Ex. No: 6

Implementation of Data Visualization using Matplotlib

Aim:

To implement python program for data visualization using Matplotlib.

Dataset:

Toyoto.csv

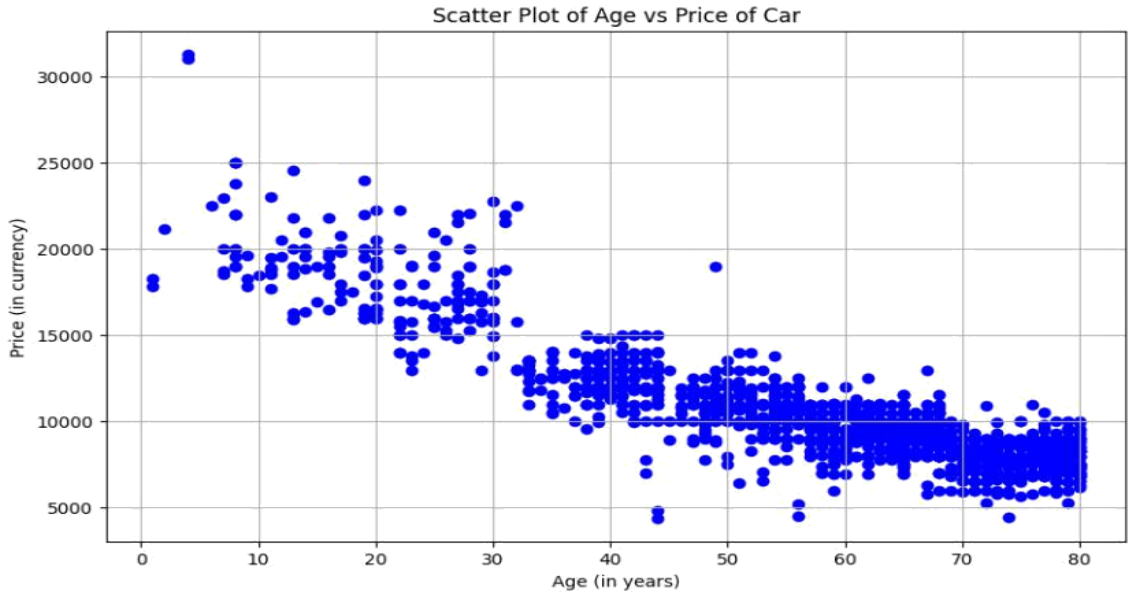
Questions:

1.Plot Scatter Plot for Age and price of car.

Code:

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
df = pd.read_csv('C:\\Users\\dines\\Downloads\\DEP Lab\\Toyota.csv')
plt.figure(figsize=(9, 6))
plt.scatter(df['Age'], df['Price'], color='blue')
plt.title('Scatter Plot of Age vs Price of Car')
plt.xlabel('Age (in years)')
plt.ylabel('Price (in currency)')
plt.grid(True)
plt.show()
```

Output:

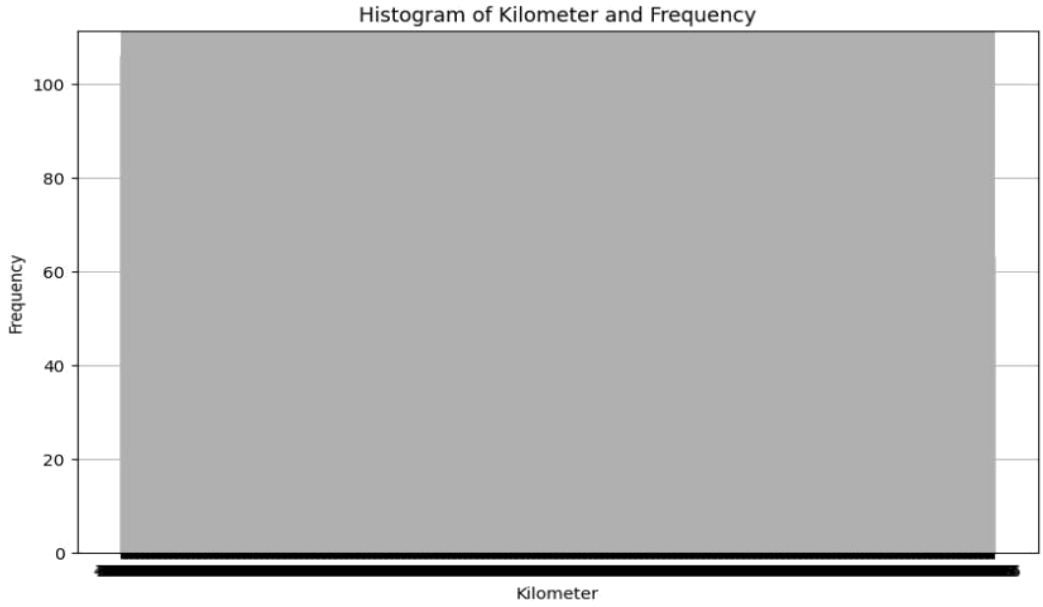


2.Plot Histogram for Kilometer and frequency

Code:

```
# Histogram for Kilometer and frequency
plt.figure(figsize=(10, 6))
plt.hist(df['KM'], bins=20, color='green',edgecolor='black')
plt.title('Histogram of Kilometer and Frequency')
plt.xlabel('Kilometer')
plt.ylabel('Frequency')
plt.grid(True)
plt.show()
```

Output:



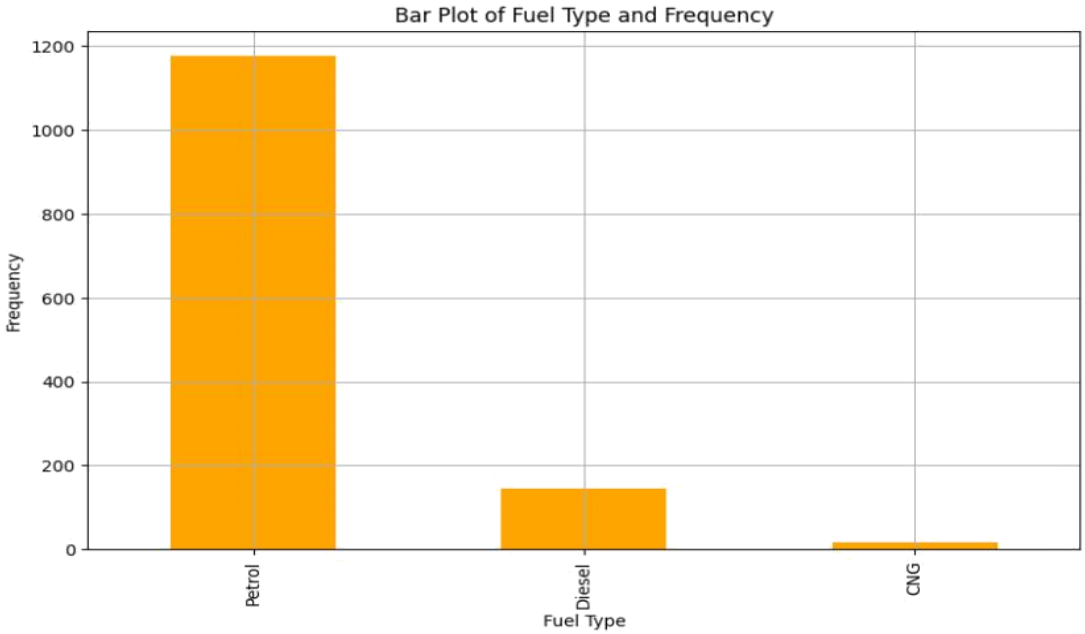
3.Plot bar plot for fuel type and frequency

Code:

```
# Bar plot for Fuel Type and Frequency
plt.figure(figsize=(10, 6))
df['FuelType'].value_counts().plot(kind='bar',color='orange')
plt.title('Bar Plot of Fuel Type and Frequency')
plt.xlabel('Fuel Type')
plt.ylabel('Frequency')
plt.grid(True)
```

plt.show()

Output:



4.Plot Box plot for prices of car

Code:

Box plot for Prices of car

plt.figure(figsize=(10, 6))

plt.boxplot(df['Price'])

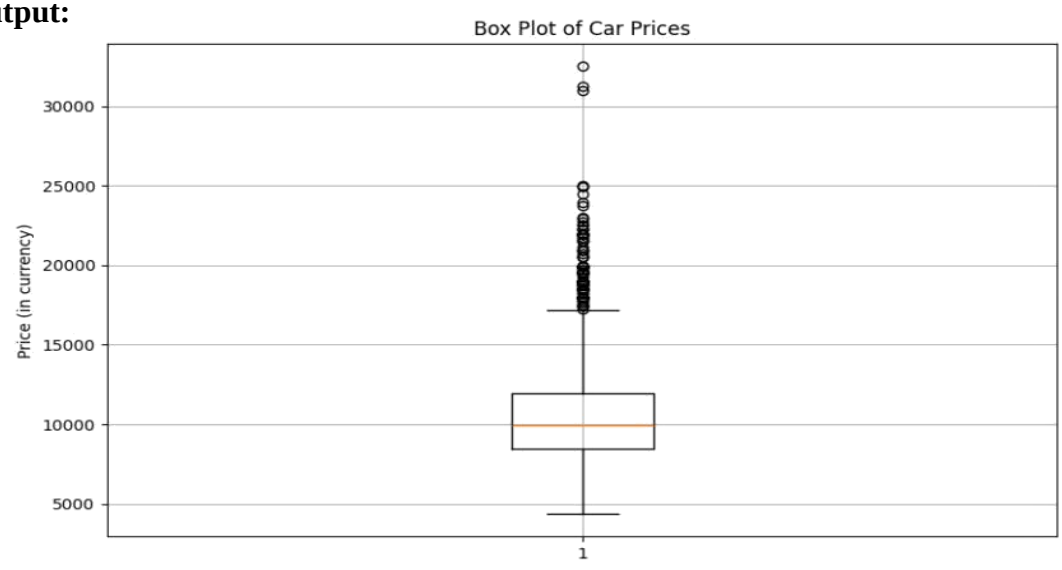
plt.title('Box Plot of Car Prices')

plt.ylabel('Price (in currency)')

plt.grid(True)

plt.show()

Output:



5.Plot pair wise plot for fuel type

Code:

```
# Pair-wise plot for Fuel Type
sns.pairplot(df, hue='FuelType', diag_kind='kde')
plt.show()
```

Output:

Rubrics:

Problem Understanding (10)	Implementation (20)	Viva (10)	Time Management (10)	Total (50)

Result:

Thus the implementation of data visualization using Matplotlib was successfully executed and the output was verified.