# Python Programming Exercises

## 1. Factorial using a user-defined function

def factorial(n):  
 result = 1  
 for i in range(1, n+1):  
 result \*= i  
 return result  
  
num = 5  
print("Factorial:", factorial(num))

## 2. Sum of numbers in a list

def sum\_list(numbers):  
 return sum(numbers)  
  
print("Sum:", sum\_list([1, 2, 3, 4]))

## 3. Factorial using recursion

def factorial\_recursive(n):  
 if n == 0 or n == 1:  
 return 1  
 return n \* factorial\_recursive(n - 1)  
  
print("Recursive Factorial:", factorial\_recursive(5))

## 4. Uppercase all strings in a list

def uppercase\_list(strings):  
 return [s.upper() for s in strings]  
  
print("Uppercase:", uppercase\_list(["hello", "world"]))

## 5. Operations on a list of numbers

numbers = []  
n = int(input("Enter the number of elements: "))  
for \_ in range(n):  
 numbers.append(float(input("Enter a number: ")))  
  
print("Sum:", sum(numbers))  
print("Largest number:", max(numbers))  
print("Smallest number:", min(numbers))