In [18]:
```
import numpy as np
```

In [19]:
```
#1.create an array of Employee with salary and display the employees whose salary i
```

In [20]:
```
# Create an array of employee names
employee_names = np.array(["Alice", "Bob", "Charlie", "David", "Eve"])

# Create an array of employee salaries
employee_salaries = np.array([60000, 45000, 55000, 30000, 75000])

# Filter employees with salary less than 50,000
low_salary_indices = np.where(employee_salaries < 50000)

# Display employees with salary less than 50,000
print("Employees with salary less than 50,000:")
for index in low_salary_indices[0]:
    print(f"{employee_names[index]}: {employee_salaries[index]}")
```

```
Employees with salary less than 50,000:
Bob: 45000
David: 30000
```

In [21]:
```
# 2. Suppose you have a dataset containing daily temperature readings for a city, a
# where the temperature either exceeded 35 degrees Celsius (hot day) or dropped bel
```

In [22]:
```
# Input: daily temperature readings (in degrees Celsius)
temperatures = np.array([32.5, 34.2, 36.8, 29.3, 31.0, 38.7, 23.1, 18.5,
                         22.8, 37.2, 4, 25, 12, -4, -12])

# Identify hot days (temperature > 35 degrees Celsius)
hot_days = np.where(temperatures > 35)

# Identify cold days (temperature < 5 degrees Celsius)
cold_days = np.where(temperatures < 5)

print("Hot days (temperature > 35°C):")
for index in hot_days[0]:
    print(f"Day {index + 1}: {temperatures[index]}°C")

print("Cold days (temperature < 5°C):")
for index in cold_days[0]:
    print(f"Day {index + 1}: {temperatures[index]}°C")
```

```
Hot days (temperature > 35°C):
Day 3: 36.8°C
Day 6: 38.7°C
Day 10: 37.2°C
Cold days (temperature < 5°C):
Day 11: 4.0°C
Day 14: -4.0°C
Day 15: -12.0°C
```

In [23]:
```
# 3. Suppose you have a dataset containing monthly sales data for a company, and yo
# Input: monthly_sales = np.array([120, 135, 148, 165, 180, 155, 168, 190, 205, 198
```

In [24]:
```
# Input: monthly sales data
monthly_sales = np.array([120, 135, 148, 165, 180, 155, 168, 190, 205, 198, 210, 22

# Split the data into quarters
Q1_sales = monthly_sales[0:3]
Q2_sales = monthly_sales[3:6]
Q3_sales = monthly_sales[6:9]
Q4_sales = monthly_sales[9:12]

print("Q1 sales:", Q1_sales)
print("Q2 sales:", Q2_sales)
print("Q3 sales:", Q3_sales)
print("Q4 sales:", Q4_sales)
```

```
Q1 sales: [120 135 148]
Q2 sales: [165 180 155]
Q3 sales: [168 190 205]
Q4 sales: [198 210 225]
```