Question 10  
  
10. Scenario: You are working on a data visualization project and need to create basic plots using

Matplotlib. You have a dataset containing the monthly sales data for a company, including the

month and corresponding sales values. Your task is to develop a Python program that generates line

plots and bar plots to visualize the sales data.

Question:

1. How would you develop a Python program to create a line plot of the monthly sales data?

2: How would you develop a Python program to create a bar plot of the monthly sales data?

Answer

import pandas as pd

import matplotlib.pyplot as plt

# Load the CSV

df = pd.read\_csv(r"D:\datasets\question3\_.csv")

print("Columns in the DataFrame:", df.columns)

print(df.head())

# Convert 'Order Date' to datetime

df['Order Date'] = pd.to\_datetime(df['Order Date'])

# Create 'Monthly\_' column

df['Monthly\_'] = df['Order Date'].dt.month\_name()

# Group and rename

monthly\_sales = df.groupby('Monthly\_')['Quantity sold'].sum().reset\_index()

monthly\_sales.rename(columns={'Quantity sold': 'Sales\_'}, inplace=True)

# Line Plot

plt.figure(figsize=(10, 5))

plt.plot(monthly\_sales['Monthly\_'], monthly\_sales['Sales\_'], marker='o', color='b', linewidth=2)

plt.title('Monthly Sales Data - Line Plot')

plt.xlabel('Month')

plt.ylabel('Sales\_')

plt.grid(True)

plt.xticks(rotation=45)

plt.tight\_layout()

plt.show()

# Bar Plot

plt.figure(figsize=(10, 5))

plt.bar(monthly\_sales['Monthly\_'], monthly\_sales['Sales\_'], color='c')

plt.title('Monthly Sales Data - Bar Plot')

plt.xlabel('Month')

plt.ylabel('Sales\_')

plt.xticks(rotation=45)

plt.tight\_layout()

plt.show()

Output:



