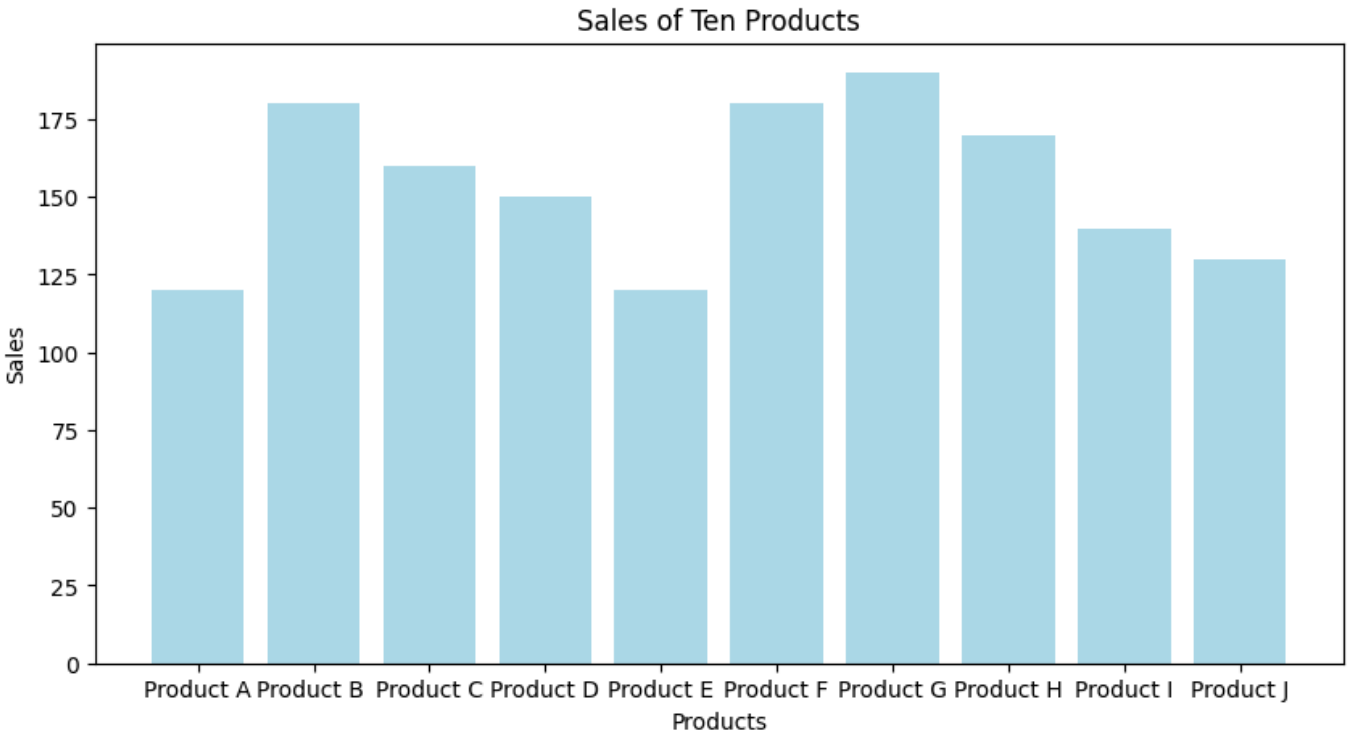
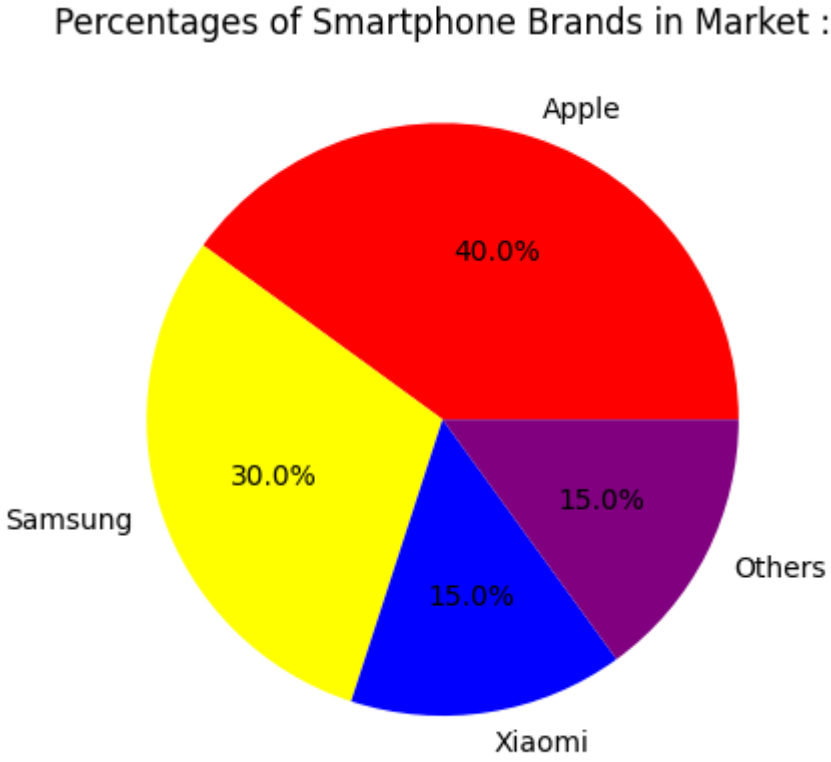
In [13]:
```
import matplotlib.pyplot as plt
#1.Create a bar chart showing the sales of ten products  with values
Products=['Product A','Product B ','Product C','Product D','Product E','Product F','Product G
Sales=[120,180,160,150,120,180,190,170,140,130]
plt.figure(figsize=(10, 5))
plt.bar(Products,Sales,color='lightblue')
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales of Ten Products")
plt.show()
```



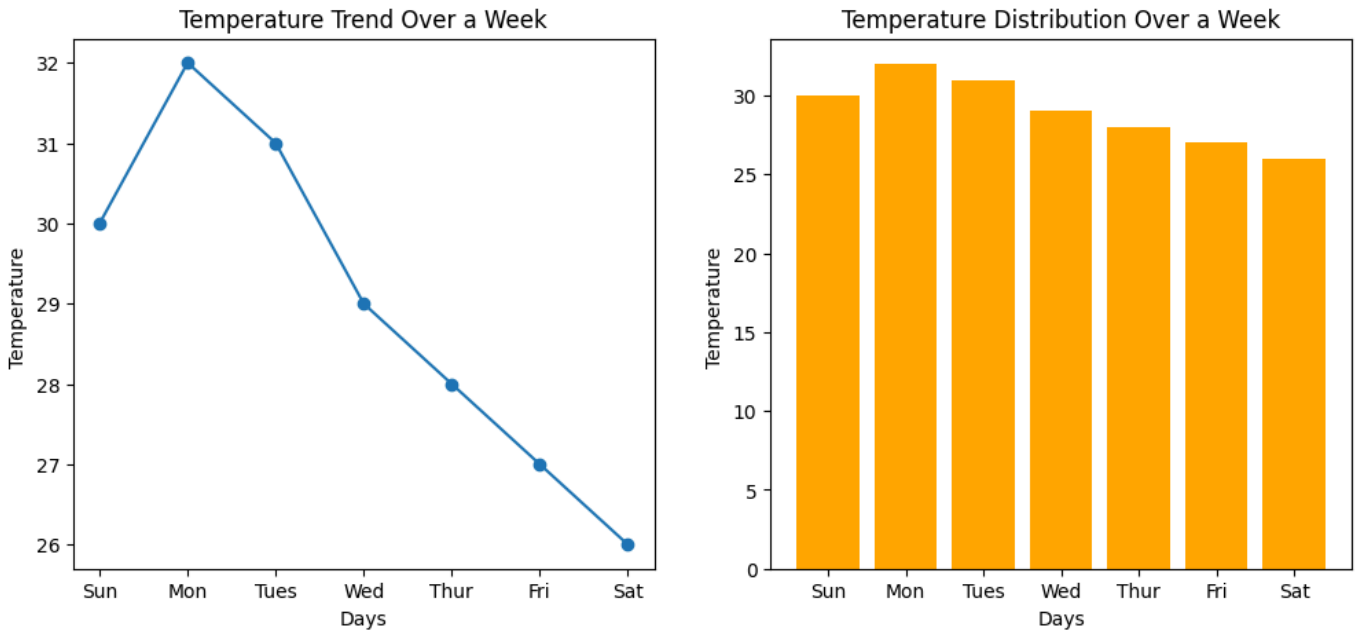
In [23]:
```
 # #2. Create a pie chart for the following market share data:
 # Apple: 40%
 # Samsung: 30%
 # Xiaomi: 15%
 # Others: 15%
import matplotlib.pyplot as plt
Brands=['Apple','Samsung','Xiaomi','Others']
Percentage=[40,30,15,15]
colors=['red','yellow','blue','Purple']
plt.pie(Percentage,labels=Brands,autopct='%1.1f%%',colors=colors)
plt.title("Percentages of Smartphone Brands in Market :")
plt.show()
```



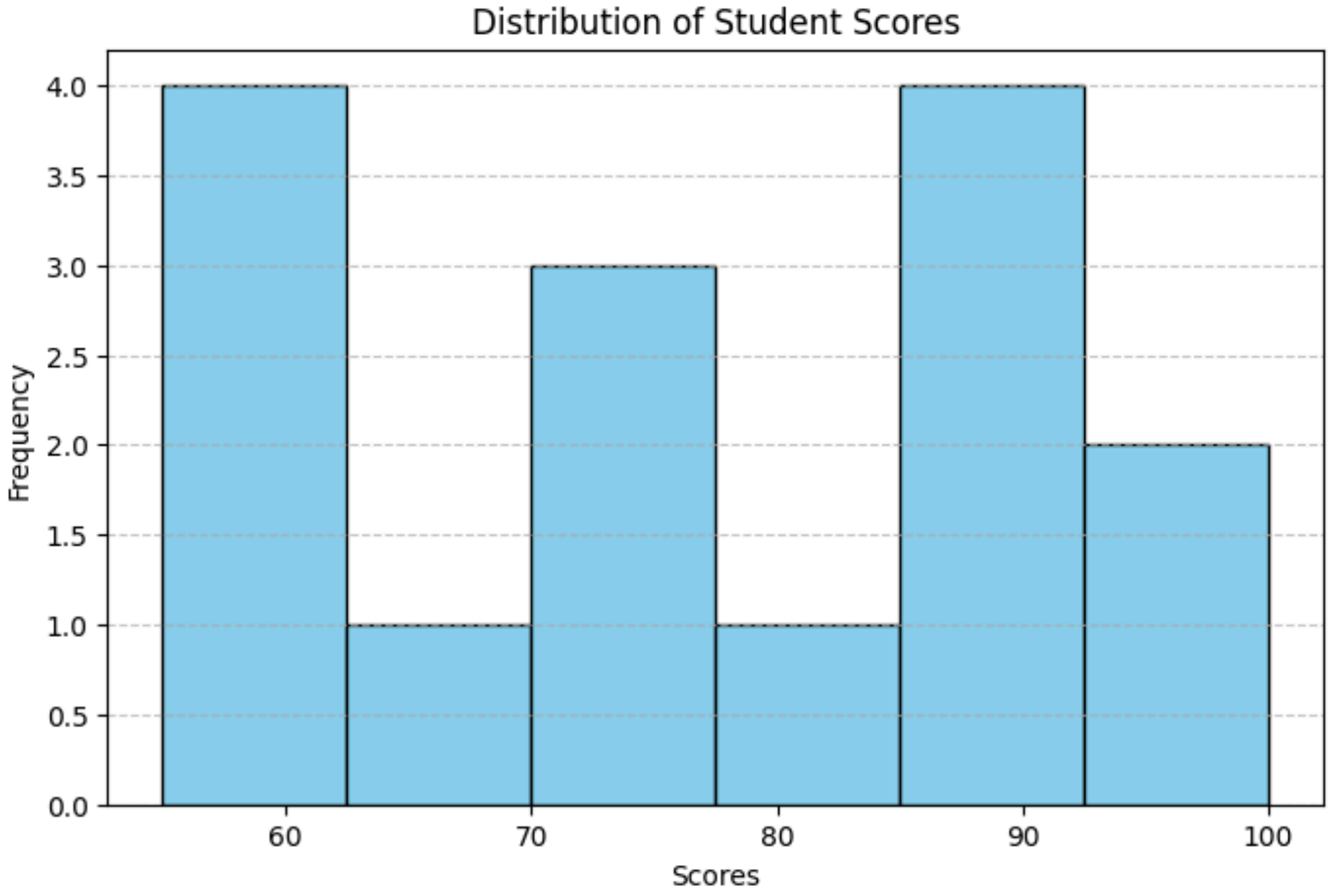
In [40]:

```
#
import matplotlib.pyplot as plt
Days=['Sun','Mon','Tues','Wed','Thur','Fri','Sat']
Temperature=[30,32,31,29,28,27,26]
plt.figure(figsize=(12,5))
# Create a figure with 2 subplots (1 row, 2 columns)
# First subplot - Line plot
plt.subplot(1,2,1)
plt.plot(Days,Temperature , marker='o')
plt.xlabel("Days")
plt.ylabel("Temperature ")
plt.title("Temperature Trend Over a Week")

# Second subplot - Bar chart
plt.subplot(1, 2, 2)
plt.bar(Days, Temperature, color='orange')
plt.xlabel("Days")
plt.ylabel("Temperature ")
plt.title("Temperature Distribution Over a Week")
plt.show()
```



In [50]:
```
#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=(8,5))
plt.hist(Scores,bins=6,color='skyblue',edgecolor='black')
plt.xlabel("Scores")
plt.ylabel("Frequency")
plt.title("Distribution of Student Scores")
plt.grid(axis='y', linestyle='--', alpha=0.7)
plt.show()
```



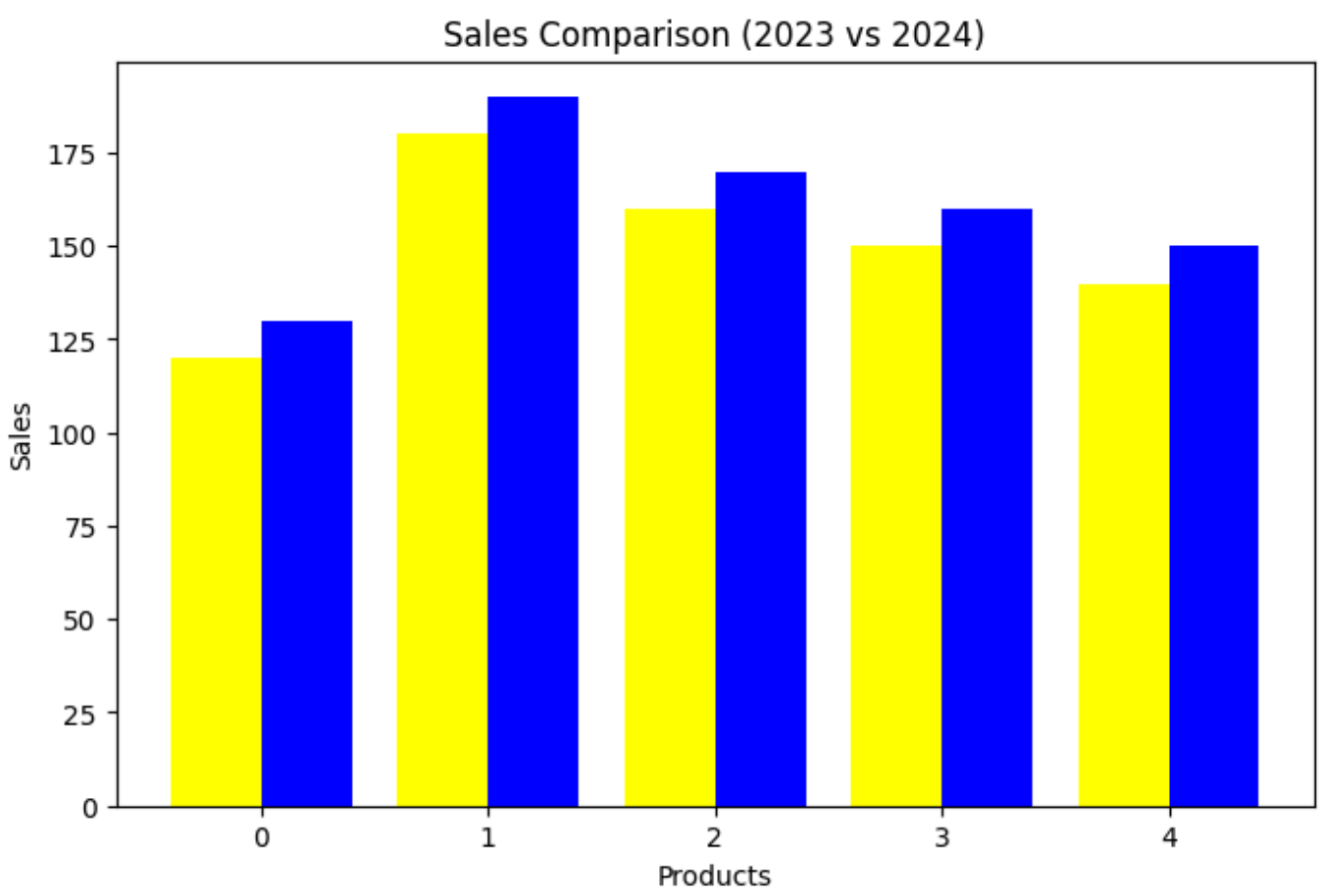
In [55]:
```
#5.Create a Matplotlib plot that compares the sales data of two years (2023 and 2024)
#for five products using a grouped bar chart.
import matplotlib.pyplot as plt

# Define products and sales data
products = ['Product A', 'Product B', 'Product C', 'Product D', 'Product E']
sales_2023 = [120, 180, 160, 150, 140]  # Sales data for 2023
sales_2024 = [130, 190, 170, 160, 150]  # Sales data for 2024

# Define bar width and x positions manually
#bar_width = 0.4
#x_positions = range(len(products))

# Create the grouped bar chart
plt.figure(figsize=(8, 5))
plt.bar([x - bar_width/2 for x in x_positions], sales_2023, width=bar_width, label='2023 Sale
plt.bar([x + bar_width/2 for x in x_positions], sales_2024, width=bar_width, label='2024 Sale

# Labeling
plt.xlabel("Products")
plt.ylabel("Sales")
plt.title("Sales Comparison (2023 vs 2024)")
plt.show()
```


Sales Comparison (2023 vs 2024)
Sales
Products
0
25
50
75
100
125
150
175
0
1
2
3
4

In [ ]: