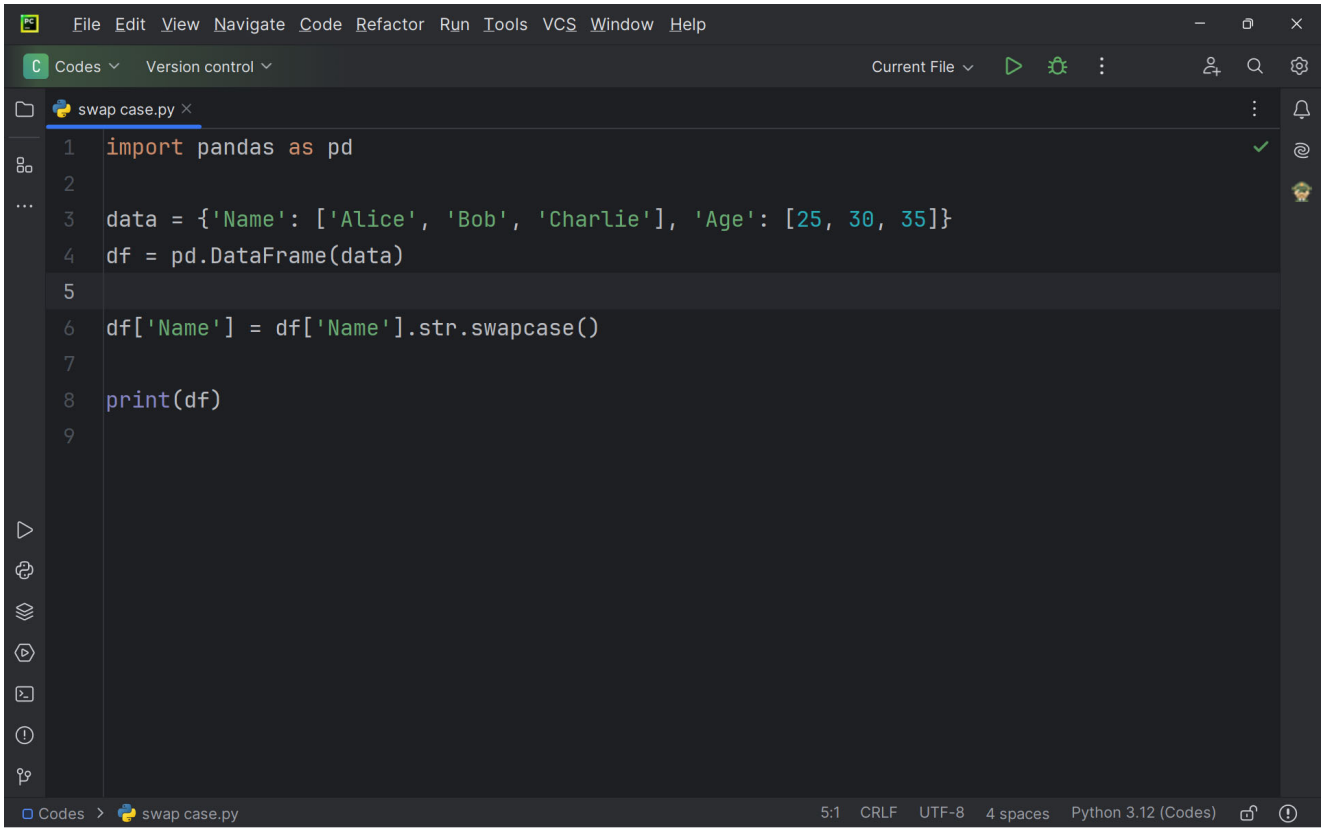
Experiment 21

Aim:

To develop a Pandas program to swap the cases of a character of a specified column.

Code:

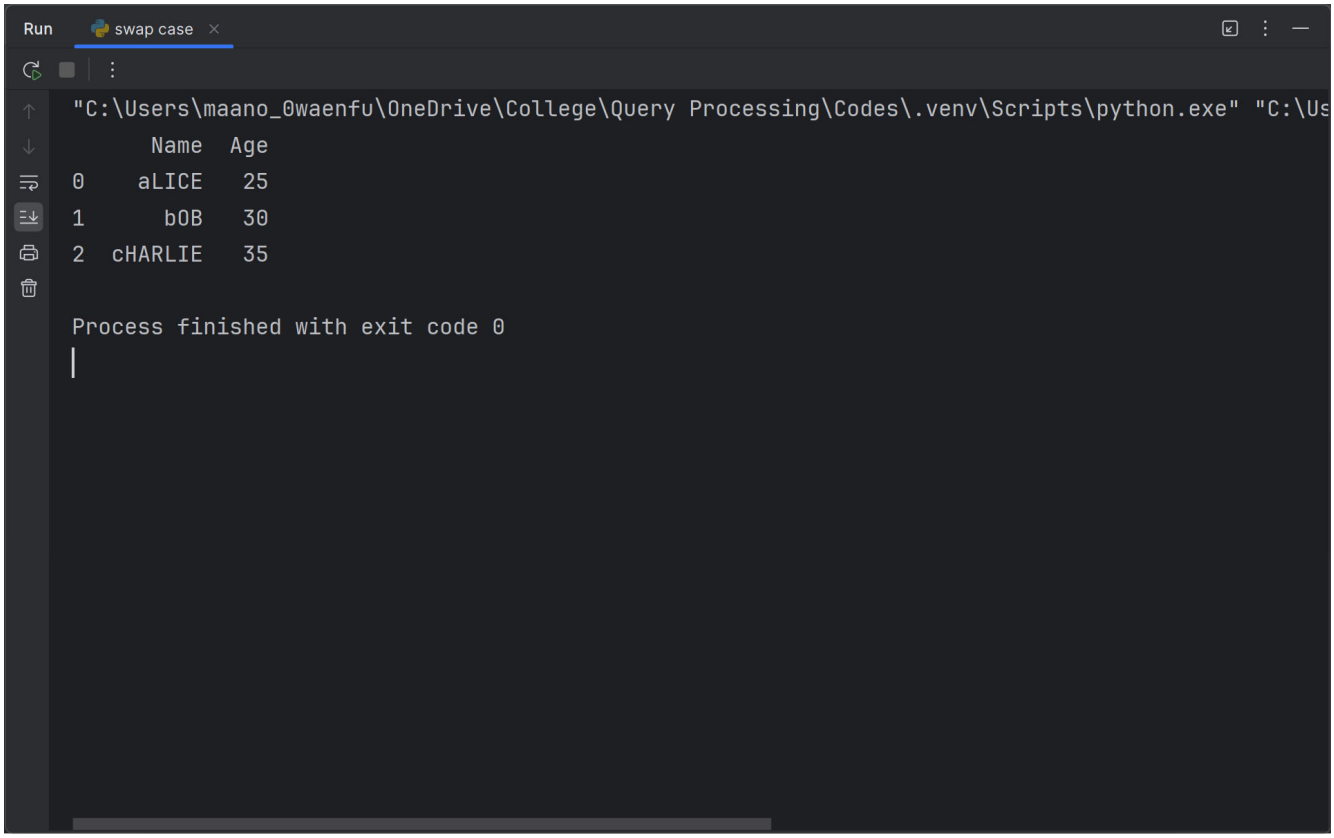


Input:

```
data = {'Name': ['Alice', 'Bob', 'Charlie'], 'Age': [25, 30, 35]}
df = pd.DataFrame(data)

df['Name'] = df['Name'].str.swapcase()
```

Output:

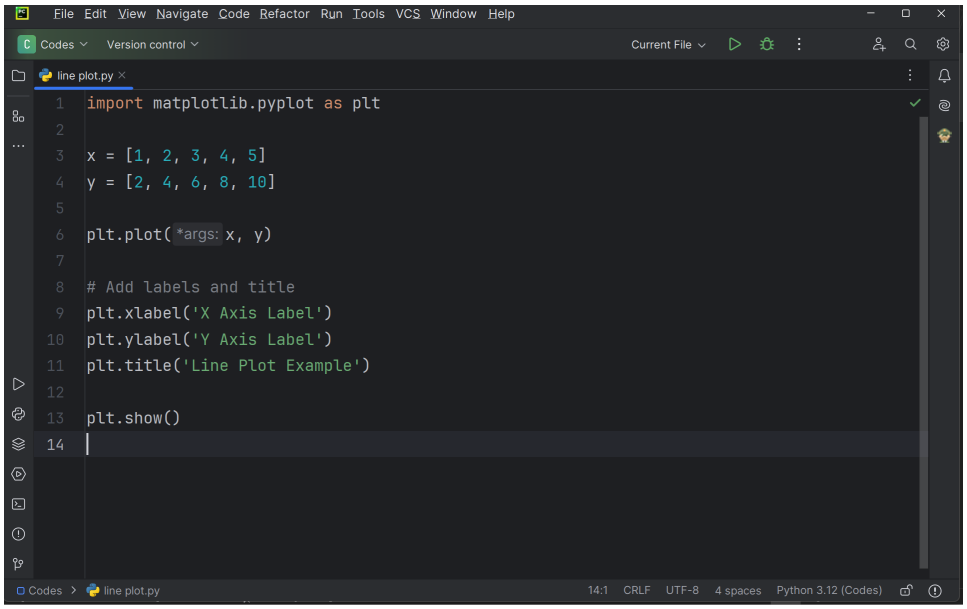

Run
swap case
"C:\Users\maano_0waenfu\OneDrive\College\Query Processing\Codes\.venv\Scripts\python.exe" "C:\Us
Name Age
0 aLICE 25
1 bOB 30
2 cHARLIE 35
Process finished with exit code 0

Experiment 22

Aim:

To develop a Pandas program to plot a straight line.

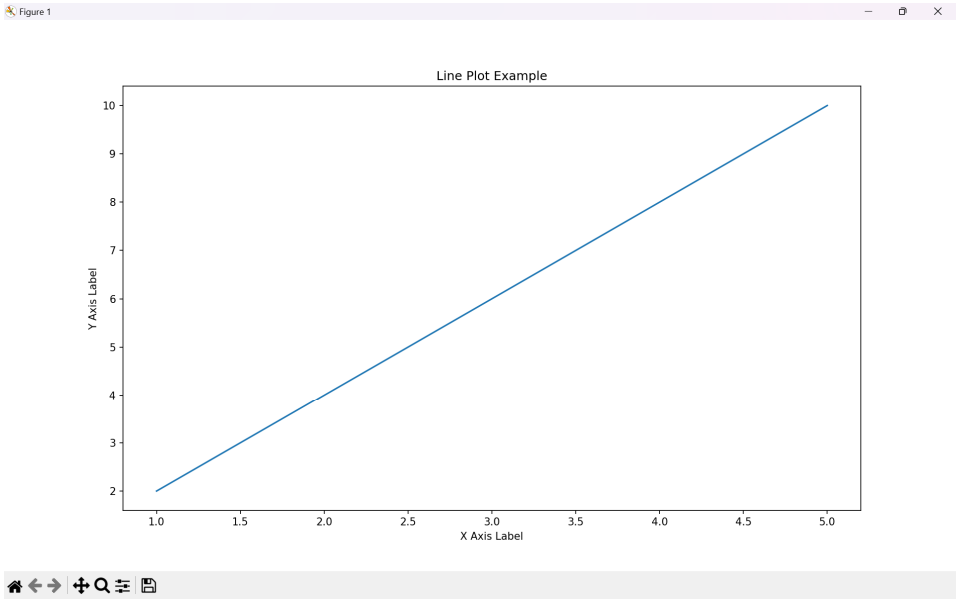
Code:



Input:

```
x = [1, 2, 3, 4, 5]
y = [2, 4, 6, 8, 10]
```

Output:

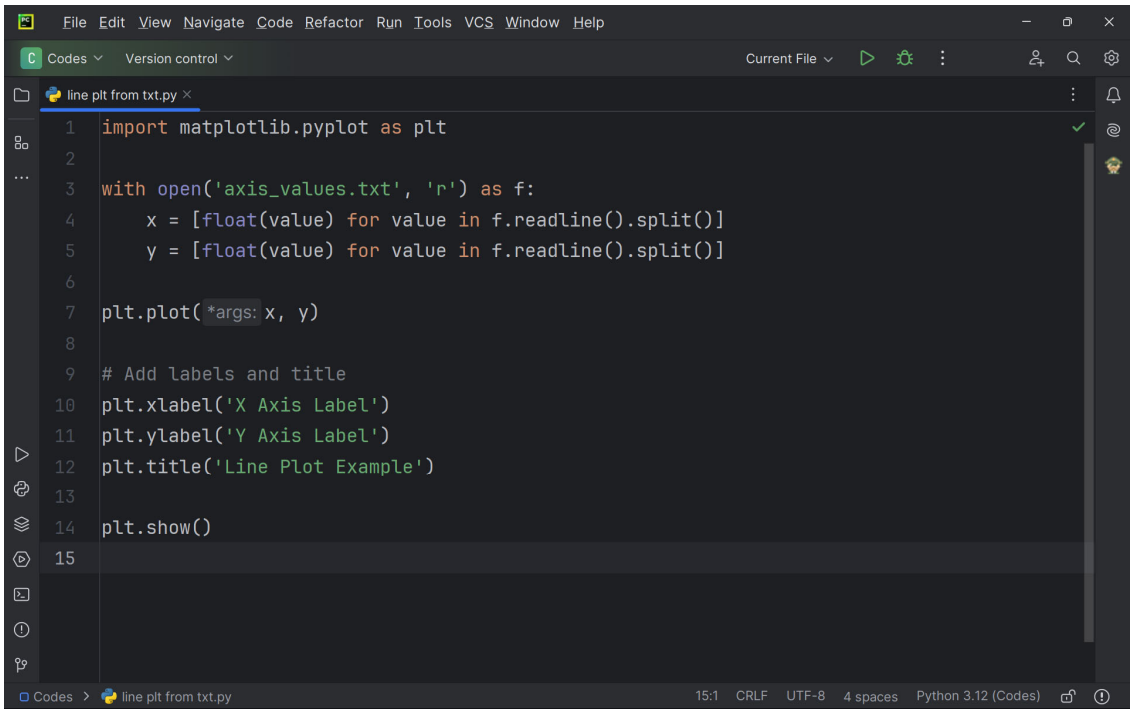


Experiment 23

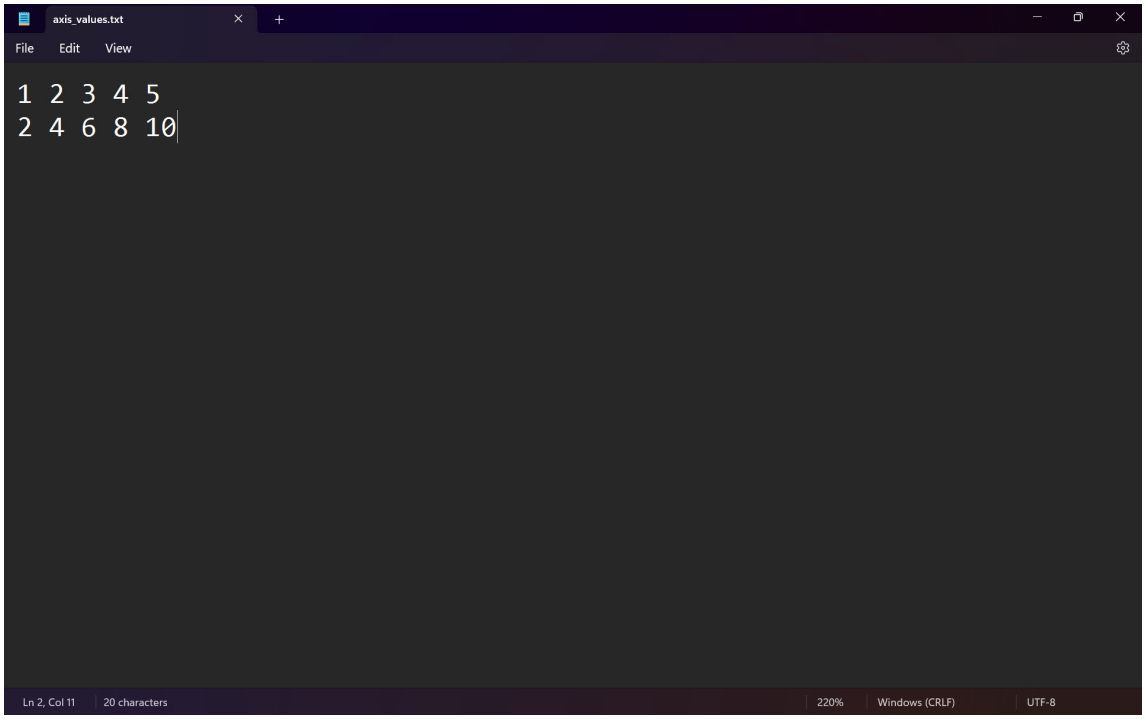
Aim:

To develop a Pandas program to plot a straight-line taking axes values in .txt file.

Code:



Input:



Output:

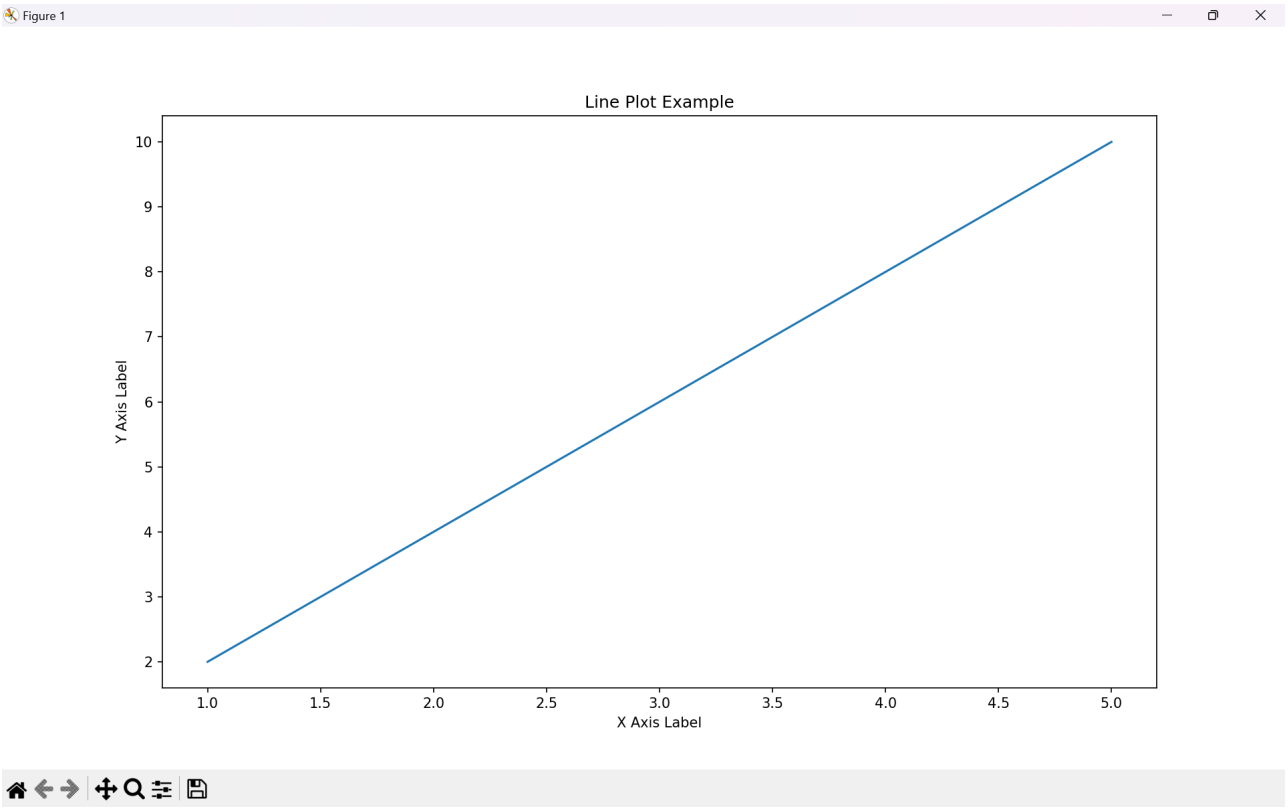


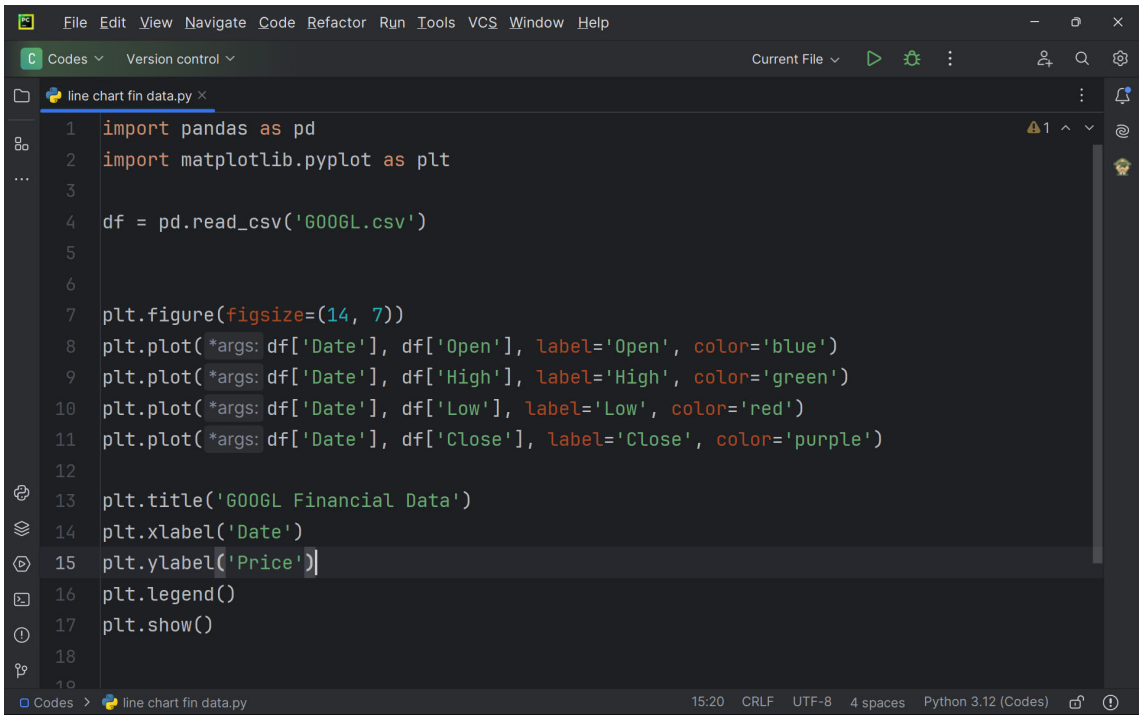
Figure 1
Line Plot Example
Y Axis Label
X Axis Label
10
9
8
7
6
5
4
3
2
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

Experiment 24

Aim:

To develop a Pandas program to plot a line chart for GOOGL financial dataset.

Code:



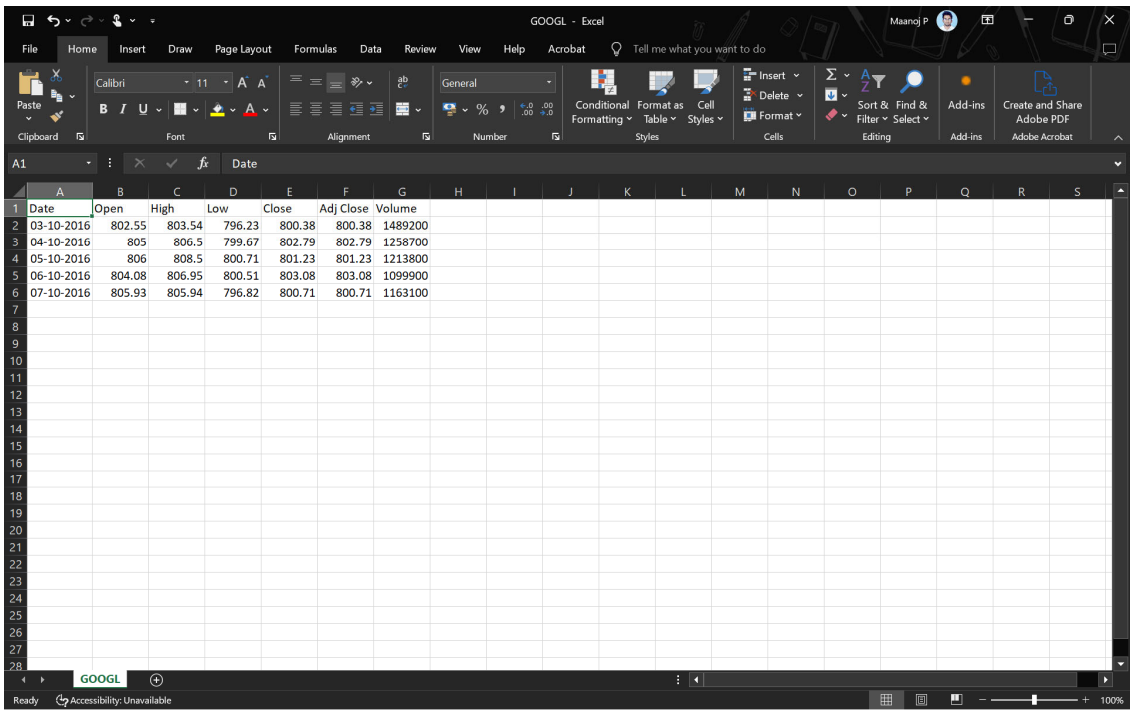
```python
import pandas as pd
import matplotlib.pyplot as plt

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


plt.figure(figsize=(14, 7))
plt.plot(*args: df['Date'], df['Open'], label='Open', color='blue')
plt.plot(*args: df['Date'], df['High'], label='High', color='green')
plt.plot(*args: df['Date'], df['Low'], label='Low', color='red')
plt.plot(*args: df['Date'], df['Close'], label='Close', color='purple')

plt.title('GOOGL Financial Data')
plt.xlabel('Date')
plt.ylabel('Price')
plt.legend()
plt.show()
```

Input:



Date	Open	High	Low	Close	Adj Close	Volume
03-10-2016	802.55	803.54	796.23	800.38	800.38	1489200
04-10-2016	805	806.5	799.67	802.79	802.79	1258700
05-10-2016	806	808.5	800.71	801.23	801.23	1213800
06-10-2016	804.08	806.95	800.51	803.08	803.08	1099900
07-10-2016	805.93	805.94	796.82	800.71	800.71	1163100

Output:

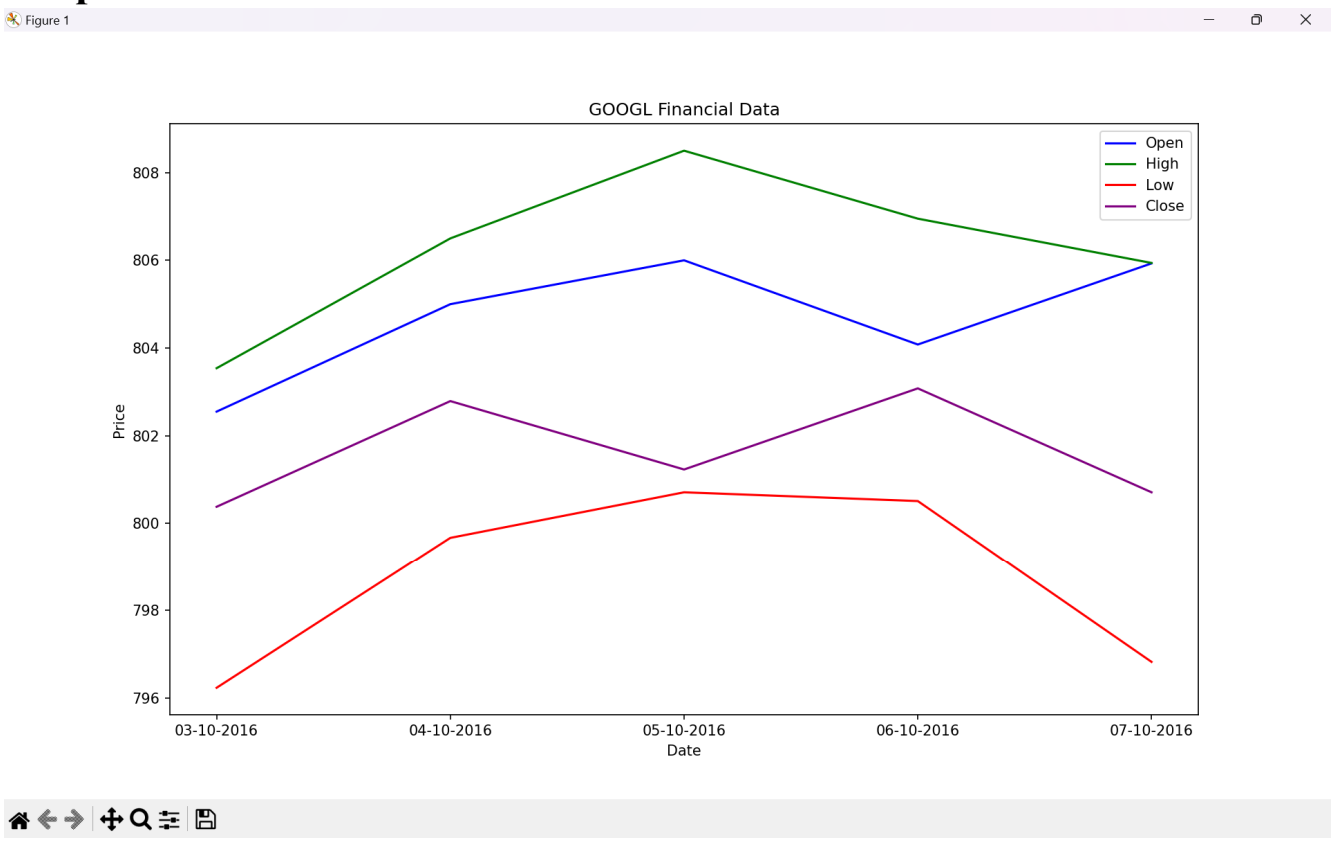


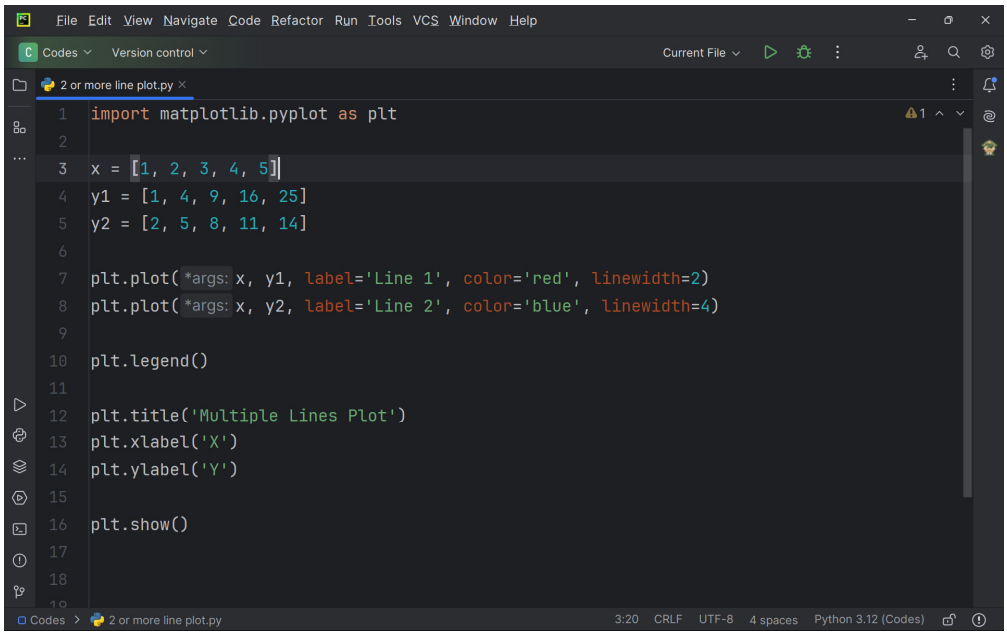
Figure 1
GOOGL Financial Data
Open
High
Low
Close
Price
808
806
804
802
800
798
796
03-10-2016
04-10-2016
05-10-2016
06-10-2016
07-10-2016
Date

Experiment 25

Aim:

To develop a Pandas program to plot a line chart with 2 or more values

Code:



```
import matplotlib.pyplot as plt

x = [1, 2, 3, 4, 5]
y1 = [1, 4, 9, 16, 25]
y2 = [2, 5, 8, 11, 14]

plt.plot(*args: x, y1, label='Line 1', color='red', linewidth=2)
plt.plot(*args: x, y2, label='Line 2', color='blue', linewidth=4)

plt.legend()

plt.title('Multiple Lines Plot')
plt.xlabel('X')
plt.ylabel('Y')

plt.show()
```

Input:

```
x = [1, 2, 3, 4, 5]
y1 = [1, 4, 9, 16, 25]
```

Output: