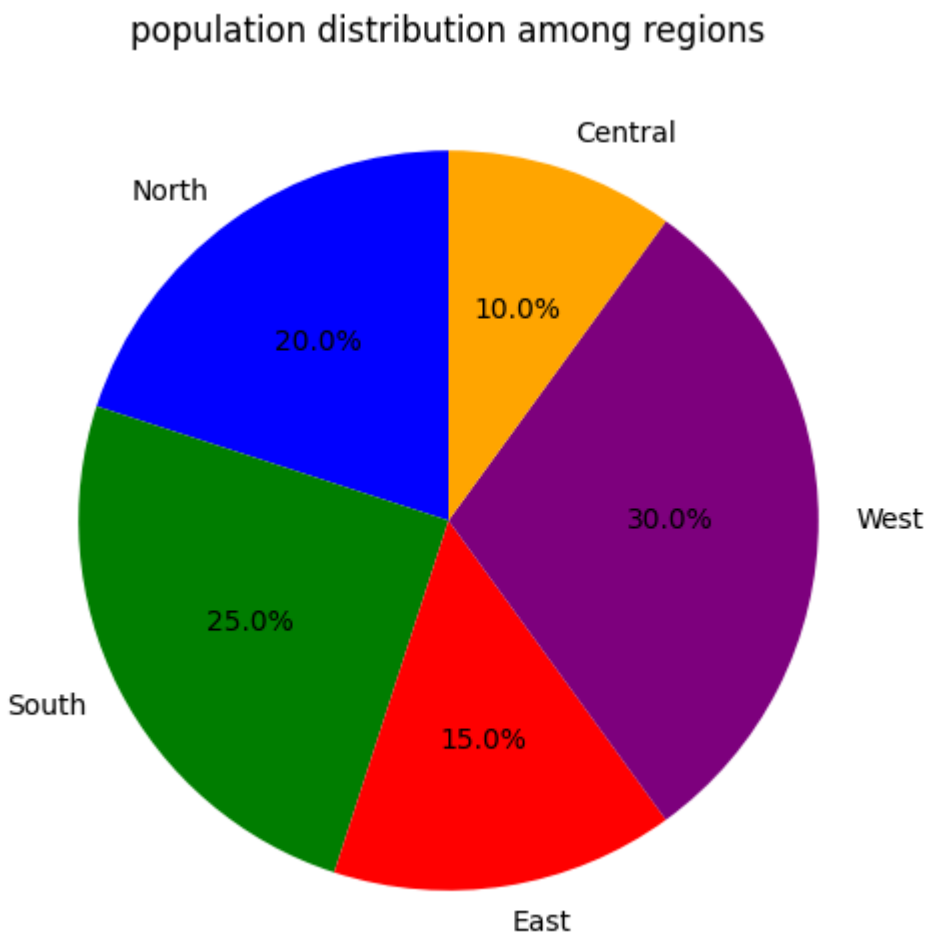
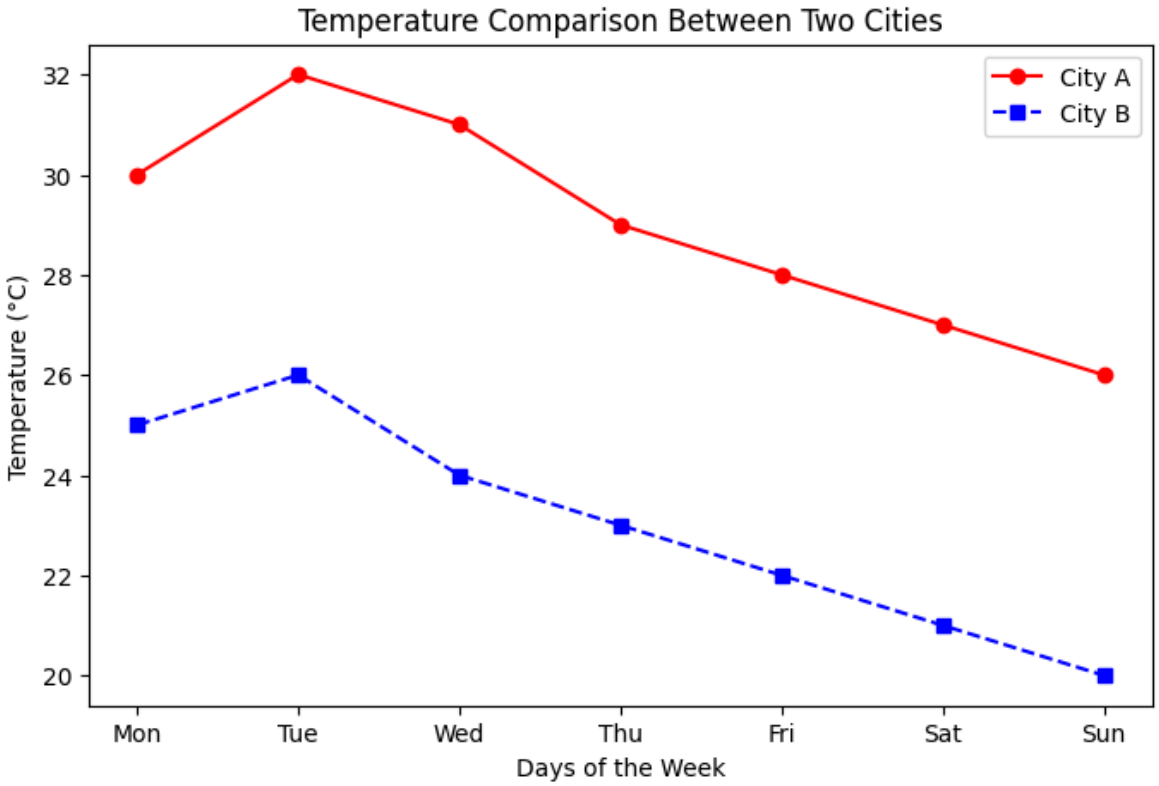
In [10]:
```
#1.Show population distribution among region using pie chart.

import matplotlib.pyplot as plt

regions = ['North','South','East','West','Central']
population = [20,25,15,30,10]

plt.figure(figsize=(6,6))
plt.pie(population, labels = regions, autopct ='%1.1f%%', startangle=90, colors=

plt.title('population distribution among regions')
plt.show()
```

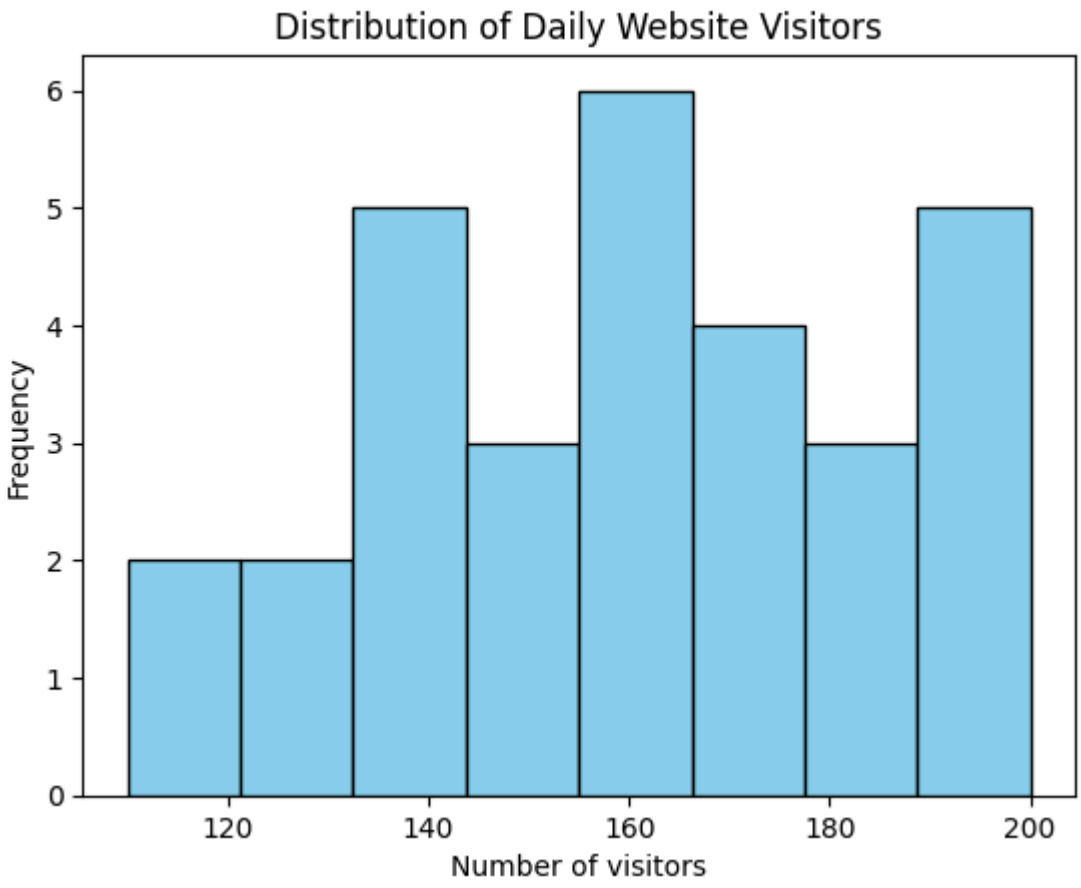


In [29]:
```
#2.Compare temperature between 2 cities using line chart

import matplotlib.pyplot as plt

# Sample data
days = ['Mon', 'Tue', 'Wed', 'Thu', 'Fri', 'Sat', 'Sun']
temp_city_A = [30, 32, 31, 29, 28, 27, 26]  # Temperatures in °C
temp_city_B = [25, 26, 24, 23, 22, 21, 20]  # Temperatures in °C

# Creating line chart
plt.figure(figsize=(8,5))
plt.plot(days, temp_city_A, marker='o', linestyle='-', color='red', label='City
plt.plot(days, temp_city_B, marker='s', linestyle='--', color='blue', label='Cit

# Labels and title
```

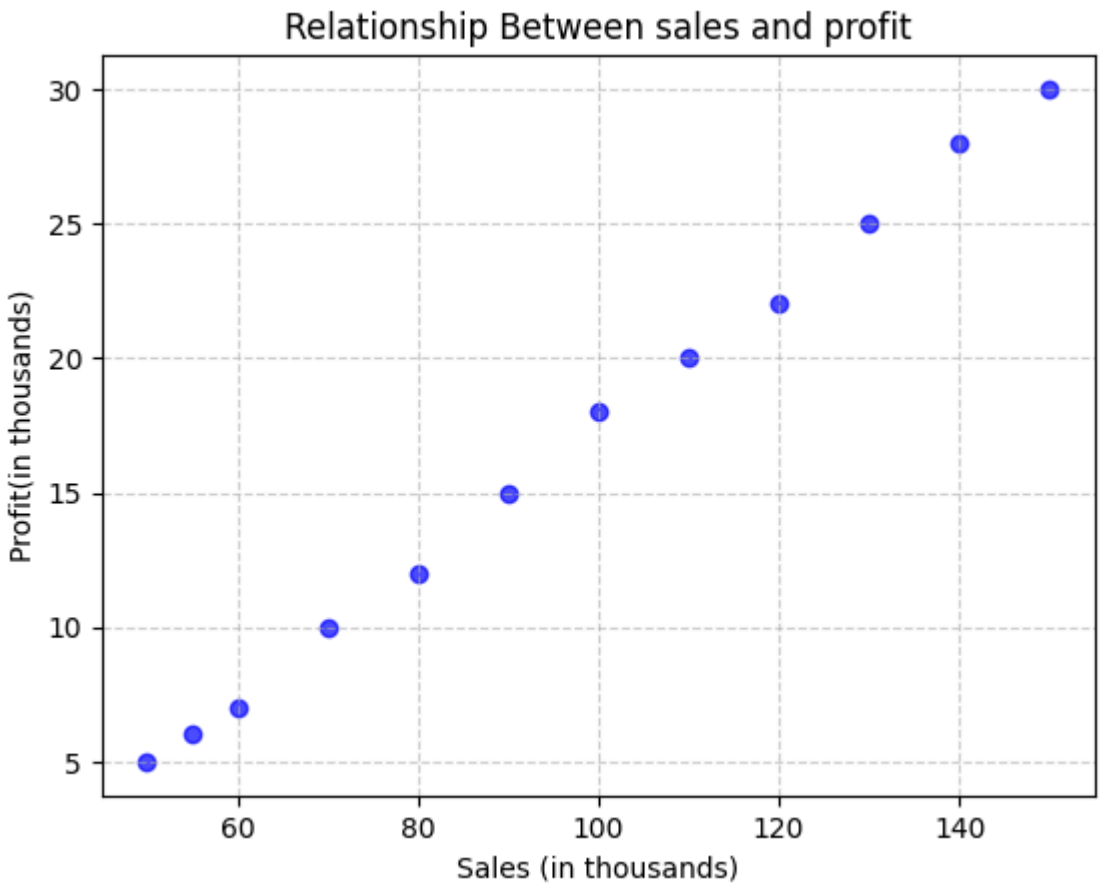
```
plt.xlabel('Days of the Week')
plt.ylabel('Temperature (°C)')
plt.title('Temperature Comparison Between Two Cities')
plt.legend()

# Display the plot
plt.show()
```



In [30]:
```
#3.Distributiuon of daily website visitors using histogram

import matplotlib.pyplot as plt

visitor_data = [120, 135, 110, 125, 140, 150, 130, 160, 145, 135, 170, 190, 155,

plt.hist(visitor_data, bins=8, color='skyblue', edgecolor='black')

plt.xlabel('Number of visitors')
plt.ylabel('Frequency')
plt.title('Distribution of Daily Website Visitors')

plt.show()
```

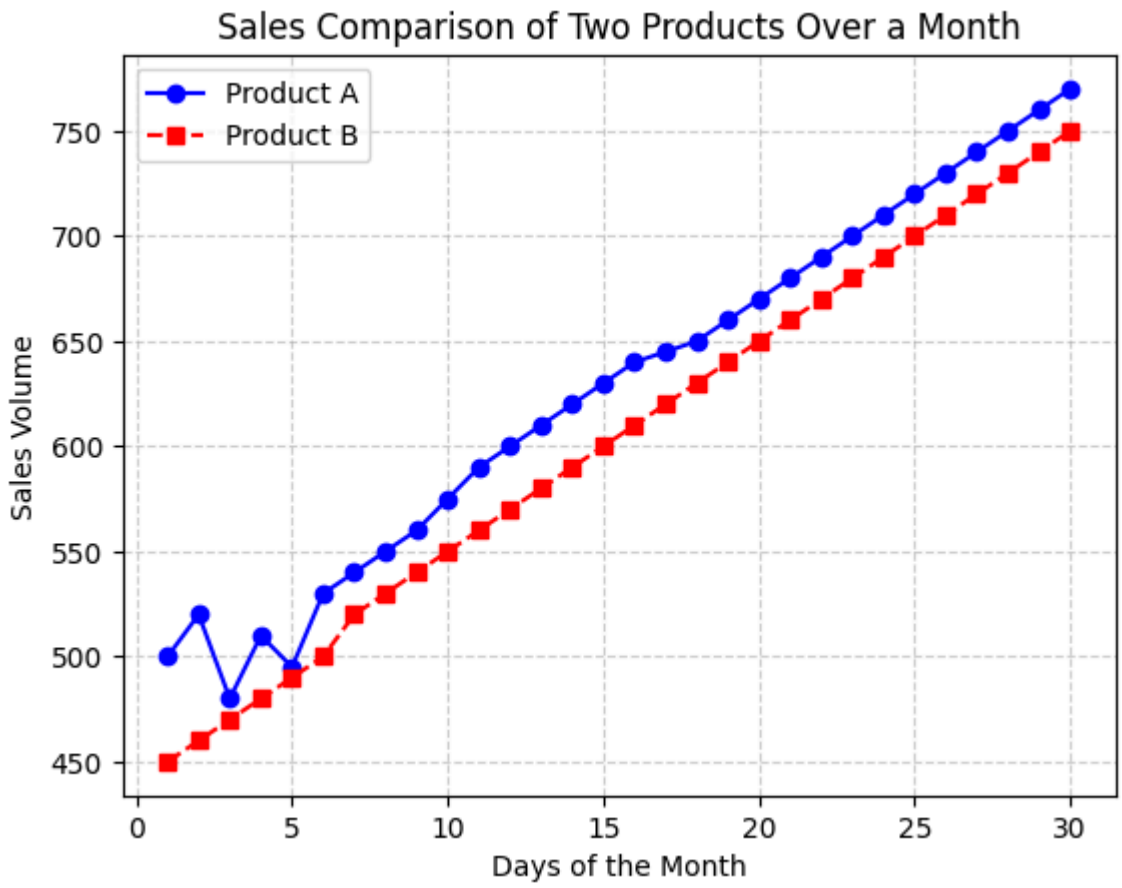


In [31]:
```python
#4.Make a relation between sales and profit using scatter plot(use grid)

import matplotlib.pyplot as plt

sales = [ 50, 55, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150]
profit = [5, 6, 7, 10, 12, 15, 18, 20, 22, 25, 28, 30]

plt.scatter(sales, profit, color='blue', marker='o', alpha=0.7)
plt.grid(True, linestyle='--', alpha=0.6)

plt.xlabel('Sales (in thousands)')
plt.ylabel('Profit(in thousands)')
plt.title('Relationship Between sales and profit')

plt.show()
```



In [37]:
```
#5.Sales comparision of 2 products over a month

import matplotlib.pyplot as plt

# Days of the month
days = list(range(1, 31))

# Sample sales data for two products
product_A_sales = [500, 520, 480, 510, 495, 530, 540, 550, 560, 575,
                   590, 600, 610, 620, 630, 640, 645, 650, 660, 670,
                   680, 690, 700, 710, 720, 730, 740, 750, 760, 770]

product_B_sales = [450, 460, 470, 480, 490, 500, 520, 530, 540, 550,
                   560, 570, 580, 590, 600, 610, 620, 630, 640, 650,
                   660, 670, 680, 690, 700, 710, 720, 730, 740, 750]

# Creating the line plot
plt.plot(days, product_A_sales, label='Product A', marker='o', linestyle='-', co
plt.plot(days, product_B_sales, label='Product B', marker='s', linestyle='--', c

# Adding grid for better readability
plt.grid(True, linestyle='--', alpha=0.6)

# Adding labels and title
plt.xlabel('Days of the Month')
plt.ylabel('Sales Volume')
plt.title('Sales Comparison of Two Products Over a Month')

# Adding legend
plt.legend()
```

```
# Showing the plot
plt.show()
```



In [ ]: