

TASK-3

Data visualization with matplotlib

Create a bar chart and a line chart using Matplotlib to visualize data from a Pandas DataFrame. Customize the charts with labels, titles, and legends.

1) Import matplotlib and pandas library

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

1. Create a Sample DataFrame

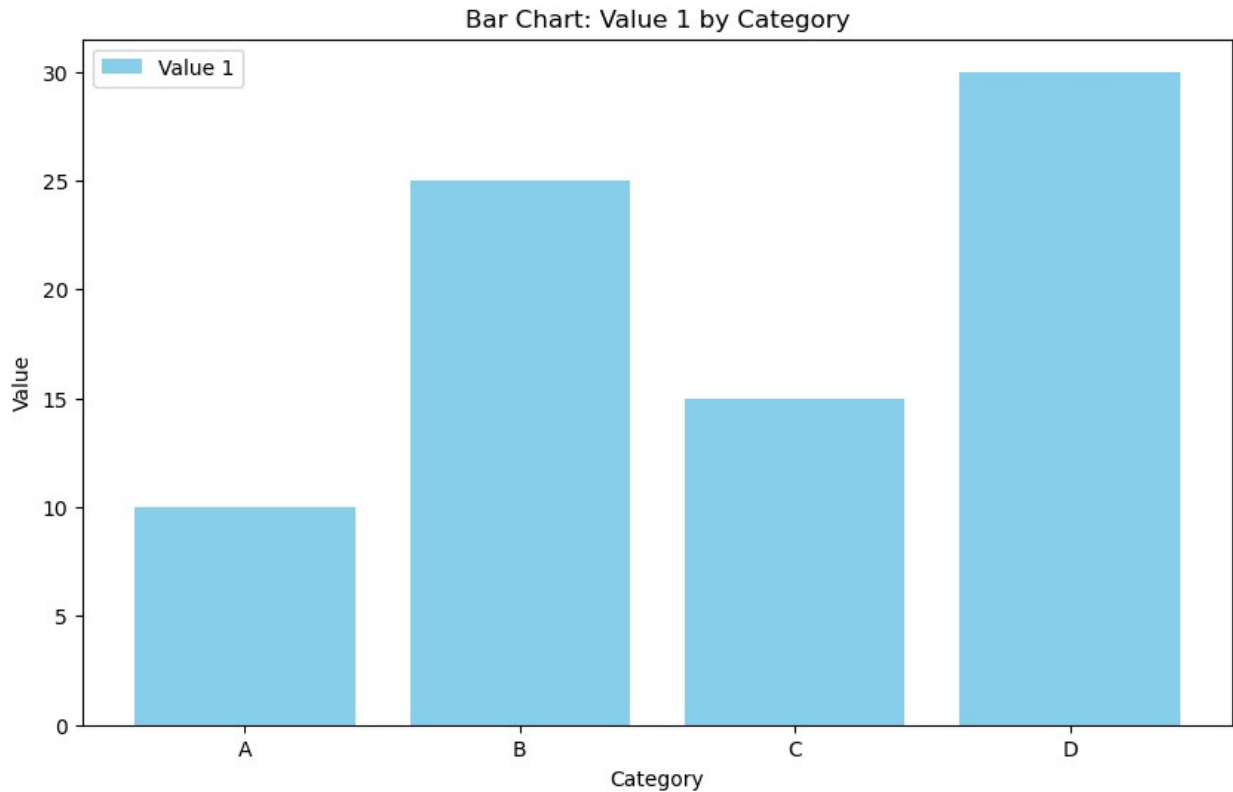
```
import pandas as pd
data = {'Category': ['A', 'B', 'C', 'D'],
        'Value1': [10, 25, 15, 30],
        'Value2': [5, 12, 8, 18]}
df = pd.DataFrame(data)
```

df

	Category	Value1	Value2
0	A	10	5
1	B	25	12
2	C	15	8
3	D	30	18

2. Create a Bar Chart

```
plt.figure(figsize=(10, 6))
plt.bar(df['Category'], df['Value1'], color='skyblue', label='Value 1')
plt.xlabel('Category')
plt.ylabel('Value')
plt.title('Bar Chart: Value 1 by Category')
plt.legend()
plt.show()
```



3. Create a Line Chart

```
plt.figure(figsize=(10, 6))
plt.plot(df['Category'], df['Value2'], color='red', marker='o',
label='Value 2')
plt.xlabel('Category')
plt.ylabel('Value')
plt.title('Line Chart: Value 2 by Category')
plt.legend()
plt.grid(True)
plt.show()
```

