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# Suppose you're a sales manager for an e-commerce company, and you want to create a figure with subplots to compare the sales performance of different product categories over time. You have sales data for four product categories: Electronics, Clothing, Home & Garden, and Sports & Outdoors. Share your conclusion/analysis.


#Input:-
import numpy as np
import matplotlib.pyplot as plt


# Data
months = np.arange(1, 13)
electronics_sales = np.array([25000, 28000, 31000, 27000, 30000, 32000, 35000, 36000, 38000, 39000, 41000, 42000])
clothing_sales = np.array([15000, 16000, 17000, 18000, 19000, 20000, 21000, 22000, 23000, 24000, 25000, 26000])
home_garden_sales = np.array([18000, 19000, 20000, 21000, 22000, 23000, 24000, 25000, 26000, 27000, 28000, 29000])
sports_outdoors_sales = np.array([12000, 13000, 14000, 15000, 16000, 17000, 18000, 19000, 20000, 21000, 22000, 23000])


# Create subplots
fig, axs = plt.subplots(2, 2, figsize=(12, 8))  # 2 rows, 2 columns


# Plot each category
axs[0, 0].plot(months, electronics_sales, marker='o', color='b', label='Electronics')
axs[0, 0].set_title('Electronics')
axs[0, 0].set_xlabel('Months')
axs[0, 0].set_ylabel('Sales')
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axs[0, 0].legend()

axs[0, 1].plot(months, clothing_sales, marker='o', color='g', label='Clothing')
axs[0, 1].set_title('Clothing')
axs[0, 1].set_xlabel('Months')
axs[0, 1].set_ylabel('Sales')
axs[0, 1].legend()

axs[1, 0].plot(months, home_garden_sales, marker='o', color='r', label='Home & Garden')
axs[1, 0].set_title('Home & Garden')
axs[1, 0].set_xlabel('Months')
axs[1, 0].set_ylabel('Sales')
axs[1, 0].legend()

axs[1, 1].plot(months, sports_outdoors_sales, marker='o', color='purple', label='Sports & Outdoors')
axs[1, 1].set_title('Sports & Outdoors')
axs[1, 1].set_xlabel('Months')
axs[1, 1].set_ylabel('Sales')
axs[1, 1].legend()

# Adjust layout
plt.tight_layout()

# Show plot
plt.show()
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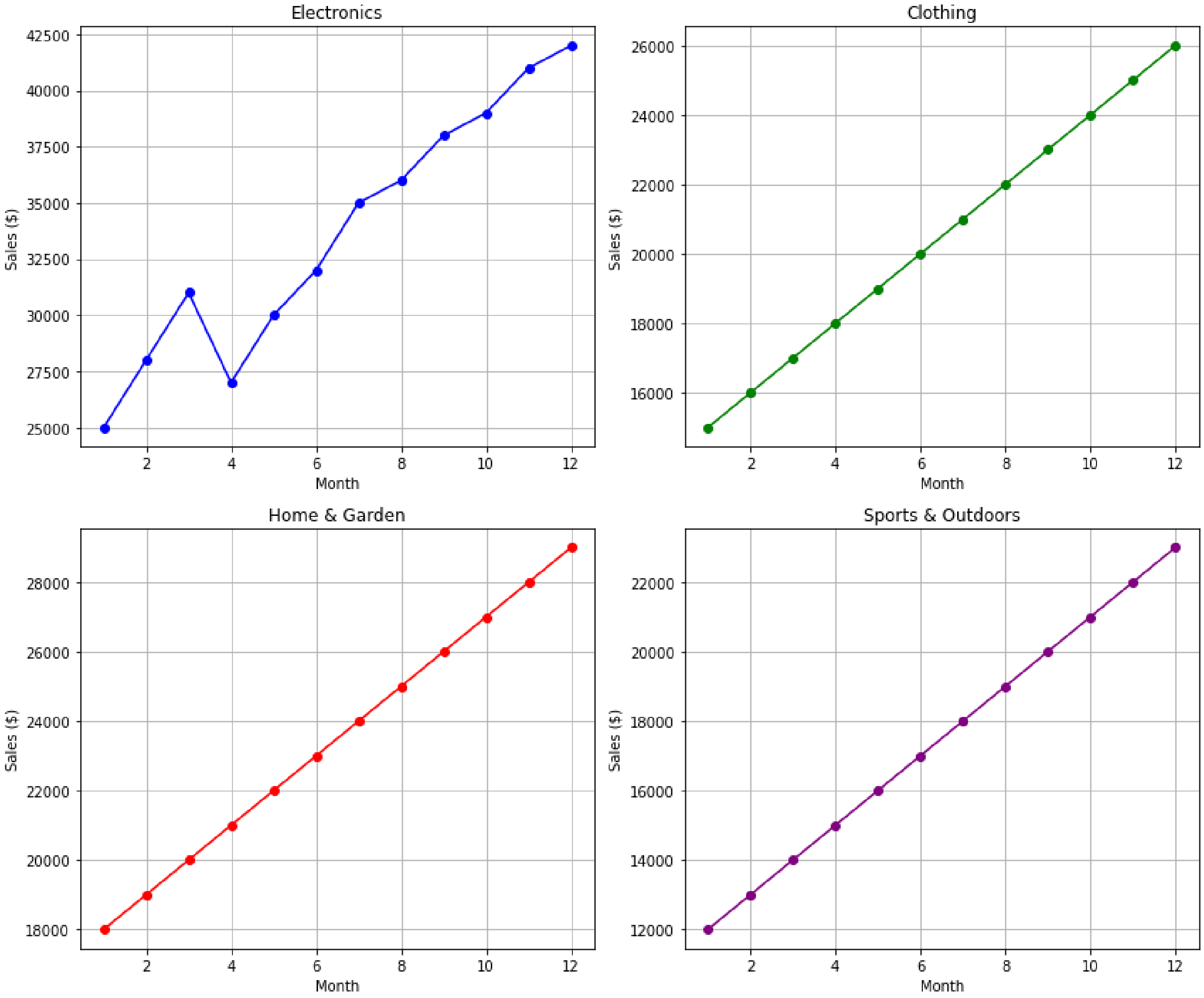
#Output:-


Electronics
Sales ($)
42500
40000
37500
35000
32500
30000
27500
25000
2
4
6
8
10
12
Month
Clothing
Sales ($)
26000
24000
22000
20000
18000
16000
2
4
6
8
10
12
Month
Home & Garden
Sales ($)
28000
26000
24000
22000
20000
18000
2
4
6
8
10
12
Month
Sports & Outdoors
Sales ($)
22000
20000
18000
16000
14000
12000
2
4
6
8
10
12
Month