**Programming\_Assignment-6**

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

# Python program to display the Fibonacci sequence

def recur\_fibo(n):

if n <= 1:

return n

else:

return(recur\_fibo(n-1) + recur\_fibo(n-2))

nterms = 10

# check if the number of terms is valid

if nterms <= 0:

print("Plese enter a positive integer")

else:

print("Fibonacci sequence:")

for i in range(nterms):

print(recur\_fibo(i))

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

def recur\_factorial(n):

if n == 1:

return n

else:

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

# take input from the user

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

# check is the number is negative

if num < 0:

print("Sorry, factorial does not exist for negative numbers")

elif num == 0:

print("The factorial of 0 is 1")

else:

print("The factorial of",num,"is",recur\_factorial(num))

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

height = float(input("Input your height in Feet: "))

weight = float(input("Input your weight in Kilogram: "))

print("Your body mass index is: ", round(weight / (height \* height), 2))

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

import math

print ("Natural logarithm of 14 is : ", end="")

print (math.log(14))

print ("Logarithm base 5 of 14 is : ", end="")

print (math.log(14,5))

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

def sumOfSeries(n):

sum = 0

for i in range(1, n+1):

sum +=i\*i\*i

return sum

# Driver Function

n = 3

print(sumOfSeries(n))