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

def fibonacci(n):

if n <= 1:

return n

else:

return fibonacci(n-1) + fibonacci(n-2)

# Get user input for the number of terms to generate

terms = int(input("Enter the number of terms: "))

# Check if the number of terms is valid

if terms <= 0:

print("Invalid input. Please enter a positive integer.")

else:

print("Fibonacci sequence:")

for i in range(terms):

print(fibonacci(i))

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

def factorial(n):

if n == 0:

return 1

else:

return n \* factorial(n-1)

# Get user input for the number to calculate factorial of

num = int(input("Enter a non-negative integer: "))

# Check if the number is valid

if num < 0:

print("Invalid input. Please enter a non-negative integer.")

else:

print(f"The factorial of {num} is {factorial(num)}")

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

weight = float(input("Enter your weight in kilograms: "))

height = float(input("Enter your height in meters: "))

# Calculate BMI

bmi = weight / (height \*\* 2)

# Print BMI

print("Your Body Mass Index (BMI) is:", round(bmi, 2))

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

import math

# Get user input for the number

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

# Calculate natural logarithm

logarithm = math.log(num)

# Print the result

print("The natural logarithm of", num, "is", logarithm)

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

n = int(input("Enter the value of n: "))

cube\_sum = 0

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

cube\_sum += i\*\*3

print("The cube sum of first", n, "natural numbers is", cube\_sum)