

**LAPORAN PRAKTIKUM
PRAKTIK PEMROGRAMAN PYTHON**

**PRAKTIKUM
DATA VISUALITATION**



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**PS D-III TEKNIK INFORMATIKA
SEKOLAH VOKASI
UNIVERSITAS SEBELAS MARET
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HASIL DAN PEMBAHASAN

INPUT

```
import pandas as pd

# reading the database
data = pd.read_csv("Data Sales3.csv", delimiter = ";")

# printing the top 10 rows
display(data.head(10))
```

1. Grafik Scatter Plot

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

# reading the database
data = pd.read_csv("Data Sales3.csv", delimiter = ";")

# Scatter plot w day against tip
plt.scatter(data['Category'], data['Quantity'])

# Adding Title to the plot
plt.title("Test")

# Setting the X and Y labels
plt.xlabel('Category')
plt.ylabel('Quantity')

# Save the plot as a PNG file
plt.savefig('scatter_plot.png', dpi=300, bbox_inches='tight')

plt.show()
```

[2]

2. Grafik Line Plot

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

# reading the database
data = pd.read_csv("Data Sales3.csv", delimiter = ";")

# Scatter plot w day against tip
plt.plot(data['Category'])
plt.plot(data['Quantity'])

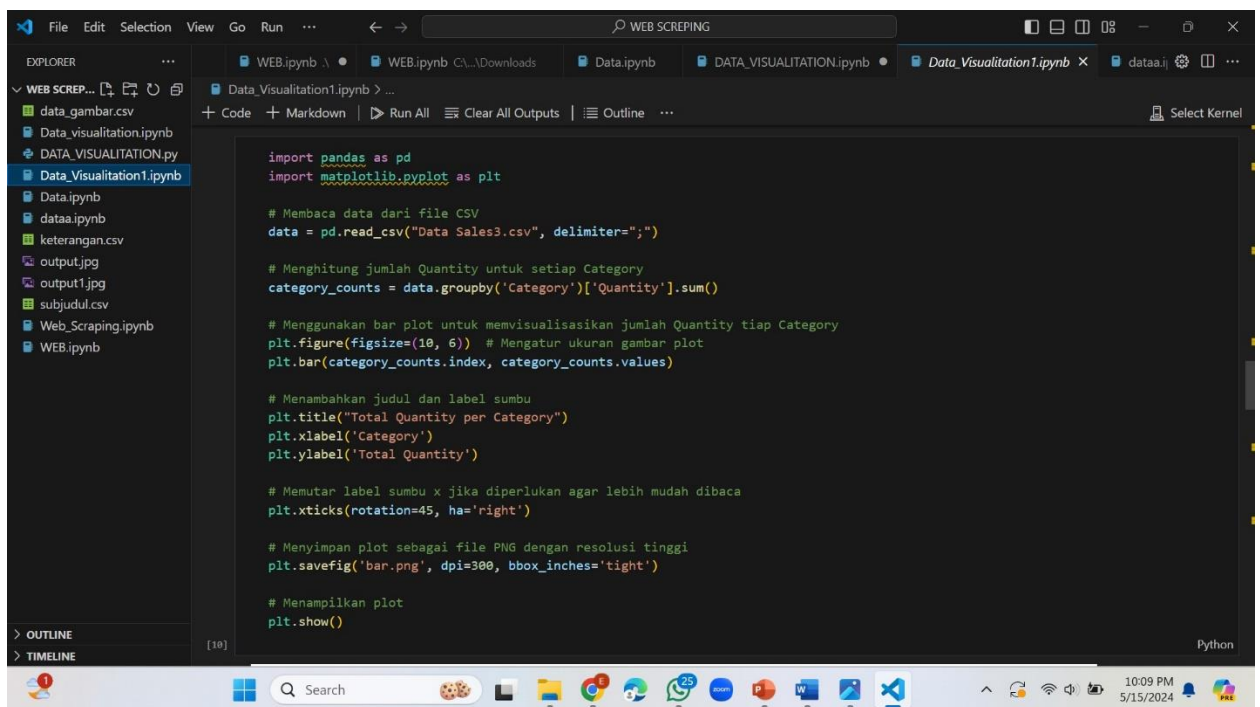
# Adding Title to the plot
plt.title("Line Plot")

# Setting the X and Y labels
plt.xlabel('Category')
plt.ylabel('Quantity')

# Save the plot as a PNG file
plt.savefig('line.png', dpi=300, bbox_inches='tight')

plt.show()
```

3. Grafik Bar Chart



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

# Membaca data dari file CSV
data = pd.read_csv("Data Sales3.csv", delimiter=";")

# Menghitung jumlah Quantity untuk setiap Category
category_counts = data.groupby('Category')['Quantity'].sum()

# Menggunakan bar plot untuk memvisualisasikan jumlah Quantity tiap Category
plt.figure(figsize=(10, 6)) # Mengatur ukuran gambar plot
plt.bar(category_counts.index, category_counts.values)

# Menambahkan judul dan label sumbu
plt.title("Total Quantity per Category")
plt.xlabel('Category')
plt.ylabel('Total Quantity')

# Memutar label sumbu x jika diperlukan agar lebih mudah dibaca
plt.xticks(rotation=45, ha='right')

# Menyimpan plot sebagai file PNG dengan resolusi tinggi
plt.savefig('bar.png', dpi=300, bbox_inches='tight')

# Menampilkan plot
plt.show()
```

4. Grafik Histogram

```

import pandas as pd
import matplotlib.pyplot as plt

# reading the database
data = pd.read_csv("Data Sales3.csv", delimiter = ";")

# Scatter plot w day against tip
plt.hist(data['Category'])

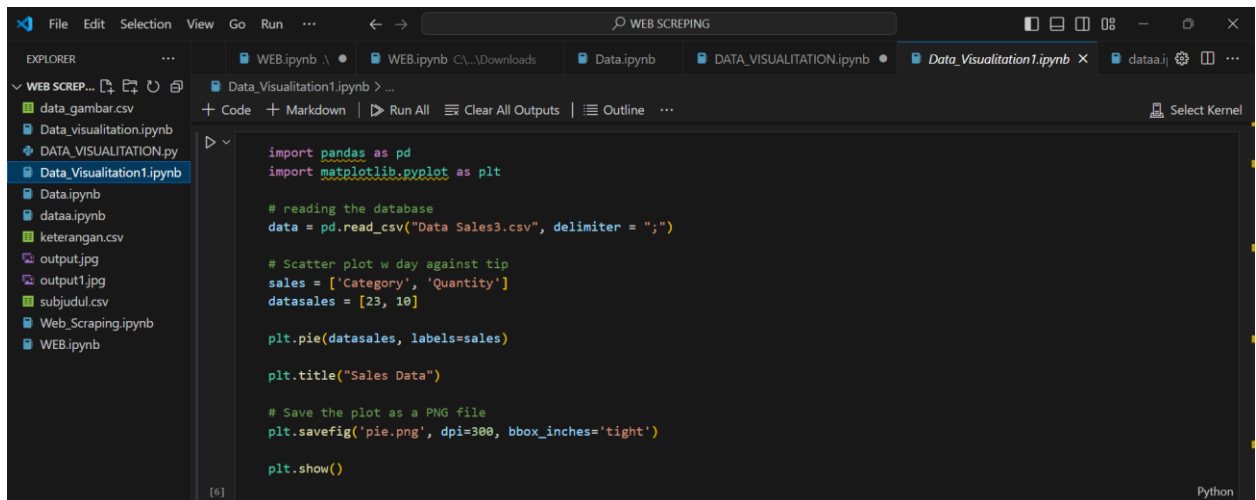
# Adding Title to the plot
plt.title("Histogram")

# Save the plot as a PNG file
plt.savefig('histogram.png', dpi=300, bbox_inches='tight')

plt.show()

```

5. Grafik Pie Chart



```

import pandas as pd
import matplotlib.pyplot as plt

# reading the database
data = pd.read_csv("Data Sales3.csv", delimiter = ";")

# Scatter plot w day against tip
sales = ['Category', 'Quantity']
datasales = [23, 10]

plt.pie(datasales, labels=sales)

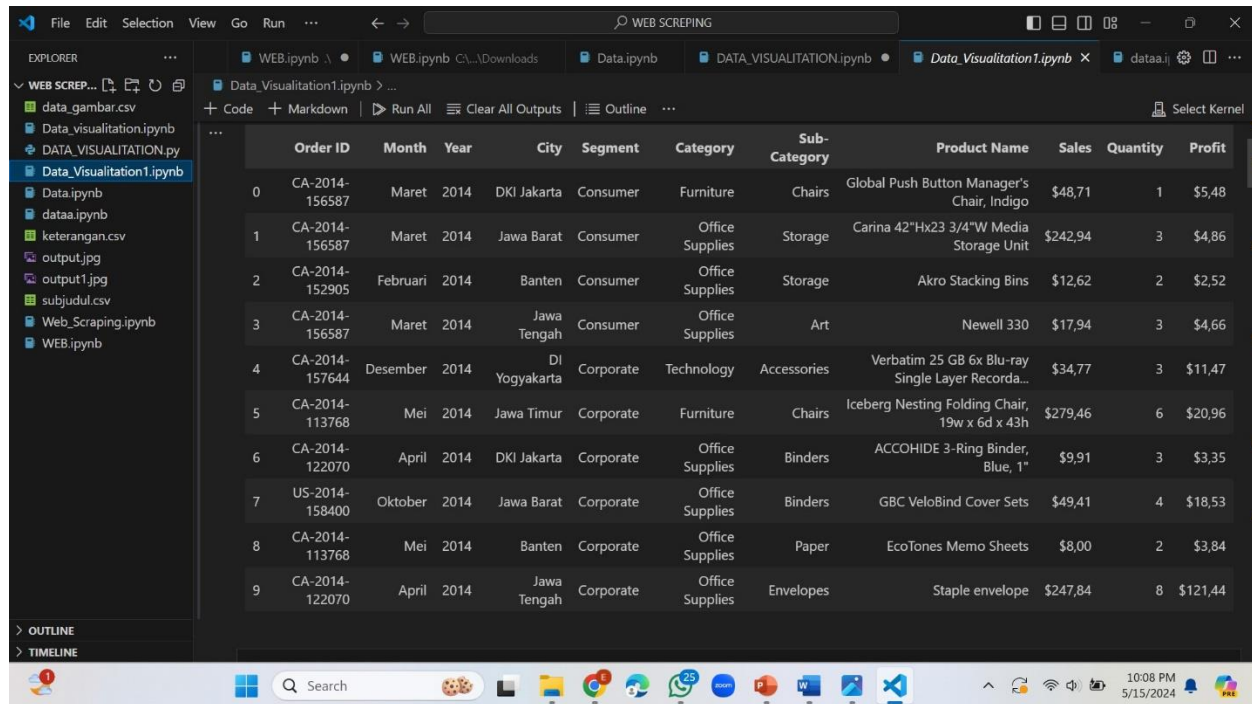
plt.title("Sales Data")

# Save the plot as a PNG file
plt.savefig('pie.png', dpi=300, bbox_inches='tight')

plt.show()

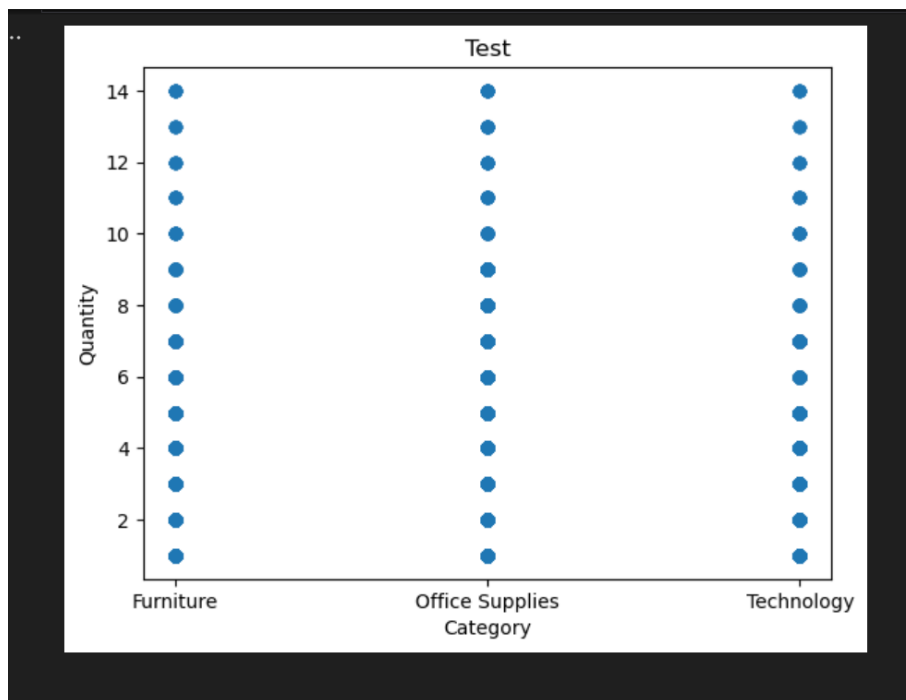
```

OUTPUT

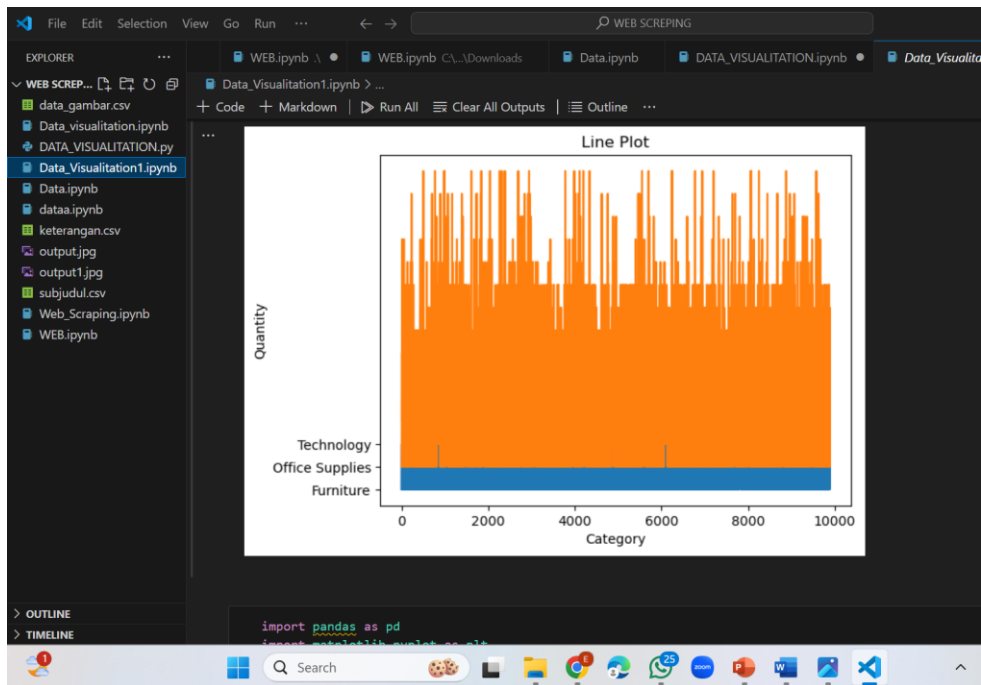


| | Order ID | Month | Year | City | Segment | Category | Sub-Category | Product Name | Sales | Quantity | Profit |
|---|----------------|----------|------|---------------|-----------|-----------------|--------------|---|----------|----------|----------|
| 0 | CA-2014-156587 | Maret | 2014 | DKI Jakarta | Consumer | Furniture | Chairs | Global Push Button Manager's Chair, Indigo | \$48,71 | 1 | \$5,48 |
| 1 | CA-2014-156587 | Maret | 2014 | Jawa Barat | Consumer | Office Supplies | Storage | Carina 42"Hx23 3/4"W Media Storage Unit | \$242,94 | 3 | \$4,86 |
| 2 | CA-2014-152905 | Februari | 2014 | Banten | Consumer | Office Supplies | Storage | Akro Stacking Bins | \$12,62 | 2 | \$2,52 |
| 3 | CA-2014-156587 | Maret | 2014 | Jawa Tengah | Consumer | Office Supplies | Art | Newell 330 | \$17,94 | 3 | \$4,66 |
| 4 | CA-2014-157644 | Desember | 2014 | DI Yogyakarta | Corporate | Technology | Accessories | Verbatim 25 GB 6x Blu-ray Single Layer Recordable | \$34,77 | 3 | \$11,47 |
| 5 | CA-2014-113768 | Mei | 2014 | Jawa Timur | Corporate | Furniture | Chairs | Iceberg Nesting Folding Chair, 19w x 6d x 43h | \$279,46 | 6 | \$20,96 |
| 6 | CA-2014-122070 | April | 2014 | DKI Jakarta | Corporate | Office Supplies | Binders | ACCOHIDE 3-Ring Binder, Blue, 1" | \$9,91 | 3 | \$3,35 |
| 7 | US-2014-158400 | Oktober | 2014 | Jawa Barat | Corporate | Office Supplies | Binders | GBC VeloBind Cover Sets | \$49,41 | 4 | \$18,53 |
| 8 | CA-2014-113768 | Mei | 2014 | Banten | Corporate | Office Supplies | Paper | EcoTones Memo Sheets | \$8,00 | 2 | \$3,84 |
| 9 | CA-2014-122070 | April | 2014 | Jawa Tengah | Corporate | Office Supplies | Envelopes | Staple envelope | \$247,84 | 8 | \$121,44 |

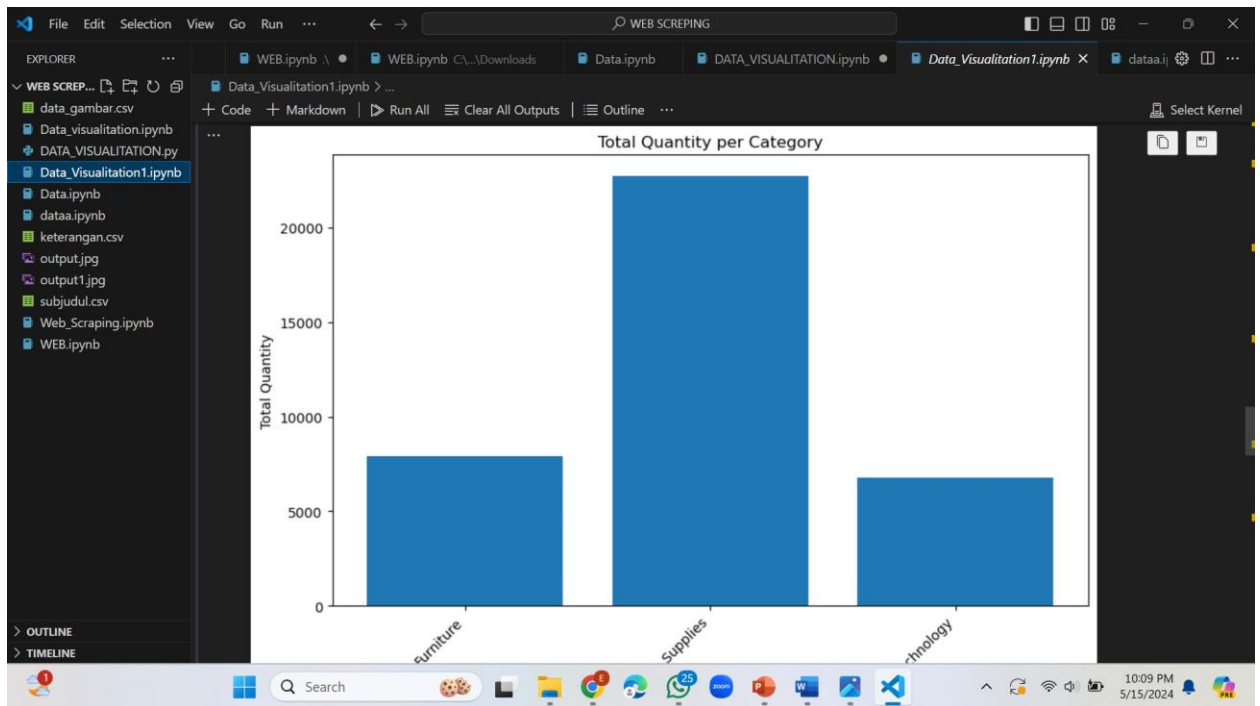
1. Grafik Scatter Plot



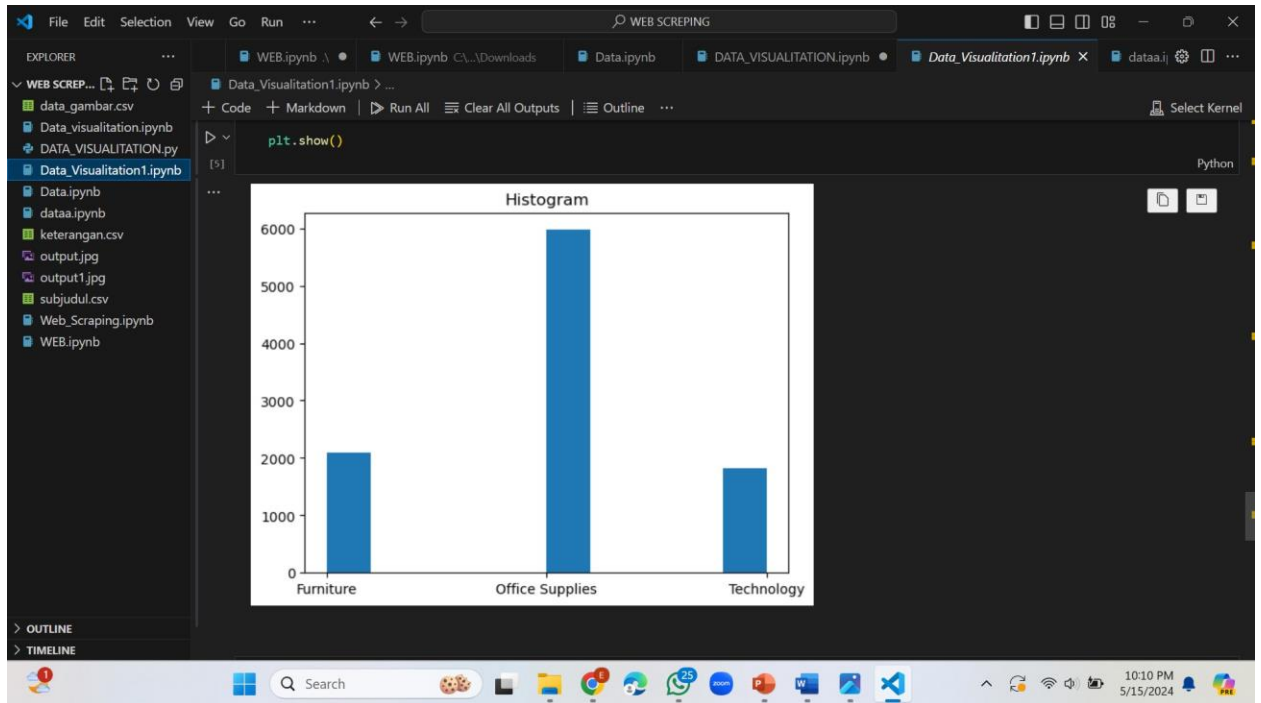
2. Grafik Line Plot



3. Grafik Bar Chart



4. Grafik Histogram



5. Grafik Pie Chart

