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

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 Display the multiplication Table?

Ans. def generateTable(base,entries):

for x in range(1,entries+1):

print(f'{base} X {x} = {base\*x}')

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

values = int(input('Enter no of entries: '))

generateTable(num,values)

1. Write a Python Program to Print the Fibonacci sequence?

Ans. s\_count = int(input('Enter the no of fibonacci sequences you want? '))

initial\_list = [0,1]

if s\_count < 0:

print('Fibonacci Numbers are not available for Negative Numbers')

elif s\_count <= 2 and s\_count >= 0:

print(initial\_list)

else:

for ins in range(s\_count):

if ins >= 2:

initial\_list.append(initial\_list[ins-1]+initial\_list[ins-2])

print(f'The First {s\_count} fibonacci series are: ',initial\_list)

1. Write a Python Program to Check Armstrong Number?

Ans. def checkArmstrongNumber():

    in\_num = input('Enter a number: ')

    sum = 0

    for char in range(len(in\_num)):

        sum = sum + pow(int(in\_num[char]),3)

    if sum == int(in\_num):

        print(f'{in\_num} is a Armstrong Number')

    else:

        print(f'{in\_num} is a Not Armstrong Number')

for x in range(2):

    checkArmstrongNumber()

1. Write a Python Program to Find Armstrong Number in an Interval?

Ans. def checkArmstrongNumber(in\_num, storage):

sum = 0

for char in range(len(in\_num)):

sum = sum + pow(int(in\_num[char]),3)

if sum == int(in\_num):

storage.append(int(in\_num))

start\_interval = int(input('Enter the Start of the Interval: '))

end\_interval = int(input('Enter the End of the Interval: '))

list\_of\_armstrong = []

if start\_interval > end\_interval:

print("Start Interval Cannot be Greater than End Interval")

else:

for number in range(start\_interval,end\_interval+1):

checkArmstrongNumber(str(number),list\_of\_armstrong)

print(f'The Armstrong numbers between {start\_interval} and {end\_interval} are {list\_of\_armstrong}')

1. Write a Python Program to Find the Sum of Natural Numbers?

Ans. def sumOfNaturalNumbers(num):

sum = num\*((num+1)/2)

print(f'Sum of {num} natural numbers is {sum}')

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

sumOfNaturalNumbers(num)