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

def factorial(n):

if n < 0:

return 0

elif n == 0 or n == 1:

return 1

else:

return n \* factorial(n-1)

factorial(15)

**# 2. Write a Python Program to Display the multiplication Table?**

num = int(input("Dispaly the multiplication table of : "))

for i in range(1,13):

print(num, 'x', i, '=', num\*i)

**# 3. Write a Python Program to Print the Fibonacci sequence?**

**# Xn = Xn-1 + Xn-2**

#defining the function to calculate fibonacci

def fibonacci(n):

if n <= 1:

return n

else:

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

# taking user input

data = int(input("Enter the fibonacci no: "))

# calling the function to go through user input

if data <= 0:

print("Enter a positive no")

else:

print("The fibonacci seq is:")

for i in range(data):

print(fibonacci(i))

**# 4. Write a Python Program to Check Armstrong Number?**

arm\_no = int(input("Enter the no :"))

#calculating the length of the number-variable to string for calculatiing

# the length of number of digits

length = len(str(arm\_no))

#intializing a varibale

sum = 0

#finding the sum, based on the length of the user input

temp = arm\_no

while temp > 0:

num = temp % 10 #considers the last element of the input

sum += num \*\* length

temp //= 10 #every iteration removes the last element

# diplaying input

if arm\_no == sum:

print(arm\_no, "Its an armstrong no")

else:

print(arm\_no, "Its not an armstrong no")

**# 5. Write a Python Program to Find Armstrong Number in an Interval?**

lower = int(input("Enter the lower range: "))

upper = int(input("Enter the upper range: "))

for arm\_no in range(lower, upper +1):

length = len(str(arm\_no))

sum = 0

temp = arm\_no

while temp > 0:

num = temp % 10 #considers the last element of the input

sum += num \*\* length

temp //= 10 #every iteration removes the last element

if arm\_no == sum:

print(arm\_no)

**# \* 6. Write a Python Program to Find the Sum of Natural Numbers?**

num = int(input("enter the natural nos: "))

if num < 0:

print("Enter a positive no")

else:

sum = 0

while(num > 0):

sum += num

num = num - 1

print(sum)