1. Write a Python Program to Display Fibonacci Sequence Using Recursion?

Ans. def genFibonacci(n,a,b):

    if n == 0:

        return 1

    else:

        result = a+b

        print(result, end=', ')

        genFibonacci(n-1,b,result)

in\_num = int(input('Enter the length of Series: '))

print('0, 1',end=', ')

genFibonacci(in\_num,1,2)

1. Write a Python Program to Find Factorial of Number Using Recursion?

Ans. def factorial(num):

    if (num < 1):

        return 1

    else:

        return num\*factorial(num-1)

num = int(input('Enter a number: '))

value = factorial(num)

print(f'The Factorial of {num} is {value}')

1. Write a Python Program to calculate your Body Mass Index?

Ans. def calculateBMI():

    in\_weight = eval(input('Enter your Weight(kgs): '))

    in\_height = eval(input('Enter your Height(mts): '))

    calc\_bmi = in\_weight/pow(in\_height,2)

    if (calc\_bmi < 18.5):

        status = 'Underweight'

    elif (calc\_bmi >= 18.5 and calc\_bmi < 24.9):

        status = 'Healthy'

    elif (calc\_bmi >= 24.9 and calc\_bmi < 30):

        status = 'Overweight'

    elif (calc\_bmi >=30):

        status = 'Suffering from Obesity'

    print(f'Your\'re BMI is {calc\_bmi} and status is {status} ')

calculateBMI()

1. Write a Python Program to calculate the natural logarithm of any number?

Ans. import math

def genNatLog():

    in\_num = eval(input("Enter a Number:"))

    print(math.log(in\_num))

genNatLog()

1. Write a Python Program for cube sum of first n natural numbers?

Ans. def cubeOfNaturalNumbers():

    in\_num = int(input("Enter the no of Natural Numbers: "))

    result = pow(((in\_num \* (in\_num +1))/2),2)

    print(f'The Cube Sum of First {in\_num} Natural Numbers is {result}')

cubeOfNaturalNumbers()