1. Write a Python program to calculate the sum of a list of numbers using recursion.

2. Write a Python program to convert an integer to a string in any base using recursion .

3. Write a Python program to sum recursion lists using recursion.
Test Data: [1, 2, [3,4], [5,6]]
Expected Result: 21

4. Write a Python program to get the factorial of a non-negative integer using recursion.

5. Write a Python program to solve the Fibonacci sequence using recursion.

6. Write a Python program to get the sum of a non-negative integer using recursion.
Test Data:
sumDigits(345) -> 12
sumDigits(45) -> 9

7. Write a Python program to calculate the sum of the positive integers of n+(n-2)+(n-4)... (until n-x =< 0) using recursion .
Test Data:
sum_series(6) -> 12
sum_series(10) -> 30

8. Write a Python program to calculate the sum of harmonic series upto n terms.
Note: The harmonic sum is the sum of reciprocals of the positive integers.
Example :

$$1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5}+\cdots$$

9. Write a Python program to calculate the geometric sum up to 'n' terms.
Note: In mathematics, a geometric series is a series with a constant ratio between successive terms.

10. Write a Python program to calculate the value of 'a' to the power of 'b' using recursion.
Test Data :
(power(3,4) -> 81

11. Write a Python program to find the greatest common divisor (GCD) of two integers using recursion.