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In [1]: # create an array of Employee with salary and display the employees whose salary is less than
class Employee:
    def __init__(self, name, salary):
        self.name = name
        self.salary = salary

employees = [
    Employee("Alice", 45000),
    Employee("Bob", 60000),
    Employee("Charlie", 48000),
    Employee("David", 35000),
    Employee("Eve", 55000)
]
print("Employees with salary less than 50,000:")
for employee in employees:
    if employee.salary < 50000:
        print(f"Name: {employee.name}, Salary: {employee.salary}")
```

Employees with salary less than 50,000:  
 Name: Alice, Salary: 45000  
 Name: Charlie, Salary: 48000  
 Name: David, Salary: 35000

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In [3]: # 2. Suppose you have a dataset containing daily temperature readings for a city, and you want to find
# where the temperature either exceeded 35 degrees Celsius (hot day) or dropped below 5 degrees Celsius (cold day)

# Input:

# 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, 10, 15, 20, 25, 30, 35, 40])
import numpy as np

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, 10, 15, 20, 25, 30, 35, 40])

hot_days = temperatures > 35
cold_days = temperatures < 5

print("Hot days (temperature > 35°C):", temperatures[hot_days])
print("Cold days (temperature < 5°C):", temperatures[cold_days])
```

Hot days (temperature > 35°C): [36.8 38.7 37.2]  
 Cold days (temperature < 5°C): [ 4. -4. -12.]

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In [4]: # 3. Suppose you have a dataset containing monthly sales data for a company, and you want to find the
# quarterly sales data

# Input: monthly_sales = np.array([120, 135, 148, 165, 180, 155, 168, 190, 205, 198, 210, 225, 130, 145, 160, 175, 190, 205, 220, 235, 250, 265, 280])
import numpy as np

monthly_sales = np.array([120, 135, 148, 165, 180, 155, 168, 190, 205, 198, 210, 225, 130, 145, 160, 175, 190, 205, 220, 235, 250, 265, 280])

quarterly_sales = monthly_sales.reshape(4, 3)

print("Quarterly Sales Data:")
for i, quarter in enumerate(quarterly_sales, start=1):
    print(f"Quarter {i}: {quarter}")
```

Quarterly Sales Data:  
 Quarter 1: [120 135 148]  
 Quarter 2: [165 180 155]  
 Quarter 3: [168 190 205]  
 Quarter 4: [198 210 225]

In [ ]: