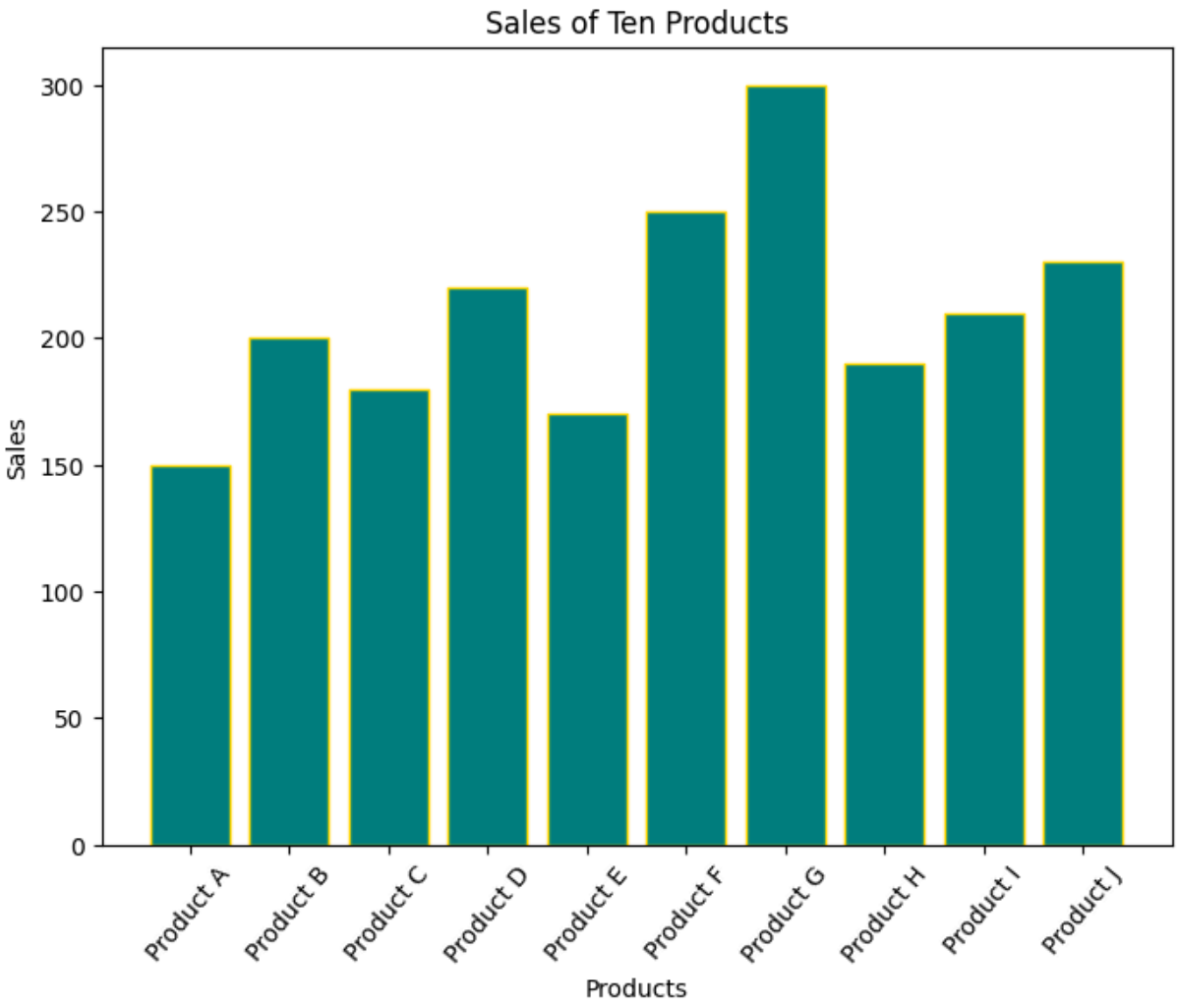
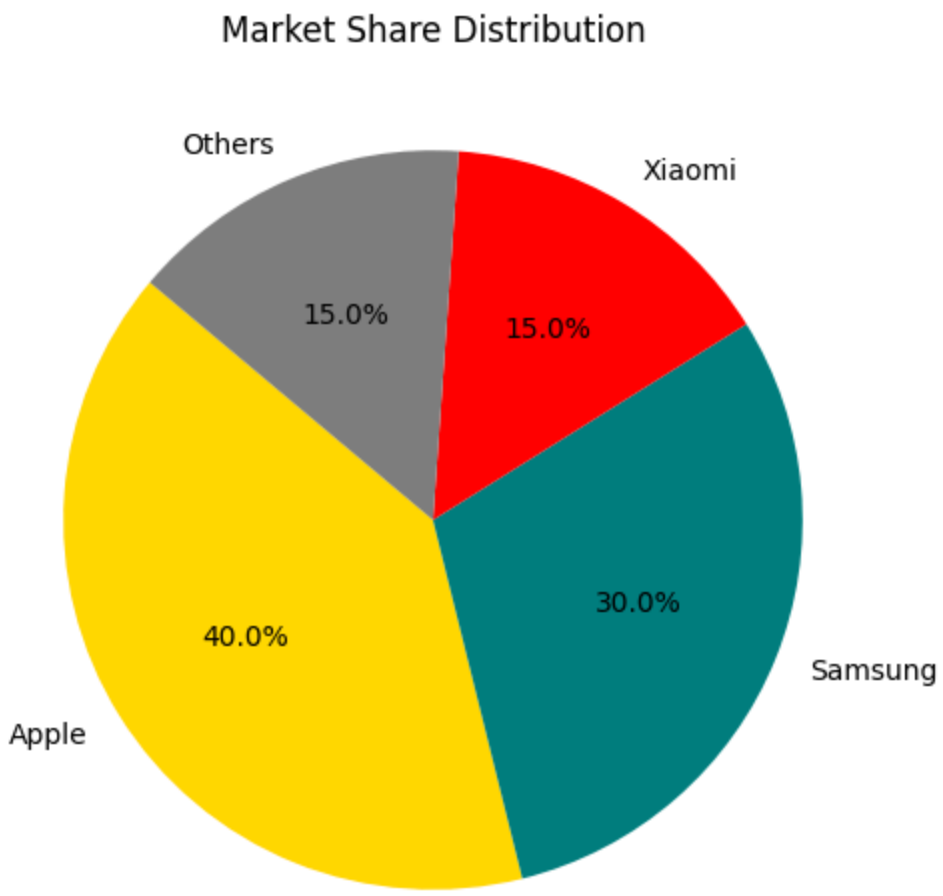
In [51]:
```
#Question 1
import matplotlib.pyplot as plt

# Data
products = ['Product A', 'Product B', 'Product C', 'Product D', 'Product E', 'Produ
sales = [150, 200, 180, 220, 170, 250, 300, 190, 210, 230]

# Create a bar chart
plt.figure(figsize=(8, 6))
plt.bar(products, sales, color='teal', edgecolor='gold')

# Labels and title
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales of Ten Products")
plt.xticks(rotation=50)  # Rotate x-axis labels for better readability


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



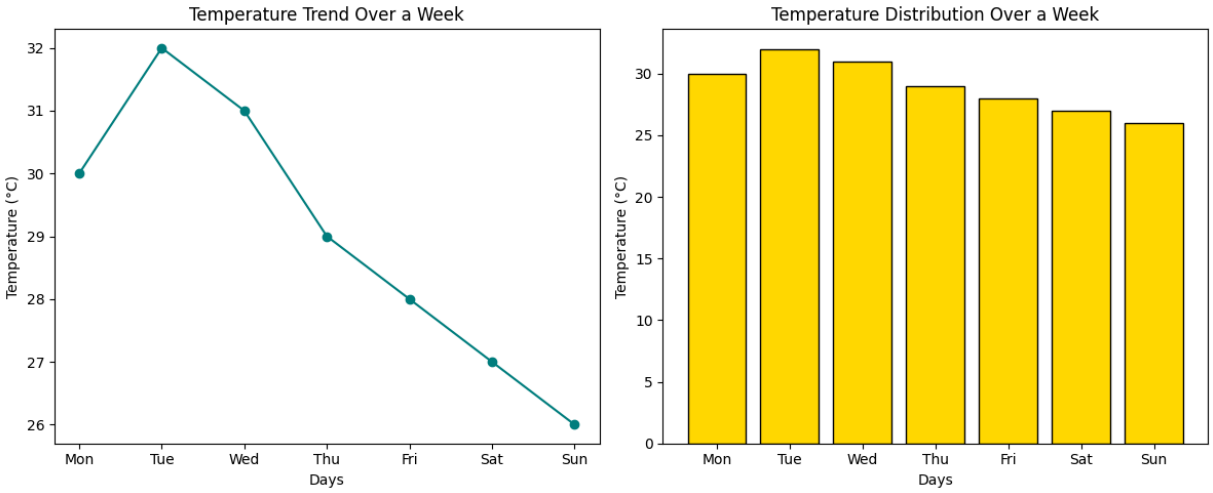
In [ ]:

In [52]:
```
#Question 2
import matplotlib.pyplot as plt

# Data
brands = ['Apple', 'Samsung', 'Xiaomi', 'Others']
market_share = [40, 30, 15, 15]
colors = ['gold', 'teal', 'red', 'gray']

# Create Pie Chart
plt.figure(figsize=(6, 6))
plt.pie(market_share, labels=brands, autopct='%1.1f%%', colors=colors,startangle=14

# Title
plt.title("Market Share Distribution")

# Show plot
plt.show()
```



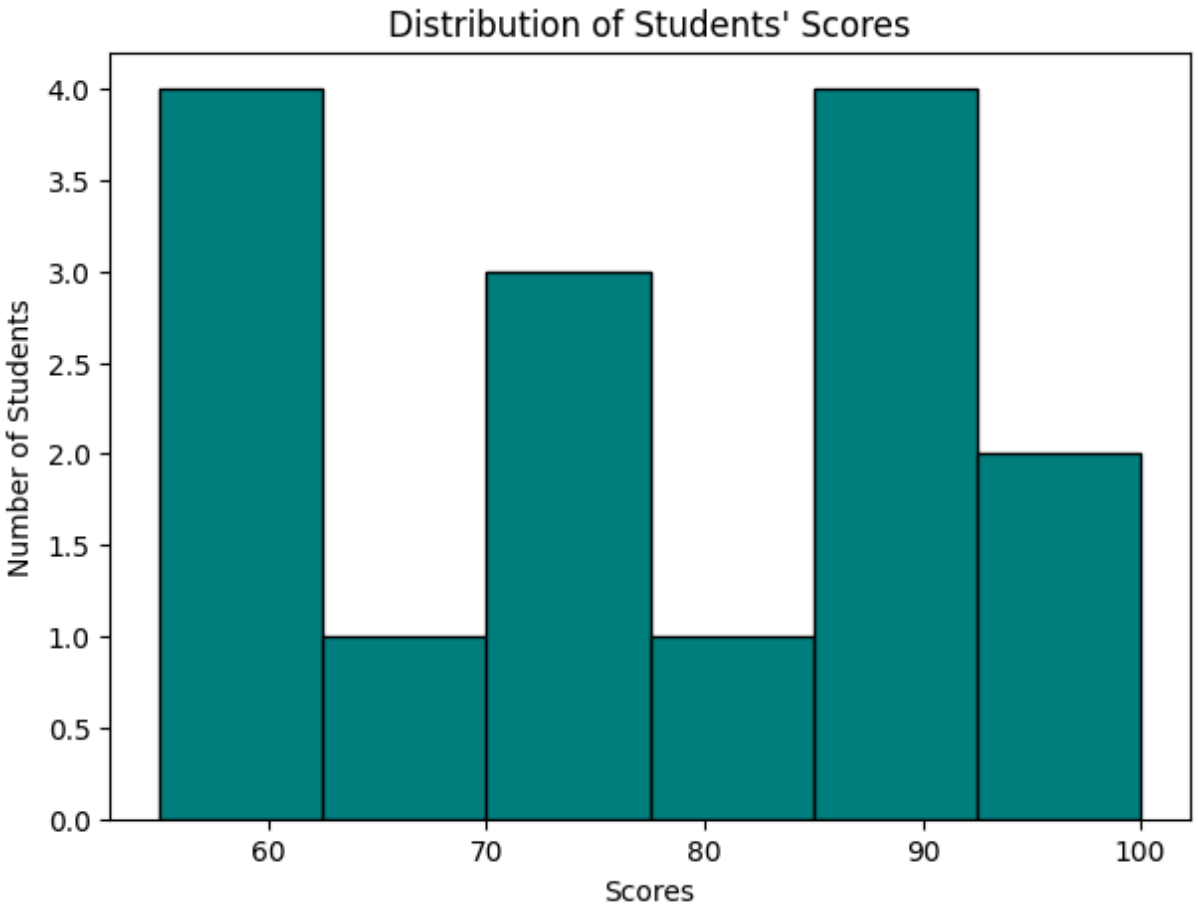
In [53]:
```
#Question 3
import matplotlib.pyplot as plt

# Data
days = ["Mon", "Tue", "Wed", "Thu", "Fri", "Sat", "Sun"]
temperatures = [30, 32, 31, 29, 28, 27, 26]
```

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

# Line plot
axs[0].plot(days, temperatures, marker='o', linestyle='-', color='teal')
axs[0].set_title("Temperature Trend Over a Week")
axs[0].set_xlabel("Days")
axs[0].set_ylabel("Temperature (°C)")

# Bar chart
axs[1].bar(days, temperatures, color='gold', edgecolor='black')
axs[1].set_title("Temperature Distribution Over a Week")
axs[1].set_xlabel("Days")
axs[1].set_ylabel("Temperature (°C)")

# Adjust layout and show
plt.tight_layout()
plt.show()
```

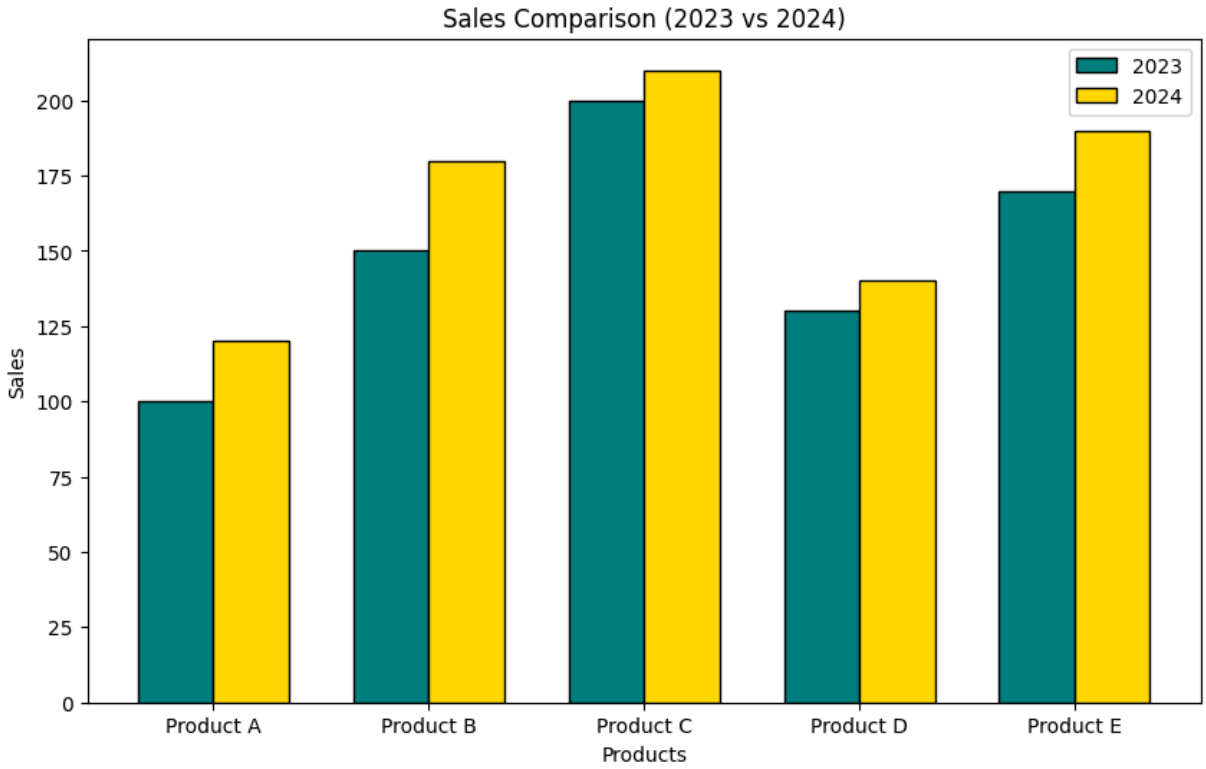


In [54]:

```
#Question 4
import matplotlib.pyplot as plt

# Data
scores = [55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 55, 60, 75, 85, 90]

# Create histogram
plt.figure(figsize=(7, 5))
plt.hist(scores, bins=6, color='teal', edgecolor='black')

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

# Show plot
plt.show()
```



In [40]:
```python
#Question 5
import numpy as np
import matplotlib.pyplot as plt

# Data
products = ['Product A', 'Product B', 'Product C', 'Product D', 'Product E']
sales_2023 = [100, 150, 200, 130, 170]
sales_2024 = [120, 180, 210, 140, 190]

# Bar width and positions
bar_width = 0.35
index = np.arange(len(products))

# Create bar chart
plt.figure(figsize=(10, 6))
plt.bar(index, sales_2023, bar_width, label='2023', color='teal',edgecolor='black')
plt.bar(index + bar_width, sales_2024, bar_width, label='2024', color='gold',edgeco

# Labels and title
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales Comparison (2023 vs 2024)")
plt.xticks(index + bar_width / 2, products)  # Align x-axis labels

# Legend and show plot
plt.legend()
plt.show()
```


Sales Comparison (2023 vs 2024)
2023
2024
Sales
0
25
50
75
100
125
150
175
200
Product A
Product B
Product C
Product D
Product E
Products

In [ ]: