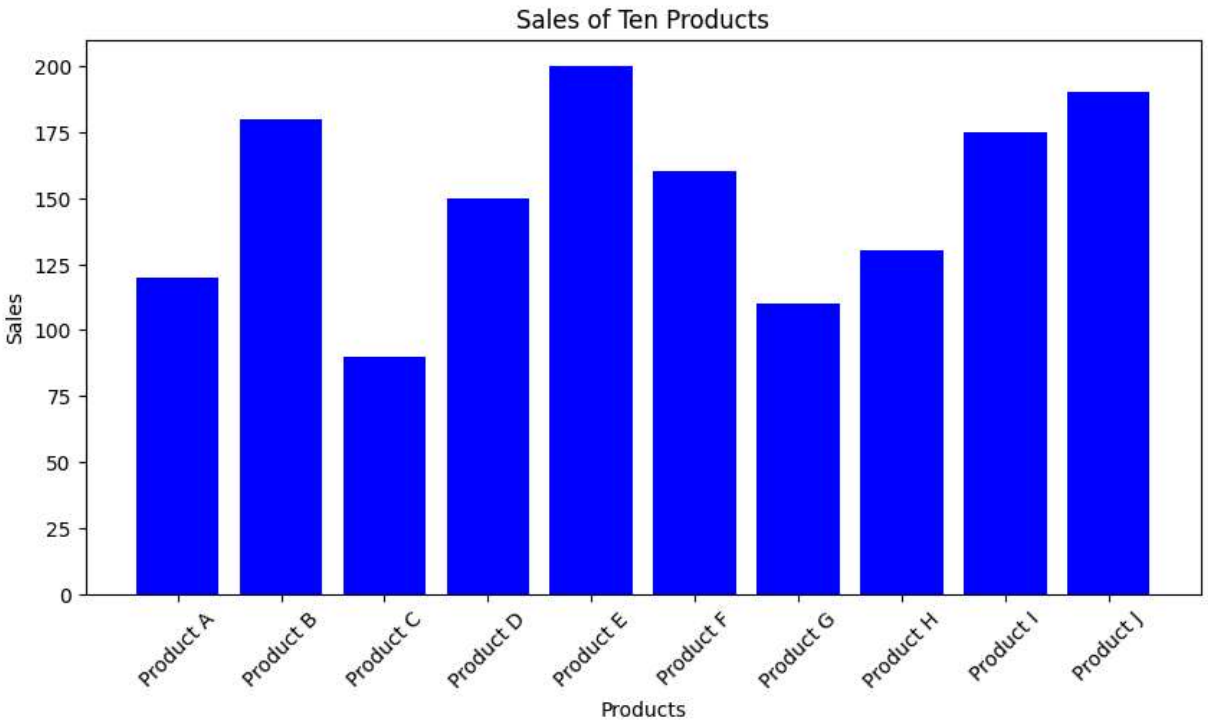
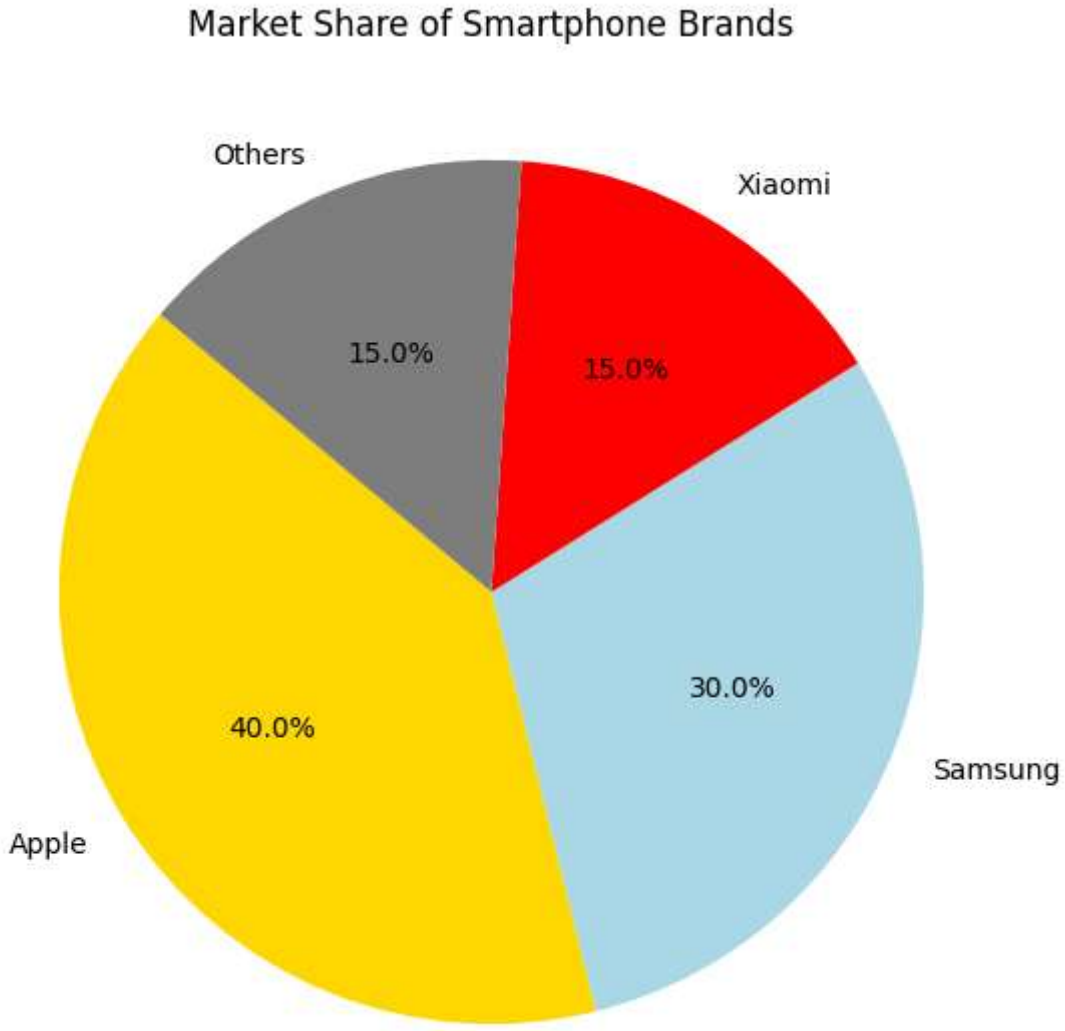
In [2]:
```
import numpy as np
import matplotlib.pyplot as plt

# Product names
products = ["Product A", "Product B", "Product C", "Product D", "Product E",
            "Product F", "Product G", "Product H", "Product I", "Product J"]

# Sales values
sales = np.array([120, 180, 90, 150, 200, 160, 110, 130, 175, 190])

# Create bar chart
plt.figure(figsize=(10, 5))
plt.bar(products, sales, color='blue')

# Labels and title
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales of Ten Products")

# Show the chart
plt.xticks(rotation=45)  # Rotate x-axis labels for better visibility
plt.show()
```



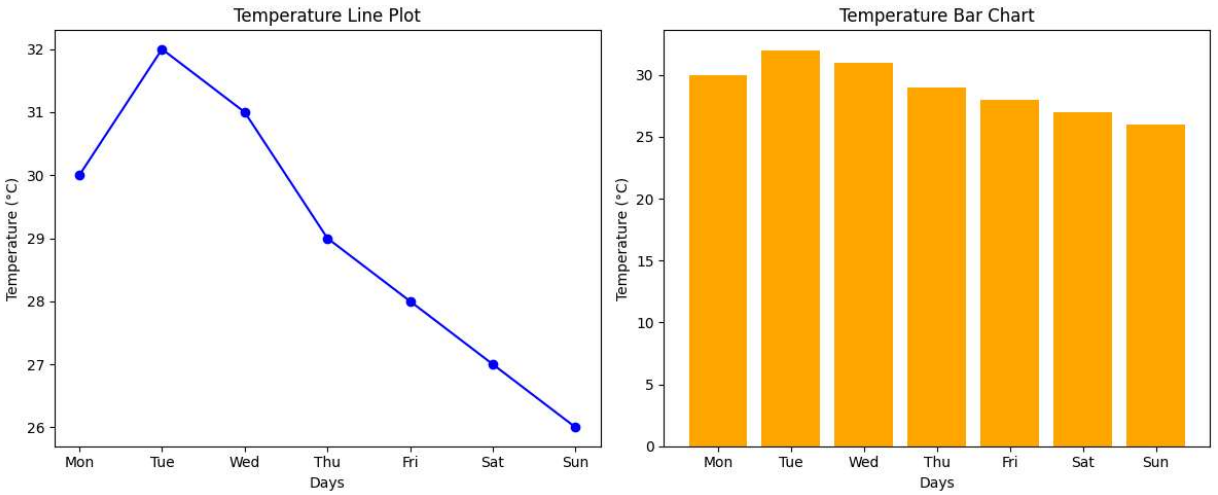
In [3]:
```
# Market share data
labels = ["Apple", "Samsung", "Xiaomi", "Others"]
sizes = np.array([40, 30, 15, 15])
colors = ["gold", "lightblue", "red", "gray"]

# Create pie chart
plt.figure(figsize=(7, 7))
plt.pie(sizes, labels=labels, colors=colors, autopct="%1.1f%%", startangle=140)
```

```
# Title
plt.title("Market Share of Smartphone Brands")
plt.show()
```

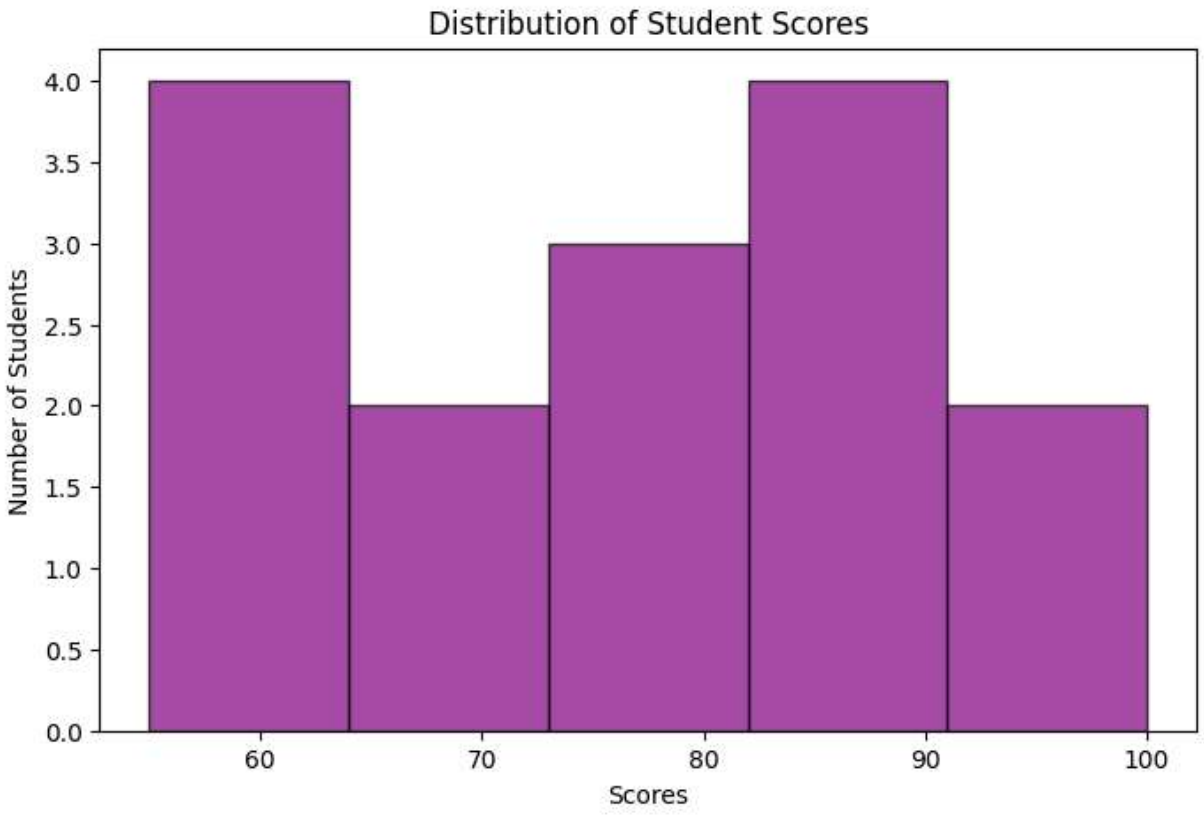


In [4]:
```
# Temperature data for a week
days = ["Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"]
temperatures = np.array([30, 32, 31, 29, 28, 27, 26])

# Create subplots
fig, ax = plt.subplots(1, 2, figsize=(12, 5))

# Line Plot
ax[0].plot(days, temperatures, marker='o', linestyle='-', color='b')
ax[0].set_title("Temperature Line Plot")
ax[0].set_xlabel("Days")
ax[0].set_ylabel("Temperature (°C)")

# Bar Chart
ax[1].bar(days, temperatures, color='orange')
ax[1].set_title("Temperature Bar Chart")
ax[1].set_xlabel("Days")
```

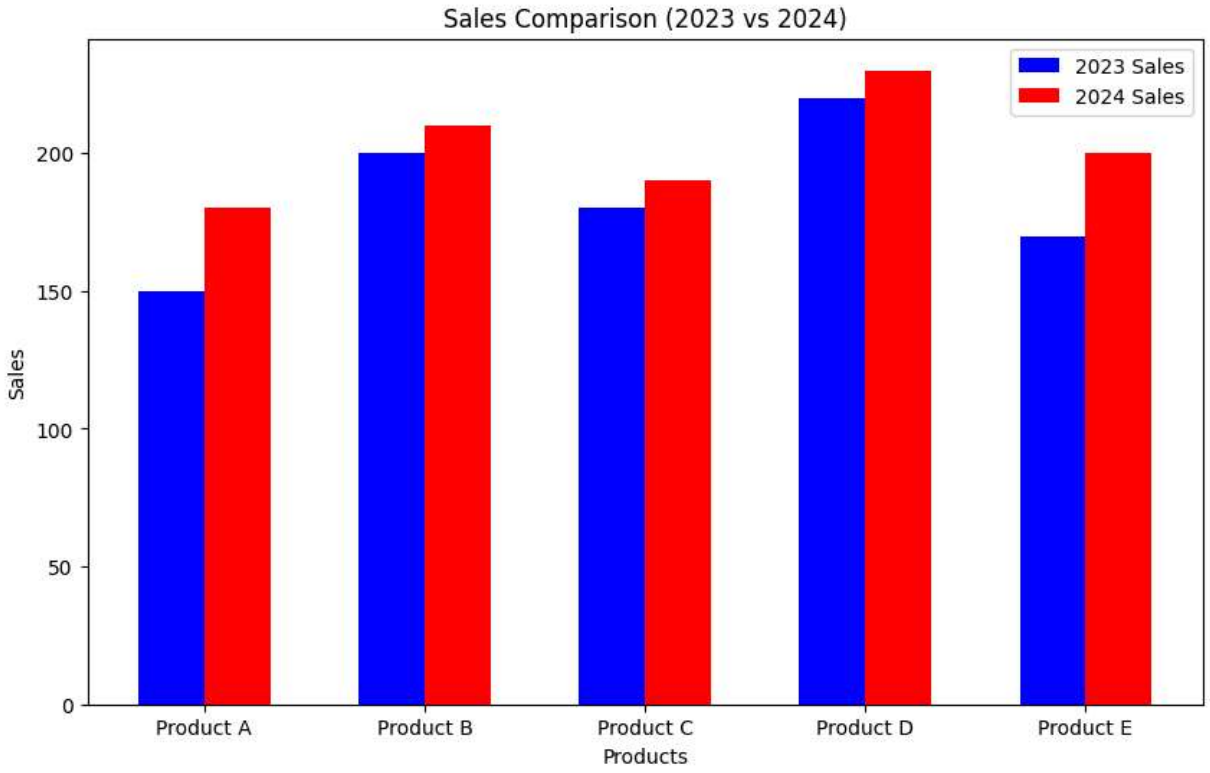
```
ax[1].set_ylabel("Temperature (°C)")

# Display the plots
plt.tight_layout()
plt.show()
```



In [5]:
```
# Student scores data
scores = np.array([55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 55, 60, 75, 85, 90])

# Create histogram
plt.figure(figsize=(8, 5))
plt.hist(scores, bins=5, color='purple', edgecolor='black', alpha=0.7)

# Labels and title
plt.xlabel("Scores")
plt.ylabel("Number of Students")
plt.title("Distribution of Student Scores")

# Show histogram
plt.show()
```



In [6]:
```
# Product categories
products = ["Product A", "Product B", "Product C", "Product D", "Product E"]

# Sales data for 2023 and 2024
sales_2023 = np.array([150, 200, 180, 220, 170])
sales_2024 = np.array([180, 210, 190, 230, 200])

# X-axis positions for bars
x = np.arange(len(products))

# Bar width
bar_width = 0.3

# Create grouped bar chart
plt.figure(figsize=(10, 6))
plt.bar(x - bar_width / 2, sales_2023, bar_width, label="2023 Sales", color='blue')
plt.bar(x + bar_width / 2, sales_2024, bar_width, label="2024 Sales", color='red')

# Labels and title
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales Comparison (2023 vs 2024)")
plt.xticks(x, products)  # Set x-axis labels to product names
plt.legend()

# Show the chart
plt.show()
```


Sales Comparison (2023 vs 2024)
2023 Sales
2024 Sales
Sales
0
50
100
150
200
Product A
Product B
Product C
Product D
Product E
Products

In [ ]: