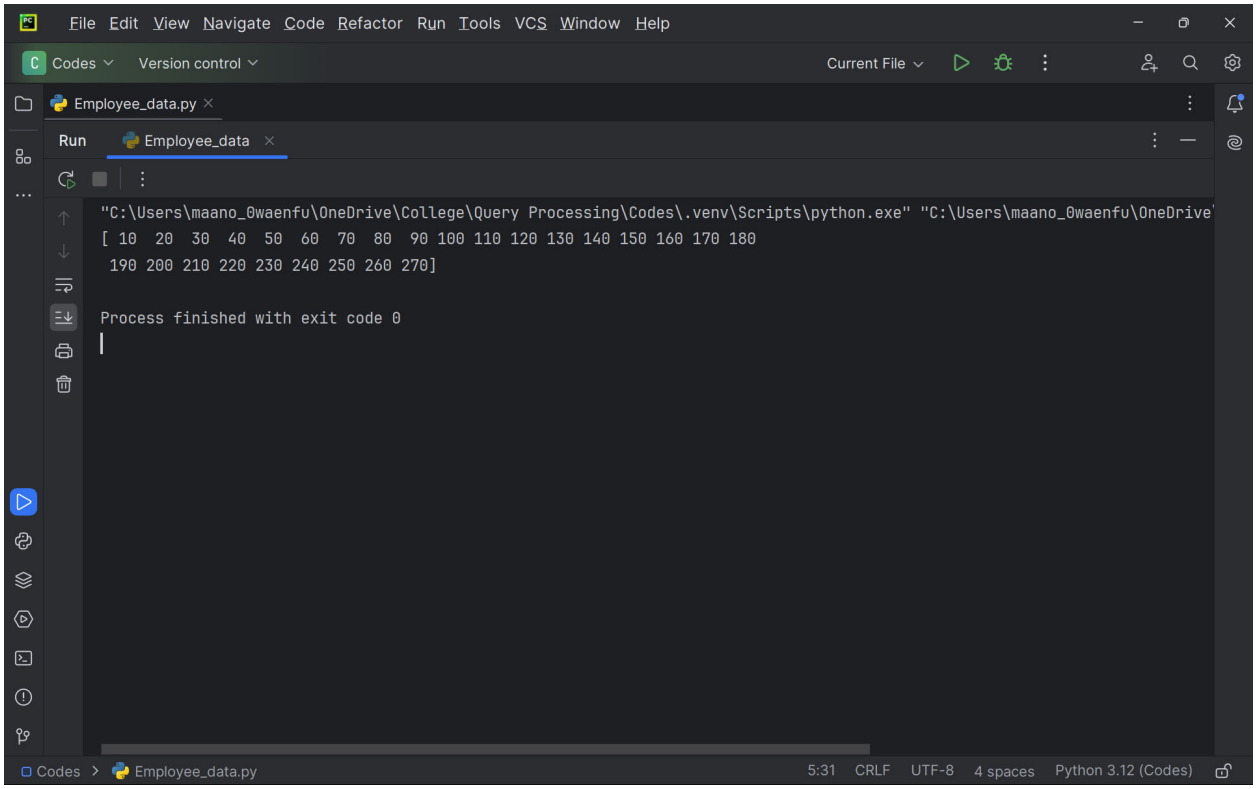


Input:



	A	B	C	D
1	Department_ID	Department_Name	Manager_ID	Location_ID
2	10	Administration	200	1700
3	20	Marketing	201	1800
4	30	Purchasing	114	1700
5	40	Human Resources	203	2400
6	50	Shipping	121	1500
7	60	IT	103	1400
8	70	Public Relations	204	2700
9	80	Sales	145	2500
10	90	Executive	100	1700
11	100	Finance	108	1700
12	110	Accounting	205	1700
13	120	Treasury	0	1700
14	130	Coporate Tax	0	1700
15	140	Control and Credit	0	1700
16	150	Shareholder Services	0	1700
17	160	Benefits	0	1700
18	170	Manufacturing	0	1700
19	180	Construction	0	1700
20	190	Contracting	0	1700
21	200	Operations	0	1700
22	210	IT Support	0	1700
23	220	NOC	0	1700
24	230	IT Helpdesk	0	1700
25	240	Government Sales	0	1700
26	250	Retails Sales	0	1700
27	260	Recruiting	0	1700
28	270	Payroll	0	1700

Output:

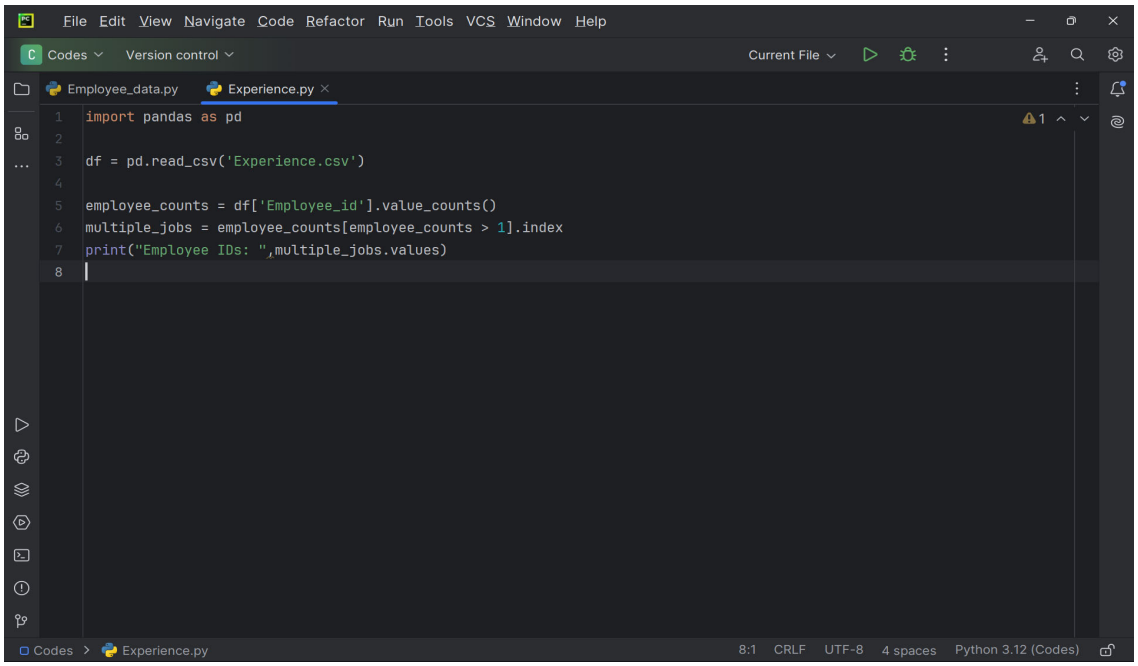

File Edit View Navigate Code Refactor Run Tools VCS Window Help
Codes
Version control
Current File
Employee_data.py
Run
Employee_data
"C:\Users\maano_0waenfu\OneDrive\College\Query Processing\Codes\.venv\Scripts\python.exe" "C:\Users\maano_0waenfu\OneDrive
[10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
 190 200 210 220 230 240 250 260 270]
Process finished with exit code 0
Codes
Employee_data.py
5:31
CRLF
UTF-8
4 spaces
Python 3.12 (Codes)

Experiment 2

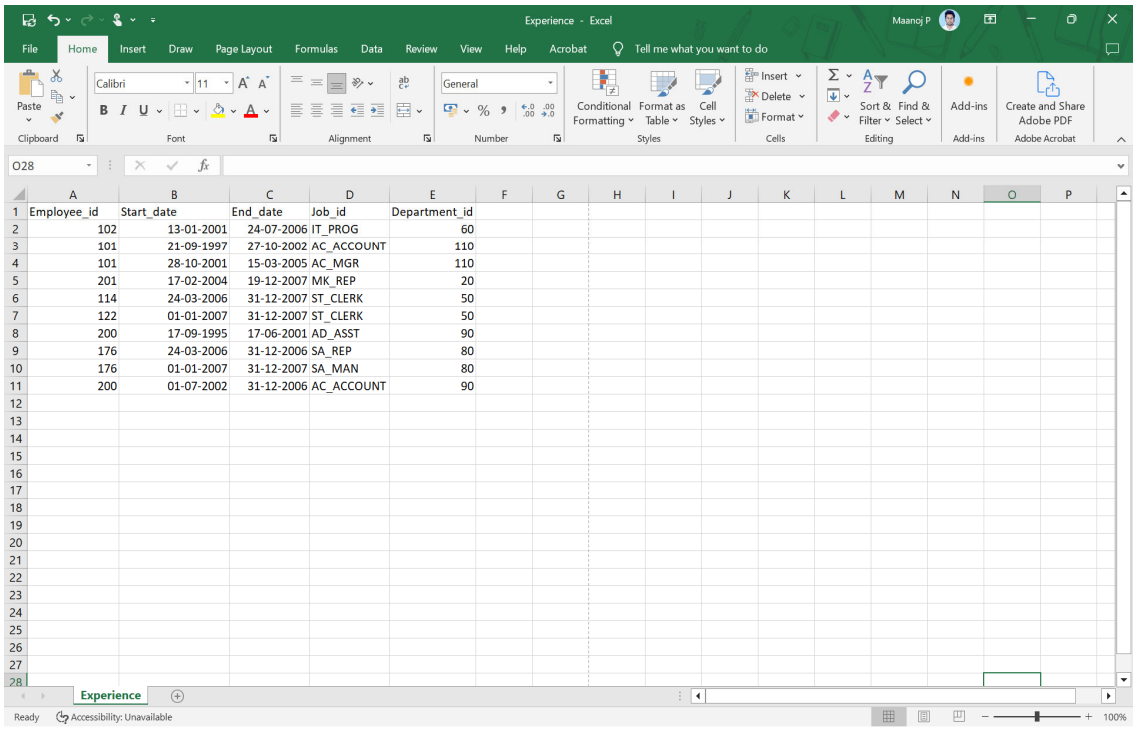
Aim:

To develop a Pandas program to display the ID for those employees who did two or more jobs in the past

Code:

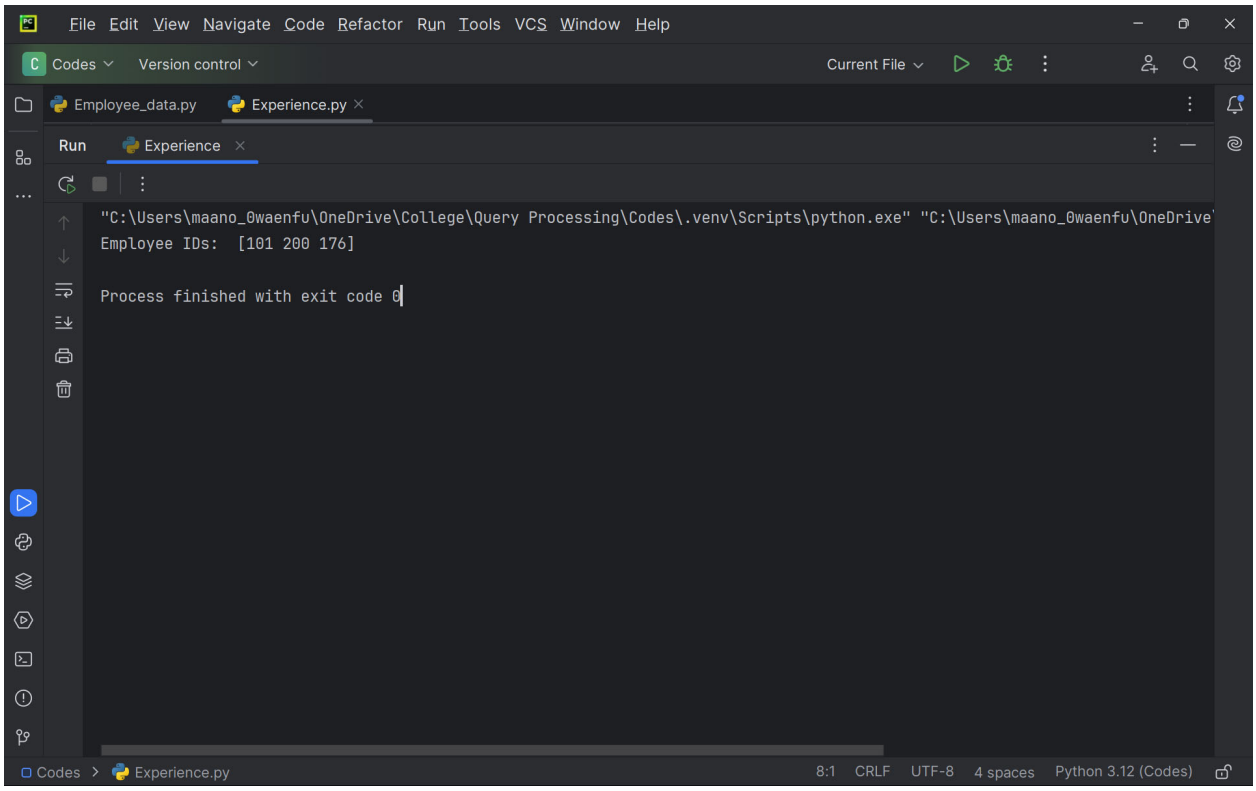


Input:



	A	B	C	D	E
1	Employee_id	Start_date	End_date	Job_id	Department_id
2	102	13-01-2001	24-07-2006	IT_PROG	60
3	101	21-09-1997	27-10-2002	AC_ACCOUNT	110
4	101	28-10-2001	15-03-2005	AC_MGR	110
5	201	17-02-2004	19-12-2007	MK_REP	20
6	114	24-03-2006	31-12-2007	ST_CLERK	50
7	122	01-01-2007	31-12-2007	ST_CLERK	50
8	200	17-09-1995	17-06-2001	AD_ASST	90
9	176	24-03-2006	31-12-2006	SA_REP	80
10	176	01-01-2007	31-12-2007	SA_MAN	80
11	200	01-07-2002	31-12-2006	AC_ACCOUNT	90

Output:

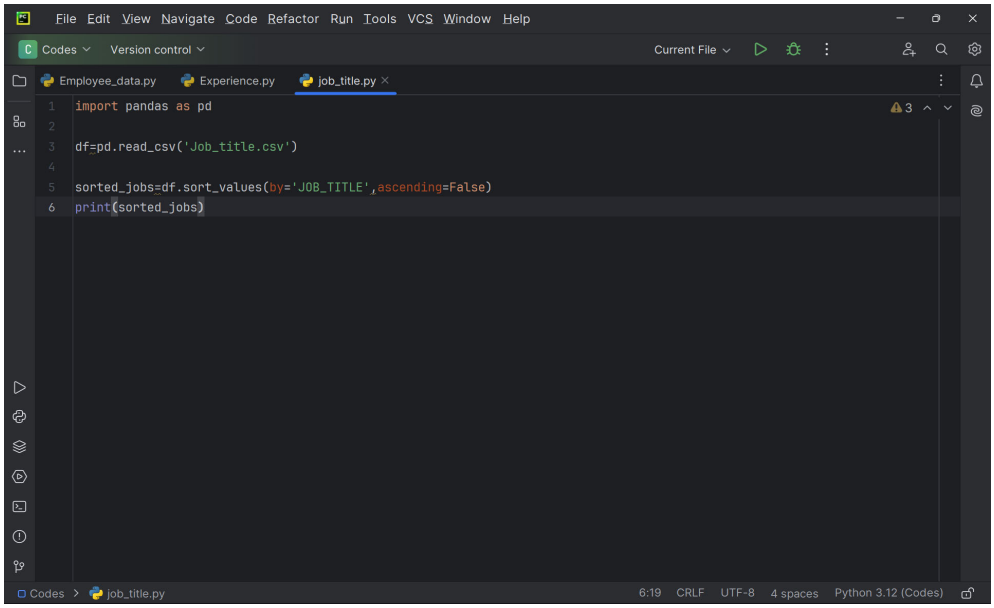

File Edit View Navigate Code Refactor Run Tools VCS Window Help
Codes
Version control
Current File
Employee_data.py
Experience.py
Run
Experience
"C:\Users\maano_0waenfu\OneDrive\College\Query Processing\Codes\.venv\Scripts\python.exe" "C:\Users\maano_0waenfu\OneDrive
Employee IDs: [101 200 176]
Process finished with exit code 0
Codes
Experience.py
8:1
CRLF
UTF-8
4 spaces
Python 3.12 (Codes)

Experiment 3

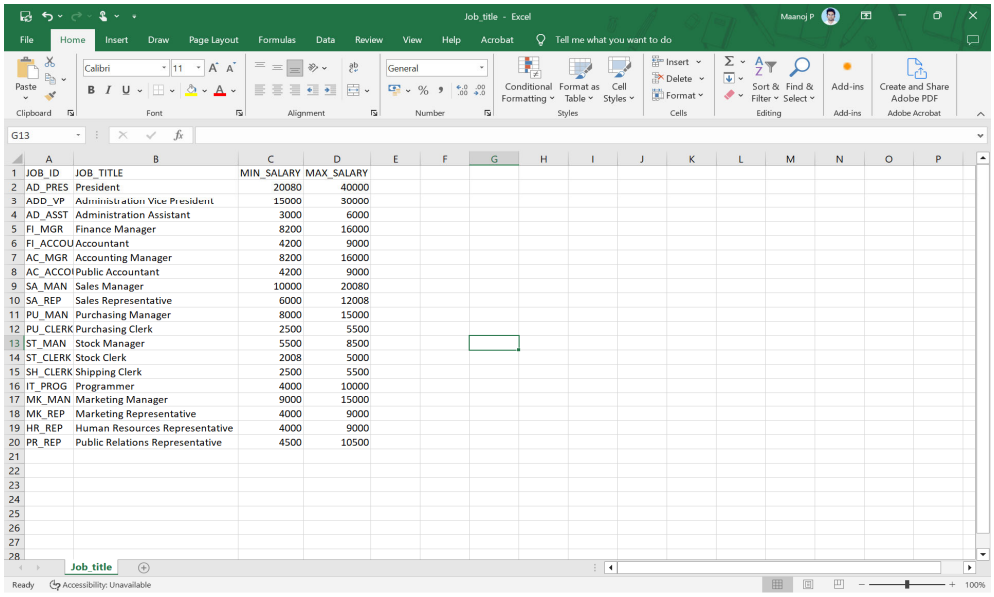
Aim:

To develop a Pandas Program to display the details of jobs in descending sequence on job title.

Code:

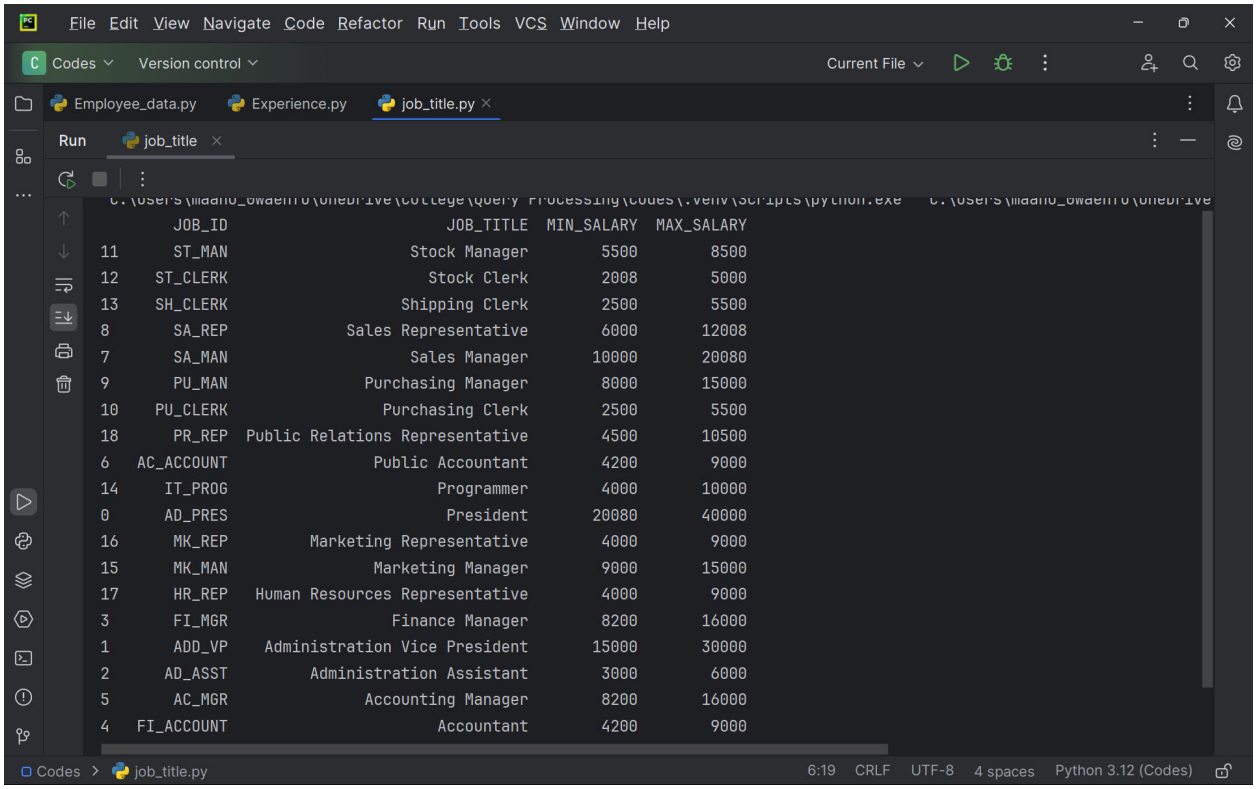


Input:



	JOB_ID	JOB_TITLE	MIN_SALARY	MAX_SALARY
1	AD_PRES	President	20080	40000
2	ADD_VP	Administration Vice President	15000	30000
3	AD_ASST	Administration Assistant	3000	6000
4	FI_MGR	Finance Manager	8200	16000
5	FI_ACCOU	Accountant	4200	9000
6	AC_MGR	Accounting Manager	8200	16000
7	AC_ACCOI	Public Accountant	4200	9000
8	SA_MAN	Sales Manager	10000	20080
9	SA_REP	Sales Representative	6000	12008
10	PU_MAN	Purchasing Manager	8000	15000
11	PU_CLERK	Purchasing Clerk	2500	5500
12	ST_MAN	Stock Manager	5500	8500
13	ST_CLERK	Stock Clerk	2008	5000
14	SH_CLERK	Shipping Clerk	2500	5500
15	IT_PROG	Programmer	4000	10000
16	MK_MAN	Marketing Manager	9000	15000
17	MK_REP	Marketing Representative	4000	9000
18	HR_REP	Human Resources Representative	4000	9000
19	PR_REP	Public Relations Representative	4500	10500

Output:

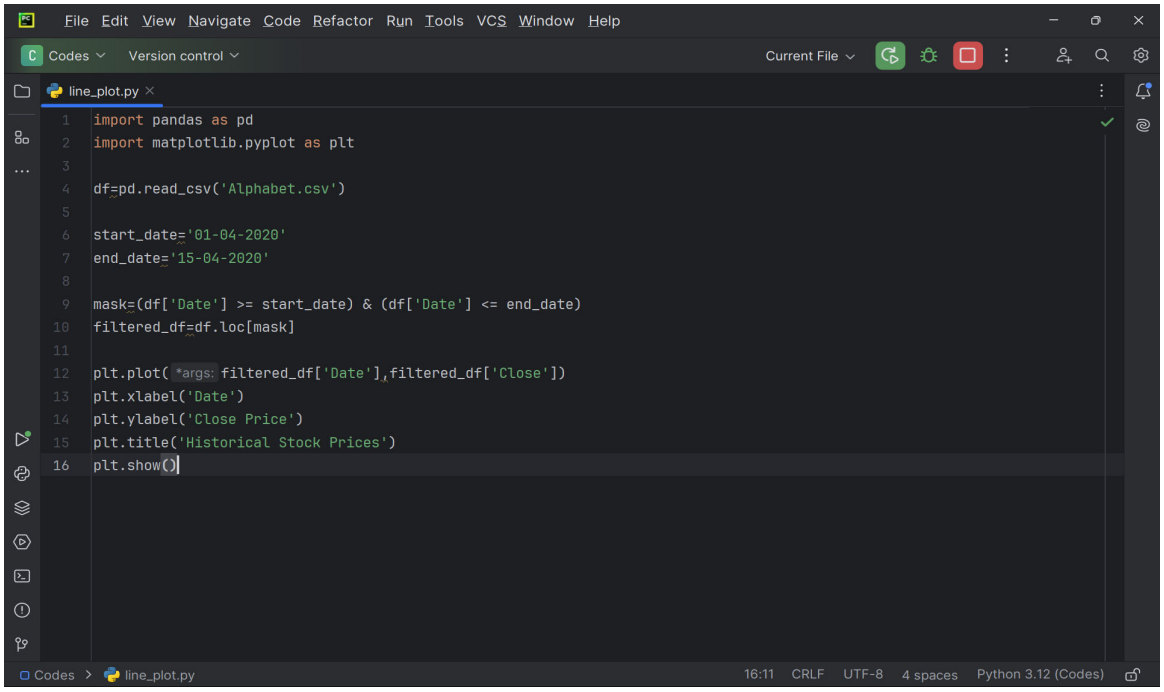

File Edit View Navigate Code Refactor Run Tools VCS Window Help
Codes
Version control
Current File
Employee_data.py
Experience.py
job_title.py
Run
job_title
JOB_ID JOB_TITLE MIN_SALARY MAX_SALARY
11 ST_MAN Stock Manager 5500 8500
12 ST_CLERK Stock Clerk 2008 5000
13 SH_CLERK Shipping Clerk 2500 5500
8 SA_REP Sales Representative 6000 12008
7 SA_MAN Sales Manager 10000 20080
9 PU_MAN Purchasing Manager 8000 15000
10 PU_CLERK Purchasing Clerk 2500 5500
18 PR_REP Public Relations Representative 4500 10500
6 AC_ACCOUNT Public Accountant 4200 9000
14 IT_PROG Programmer 4000 10000
0 AD_PRES President 20080 40000
16 MK_REP Marketing Representative 4000 9000
15 MK_MAN Marketing Manager 9000 15000
17 HR_REP Human Resources Representative 4000 9000
3 FI_MGR Finance Manager 8200 16000
1 AD_VP Administration Vice President 15000 30000
2 AD_ASST Administration Assistant 3000 6000
5 AC_MGR Accounting Manager 8200 16000
4 FI_ACCOUNT Accountant 4200 9000
Codes
job_title.py
6:19 CRLF UTF-8 4 spaces Python 3.12 (Codes)

Experiment 4

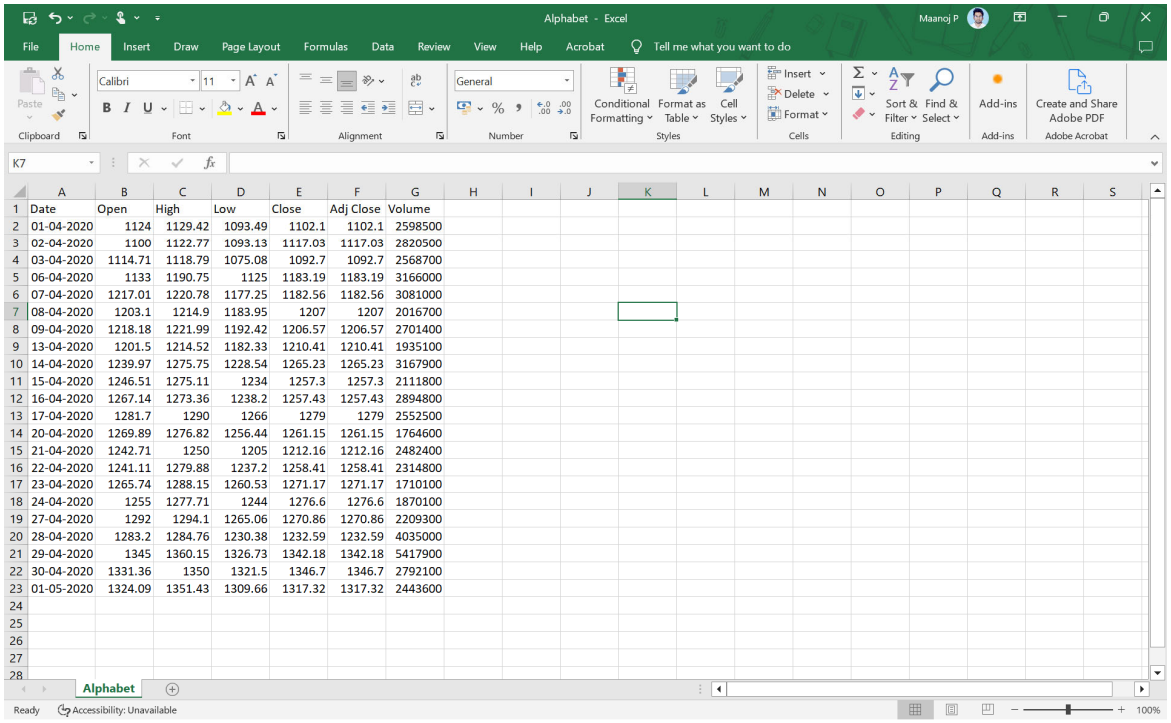
Aim:

To develop a Pandas program to create a line plot of the historical stock prices of Alphabet Inc. between two specific dates

Code:



Input:



Date	Open	High	Low	Close	Adj Close	Volume
01-04-2020	1124	1129.42	1093.49	1102.1	1102.1	2598500
02-04-2020	1100	1122.77	1093.13	1117.03	1117.03	2820500
03-04-2020	1114.71	1118.79	1075.08	1092.7	1092.7	2568700
06-04-2020	1133	1190.75	1125	1183.19	1183.19	3166000
07-04-2020	1217.01	1220.78	1177.25	1182.56	1182.56	3081000
08-04-2020	1203.1	1214.9	1183.95	1207	1207	2016700
09-04-2020	1218.18	1221.99	1192.42	1206.57	1206.57	2701400
13-04-2020	1201.5	1214.52	1182.33	1210.41	1210.41	1935100
14-04-2020	1239.97	1275.75	1228.54	1265.23	1265.23	3167900
15-04-2020	1246.51	1275.11	1234	1257.3	1257.3	2111800
16-04-2020	1267.14	1273.36	1238.2	1257.43	1257.43	2894800
17-04-2020	1281.7	1290	1266	1279	1279	2552500
20-04-2020	1269.89	1276.82	1256.44	1261.15	1261.15	1764600
21-04-2020	1242.71	1250	1205	1212.16	1212.16	2482400
22-04-2020	1241.11	1279.88	1237.2	1258.41	1258.41	2314800
23-04-2020	1265.74	1288.15	1260.53	1271.17	1271.17	1710100
24-04-2020	1255	1277.71	1244	1276.6	1276.6	1870100
27-04-2020	1292	1294.1	1265.06	1270.86	1270.86	2209300
28-04-2020	1283.2	1284.76	1230.38	1232.59	1232.59	4035000
29-04-2020	1345	1360.15	1326.73	1342.18	1342.18	5417900
30-04-2020	1331.36	1350	1321.5	1346.7	1346.7	2792100
01-05-2020	1324.09	1351.43	1309.66	1317.32	1317.32	2443600

Output:

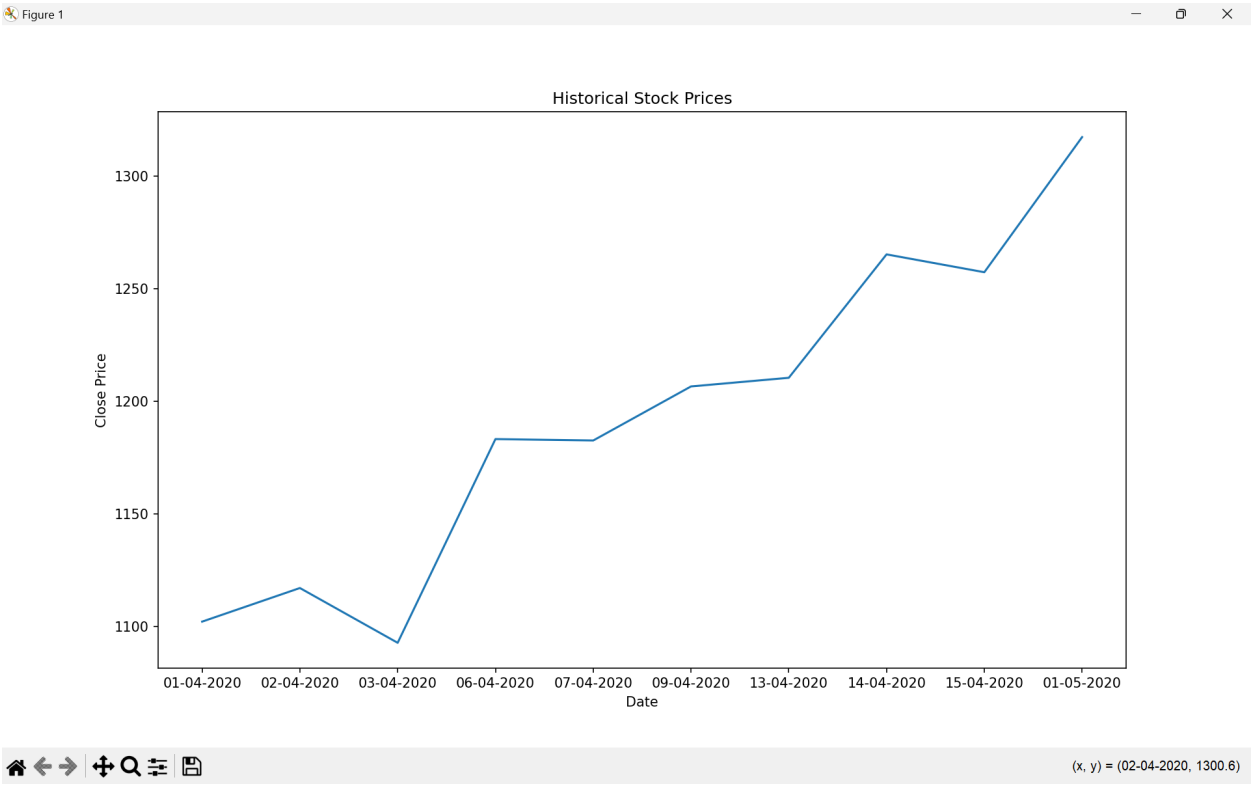


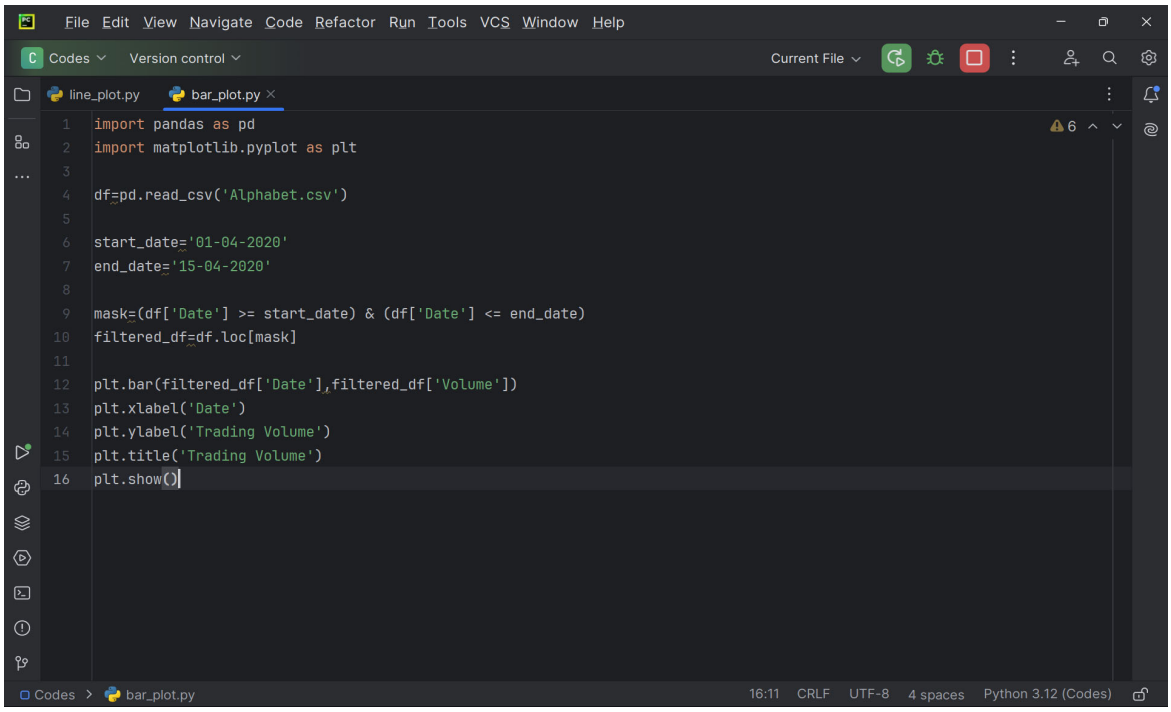
Figure 1
Historical Stock Prices
Close Price
1300
1250
1200
1150
1100
01-04-2020
02-04-2020
03-04-2020
06-04-2020
07-04-2020
09-04-2020
13-04-2020
14-04-2020
15-04-2020
01-05-2020
Date
(x, y) = (02-04-2020, 1300.6)

Experiment 5

Aim:

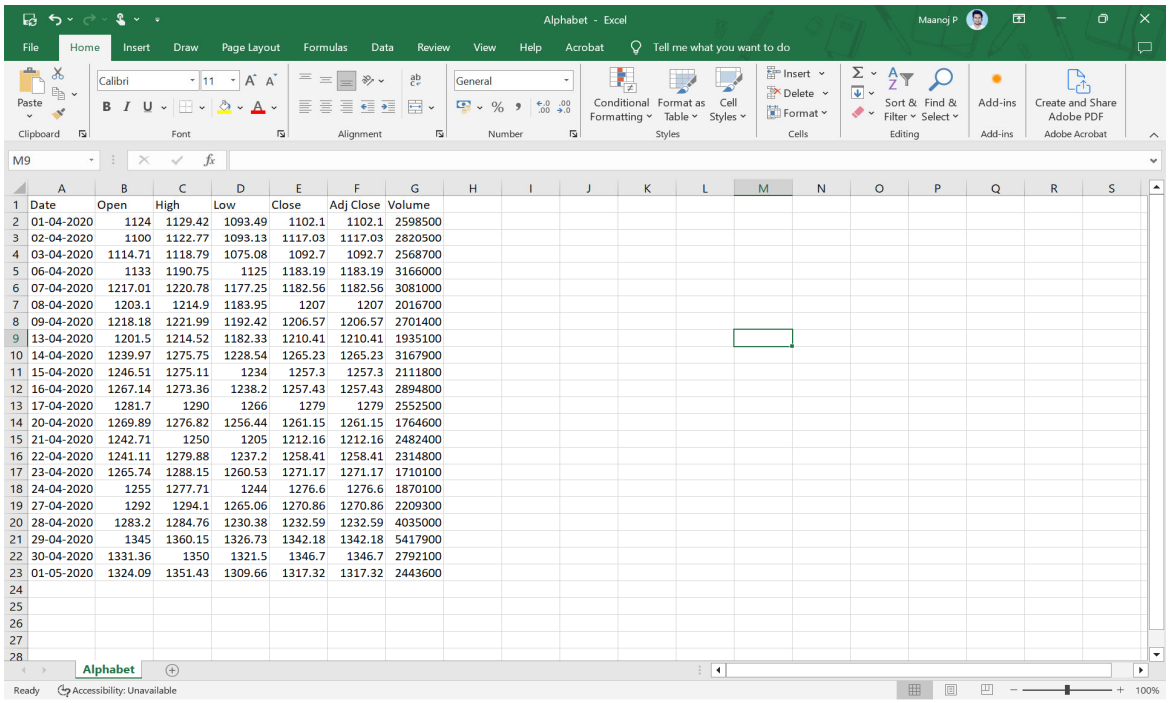
To develop a Pandas program to create a bar plot of the trading volume of Alphabet Inc. between two specific dates

Code:



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

df=pd.read_csv('Alphabet.csv')

start_date='01-04-2020'
end_date='15-04-2020'

mask=(df['Date'] >= start_date) & (df['Date'] <= end_date)
filtered_df=df.loc[mask]

plt.bar(filtered_df['Date'],filtered_df['Volume'])
plt.xlabel('Date')
plt.ylabel('Trading Volume')
plt.title('Trading Volume')
plt.show()
```

Input:



Date	Open	High	Low	Close	Adj Close	Volume
01-04-2020	1124	1129.42	1093.49	1102.1	1102.1	2598500
02-04-2020	1100	1122.77	1093.13	1117.03	1117.03	2820500
03-04-2020	1114.71	1118.79	1075.08	1092.7	1092.7	2568700
06-04-2020	1133	1190.75	1125	1183.19	1183.19	3166000
07-04-2020	1217.01	1220.78	1177.25	1182.56	1182.56	3081000
08-04-2020	1203.1	1214.9	1183.95	1207	1207	2016700
09-04-2020	1218.18	1221.99	1192.42	1206.57	1206.57	2701400
13-04-2020	1201.5	1214.52	1182.33	1210.41	1210.41	1935100
14-04-2020	1239.97	1275.75	1228.54	1265.23	1265.23	3167900
15-04-2020	1246.51	1275.11	1234	1257.3	1257.3	2111800
16-04-2020	1267.14	1273.36	1238.2	1257.43	1257.43	2894800
17-04-2020	1281.7	1290	1266	1279	1279	2552500
20-04-2020	1269.89	1276.82	1256.44	1261.15	1261.15	1764600
21-04-2020	1242.71	1250	1205	1212.16	1212.16	2482400
22-04-2020	1241.11	1279.88	1237.2	1258.41	1258.41	2314800
23-04-2020	1265.74	1288.15	1260.53	1271.17	1271.17	1710100
24-04-2020	1255	1277.71	1244	1276.6	1276.6	1870100
27-04-2020	1292	1294.1	1265.06	1270.86	1270.86	2209300
28-04-2020	1283.2	1284.76	1230.38	1232.59	1232.59	4035000
29-04-2020	1345	1360.15	1326.73	1342.18	1342.18	5417900
30-04-2020	1331.36	1350	1321.5	1346.7	1346.7	2792100
01-05-2020	1324.09	1351.43	1309.66	1317.32	1317.32	2443600

Output:

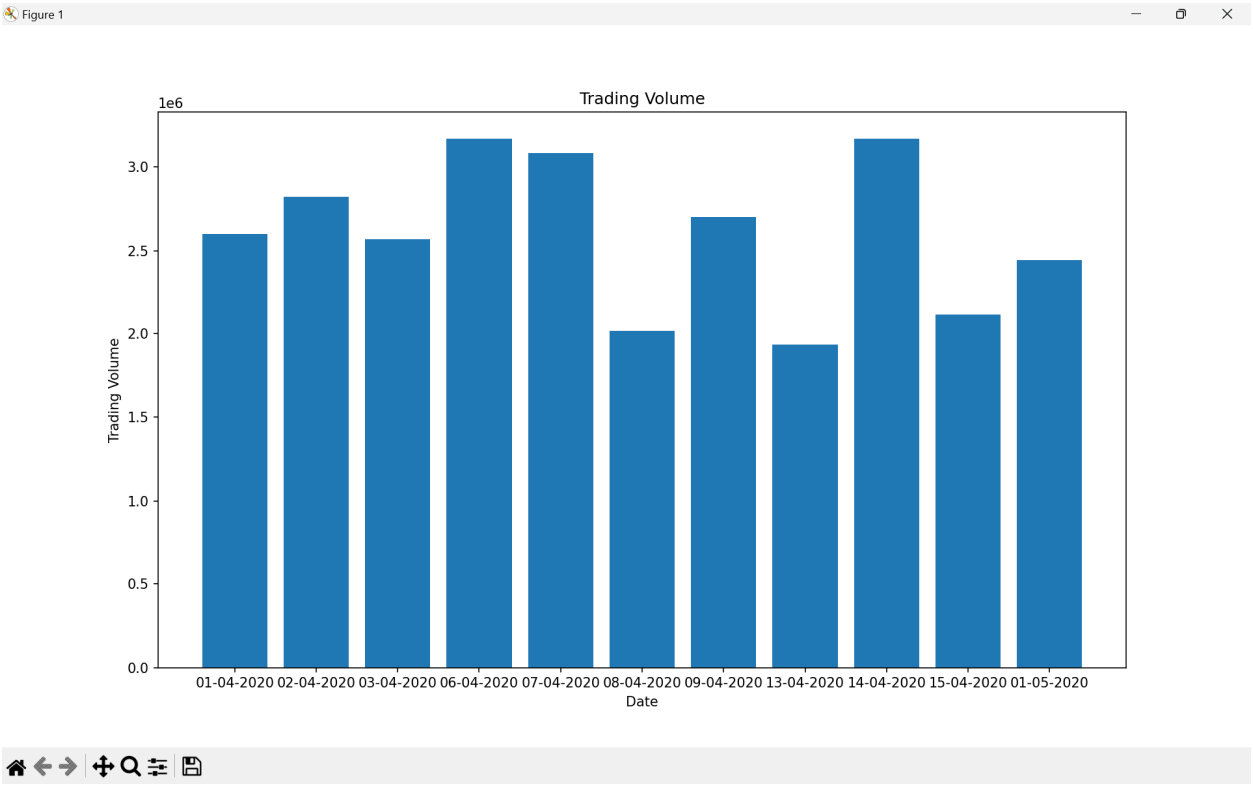


Figure 1
Trading Volume
1e6
3.0
2.5
2.0
1.5
1.0
0.5
0.0
Trading Volume
01-04-2020
02-04-2020
03-04-2020
06-04-2020
07-04-2020
08-04-2020
09-04-2020
13-04-2020
14-04-2020
15-04-2020
01-05-2020
Date