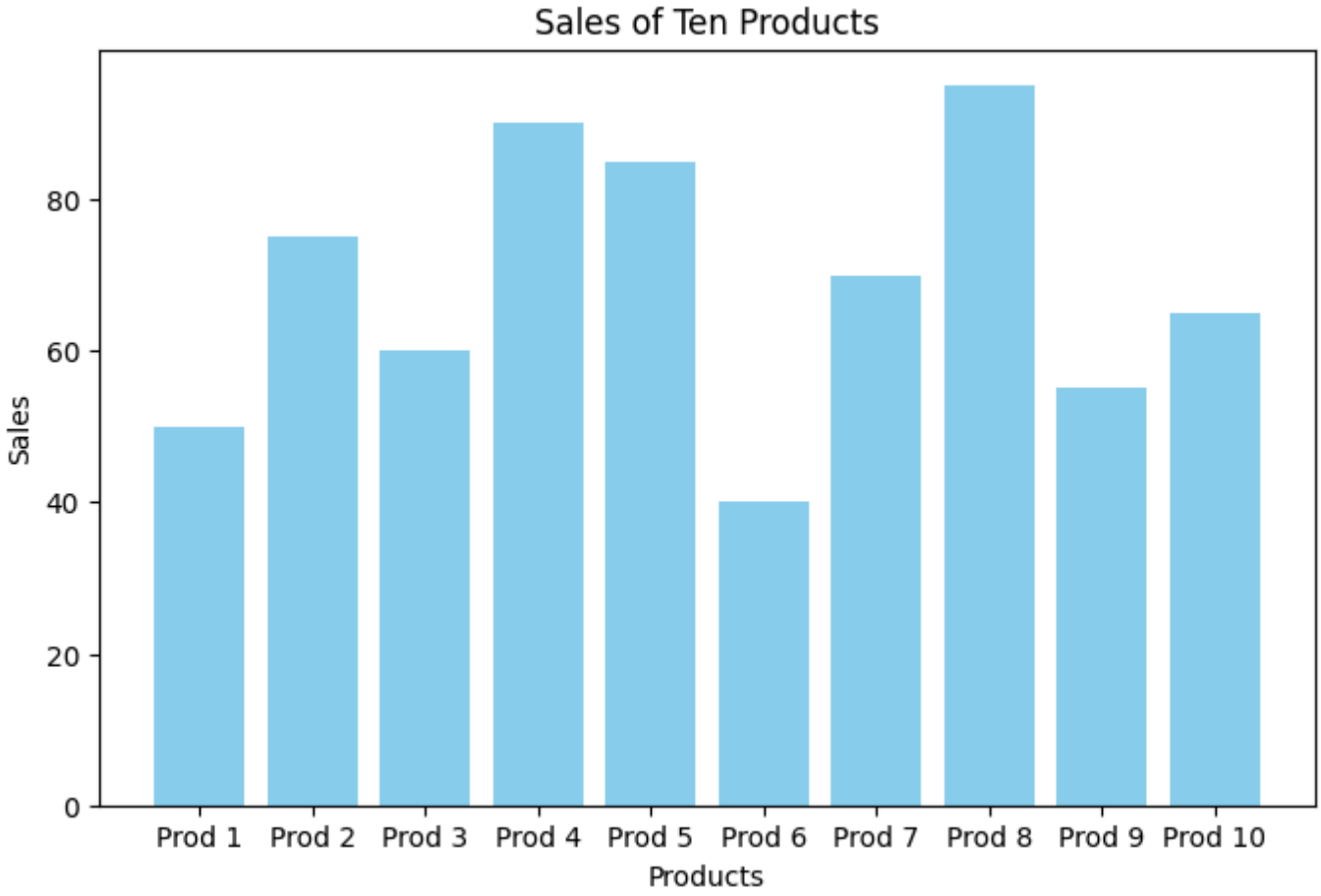
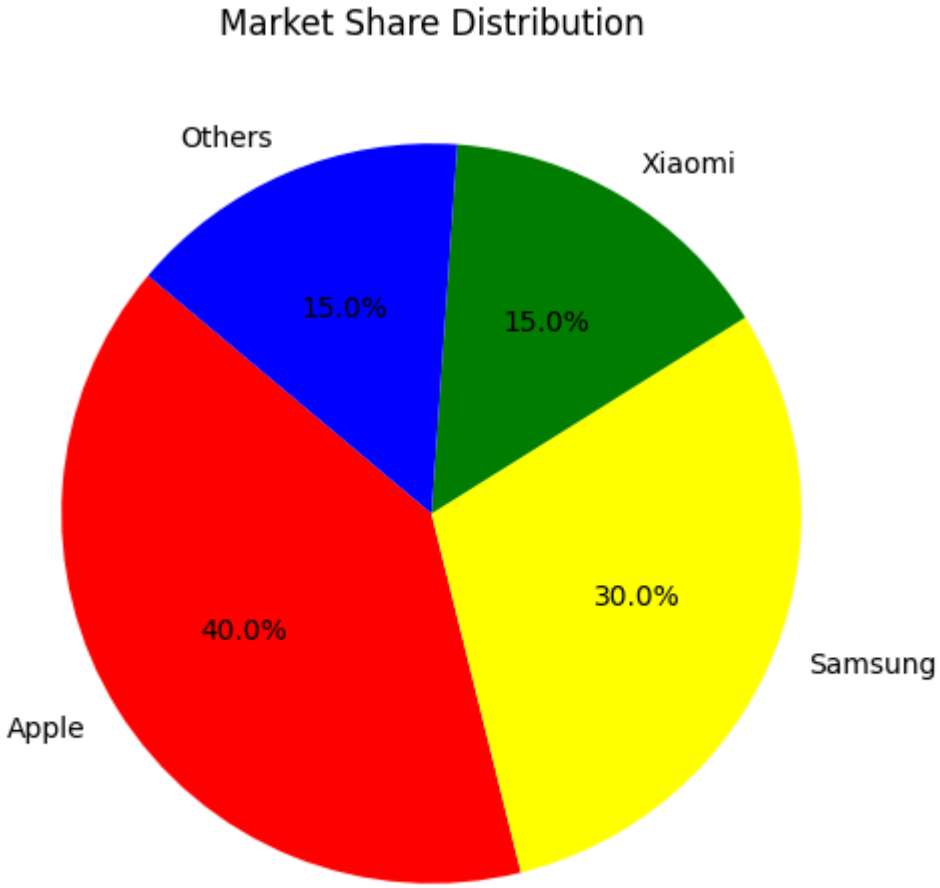
In [8]:
```
# 1.Create a bar chart showing the sales of ten products  with values .
import matplotlib.pyplot as plt
products = ['Prod 1', 'Prod 2', 'Prod 3', 'Prod 4', 'Prod 5', 'Prod 6', 'Prod 7', 'Prod 8', '
sales = [50, 75, 60, 90, 85, 40, 70, 95, 55, 65]

plt.figure(figsize=(8, 5))
plt.bar(products, sales, color='skyblue')
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales of Ten Products")
plt.show()
```

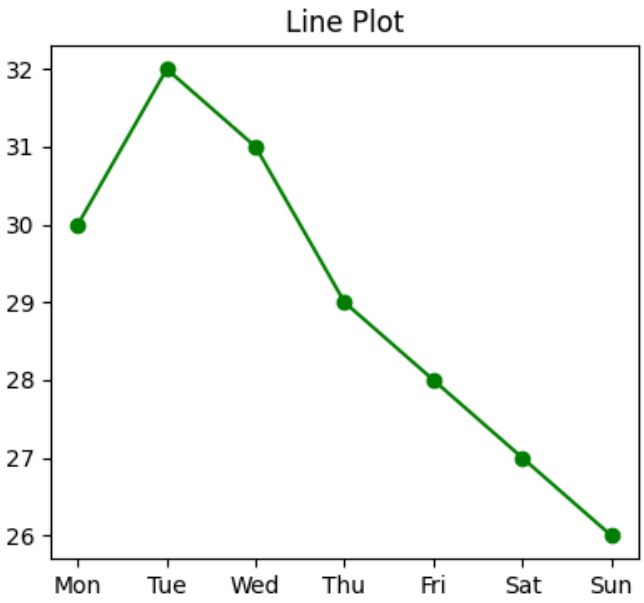


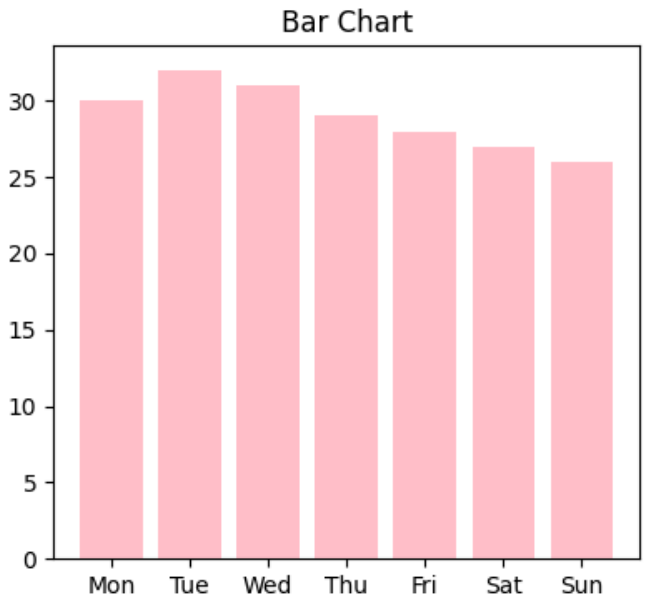

In [16]:
```
#2. Create a pie chart for the following market share data:
#Apple: 40%
#Samsung: 30%
#Xiaomi: 15%
#Others: 15%
import matplotlib.pyplot as plt
Brand = ['Apple','Samsung','Xiaomi','Others']
share = ['40','30','15','15']

#plt.figure(figsize=(8, 5))
colors=['red','yellow','green','blue']
plt.figure(figsize=(6, 6))
plt.pie(share, labels =Brand, autopct='%1.1f%%', colors=colors, startangle=140)
plt.title("Market Share Distribution")
plt.show()
```



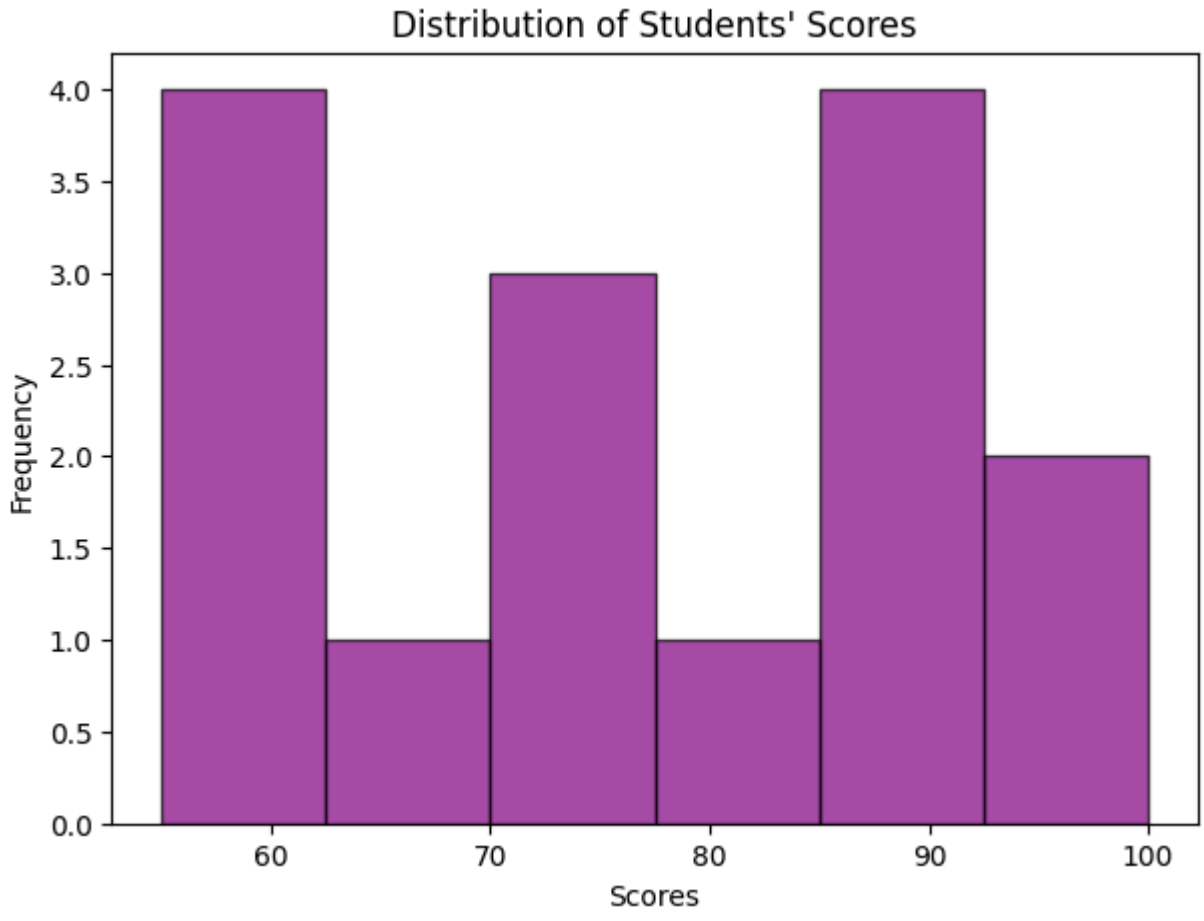

In [21]:

```
#3.Create a subplot with two graphs:
#A line plot for temperatures in a week: [30, 32, 31, 29, 28, 27, 26]
#A bar chart for the same data.
import matplotlib.pyplot as plt

temps = [30, 32, 31, 29, 28, 27, 26]
days = ['Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun']

fig, ax = plt.subplots(1, 2, figsize=(10, 4))

ax[0].plot(days, temps, marker='o', color='green')
ax[0].set_title("Line Plot")

ax[1].bar(days, temps, color='pink')
ax[1].set_title("Bar Chart")

plt.show()
```



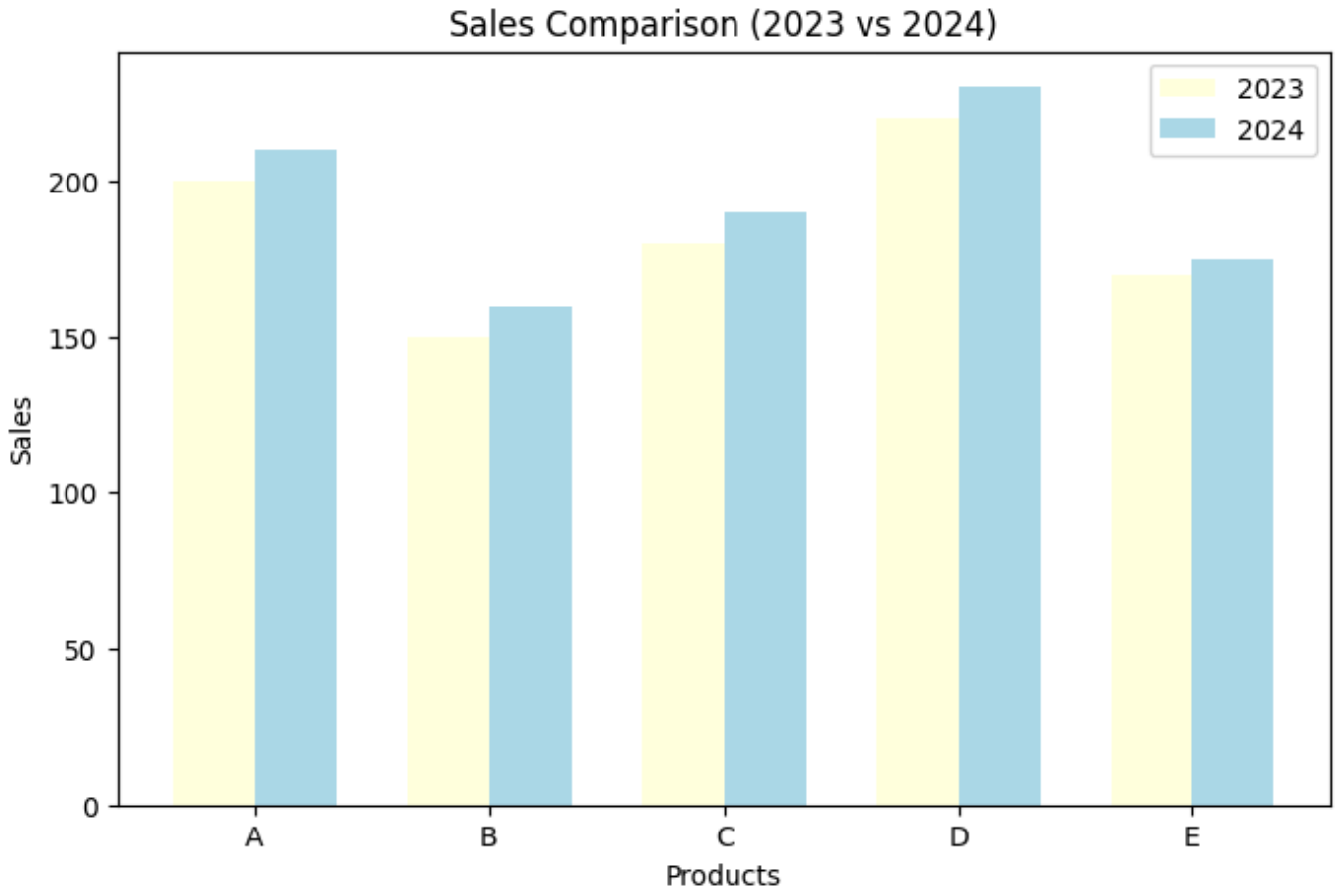




In [22]:
```
#4.Generate a histogram showing the distribution of students' scores:
#Scores: [55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 55, 60, 75, 85, 90]
import matplotlib.pyplot as plt
scores = [55, 60, 65, 70, 75, 80, 85, 90, 95, 100, 55, 60, 75, 85, 90]

plt.figure(figsize=(7, 5))
plt.hist(scores, bins=6, color='purple', edgecolor='black', alpha=0.7)
plt.xlabel("Scores")
plt.ylabel("Frequency")
plt.title("Distribution of Students' Scores")
plt.show()
```




In [24]:
```
# 5 .Create a Matplotlib plot that compares the sales data of two years (2023 and 2024)
#for five products using a grouped bar chart.
import matplotlib.pyplot as plt
products = ['A', 'B', 'C', 'D', 'E']
sales_2023 = [200, 150, 180, 220, 170]
sales_2024 = [210, 160, 190, 230, 175]
```

```
x = [0, 1, 2, 3, 4]  # Positions for bars
width = 0.35  # Width of each bar

plt.figure(figsize=(8, 5))
plt.bar([p - width/2 for p in x], sales_2023, width, label='2023', color='lightyellow')
plt.bar([p + width/2 for p in x], sales_2024, width, label='2024', color='lightblue')

plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales Comparison (2023 vs 2024)")
plt.xticks(x, products)
plt.legend()

plt.show()
```




In [ ]: