**Write a Python Program to print the fibonacci series upto n\_terms using Recursion.**

def recursive\_fibonacci(n):

if n <= 1:

return n

else:

return(recursive\_fibonacci(n-1) + recursive\_fibonacci(n-2))

n\_terms = int(input())

if n\_terms <= 0:

print("Invalid input ! Please input a positive value")

else:

print("Fibonacci series:")

for i in range(n\_terms):

print(recursive\_fibonacci(i))

**Write a Python Program to print factorial of a number recursively.**

def recursive\_factorial(n):

if n == 1:

return n

else:

return n \* recursive\_factorial(n-1)

num = int(input())

if num < 0:

print("Invalid input ! Please enter a positive number.")

elif num == 0:

print("Factorial of number 0 is 1")

else:

print("Factorial of number", num, "=", recursive\_factorial(num))

**Write a Python Program Using a recursive function to calculate the sum of a sequence**

def sum(n):

if n > 0:

return n + sum(n-1)

return 0

n=int(input())

result = sum(n)

print(result)

**Write a python Program Using Recursive Function which  calculates the value of a number multiplied by itself a certain number of times.**

def power(num, topwr):

if topwr == 0:

return 1

else:

return num \* power(num, topwr - 1)

n=int(input())

x=int(input())

print('{} to the power of {} is {}'.format(n, x, power(n, x)))

**Write a Program to Create a recursive function to reverse a string.**

def reverse(string):

if len(string) == 0:

return string

else:

return reverse(string[1:]) + string[0]

reverseme = input()

print(reverse(reverseme))

**Write a Python Program to calculate the GCD of the given two numbers using Recursive function**

def GCD(a, b):

if b == 0:

return a # Base case

return GCD(b, a % b) # Tail Recursive Call

n1=int(input())

n2=int(input())

print(GCD(n1,n2))

**Write a python program to convert the given decimal number to binary number using recursive function.**

def decimal\_binary(n):

if int(n) != n:

return "Parameter can be only be an integer value"

if n == 0:

return 0

else:

return (n % 2) + 10 \* decimal\_binary(int(n/2))

n=int(input())

print(decimal\_binary(n))

**Write a short recursive python function that finds the maximum value in a sequence without using any loops.**

def maximum\_in\_list(nums):

l = len(nums)

if l == 1:

return nums[0]

m1 = maximum\_in\_list(nums[0:l//2])

m2 = maximum\_in\_list(nums[l//2:l])

if m1 > m2:

return m1

else:

return m2

**Use recursion to write a Python function for determining if a string has more vowels than consonants return True otherwise False.**

def if\_more\_vowels(string):

def count\_vowels(string):

l = len(string)

if l == 1:

if string.lower() in ['a', 'e', 'i', 'o', 'u']:

return 1

return 0

vowels\_a = count\_vowels(string[0:l//2])

vowels\_b = count\_vowels(string[l//2:l])

return vowels\_a + vowels\_b

vowels = count\_vowels(string)

if vowels > len(string) - vowels:

return True

return False

str1=input()

print(if\_more\_vowels(str1))

**Write a Python program to calculate the harmonic sum of n-1.  
*Note*: The harmonic sum is the sum of reciprocals of the positive integers.  
  
Example:  
harmonic series**

def harmonic\_sum(n):

if n < 2:

return 1

else:

return 1 / n + (harmonic\_sum(n - 1))

n=int(input())

print(harmonic\_sum(n))

**Write a python program to calculate the length of the given string using recursion**

def length(str):

if str == "":

return 0

return 1 + length(str[1:])

str = input()

x=length(str)

print("length of", str, "is", x)

**Write a python program using nested loop to find the prime numbers between 2 to 100.**

i = 2

while(i < 100):

j = 2

while(j <= (i/j)):

if not(i%j): break

j = j + 1

if (j > i/j) : print(i, " is prime")

i = i + 1

**Write a python program to print the following pattern**

**5 4 3 2 1  
5 4 3 2  
5 4 3  
5 4  
5**

i=1

n=int(input())

while(i<=n):

j=n

while(j>=i):

print(j, end=' ')

j-=1

i+=1

print()

**Write a Python program to print the following pattern based on the given input.**

**input:6**

**output:**

**\*  
\*\*  
\*\*\*  
\*\*\*\*  
\*\*\*\*\***

x=int(input())

for i in range(x):

for j in range(i):

print('\*', end='')

print()

**Write a python program to print the following pattern based on the given input.**

**Input:6  
Output:**

**1  
2 2  
3 3 3  
4 4 4 4  
5 5 5 5 5**

n=int(input())

for i in range(1, n):

for j in range(i):

print(i, end=' ')

print()