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

Sol:- def factorial(n):

if n == 0:

return 1

else:

return n \* factorial(n-1)

# test the function

num = 5

print("Factorial of", num, "is", factorial(num))

1. Write a Python Program to Display the multiplication Table?

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

# iterate 10 times

for i in range(1, 11):

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

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

Sol:- def fibonacci(n):

a, b = 0, 1

count = 0

if n <= 0:

print("Please enter a positive integer.")

elif n == 1:

print("Fibonacci sequence upto", n, ":")

print(a)

else:

print("Fibonacci sequence upto", n, ":")

while count < n:

print(a)

c = a + b

a = b

b = c

count += 1

# Example usage

fibonacci(10)

1. Write a Python Program to Check Armstrong Number?

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

temp = num

sum = 0

# find the sum of the cube of each digit

while temp > 0:

digit = temp % 10

sum += digit \*\* 3

temp //= 10

# display the result

if num == sum:

print(num, "is an Armstrong number")

else:

print(num, "is not an Armstrong number")

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

Sol:- lower = int(input("Enter lower range: "))

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

print("Armstrong numbers in the given range are:")

for num in range(lower, upper + 1):

order = len(str(num))

sum = 0

temp = num

while temp > 0:

digit = temp % 10

sum += digit \*\* order

temp //= 10

if num == sum:

print(num)

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

Sol:- num = int(input("Enter a positive integer: "))

sum = 0

if num <= 0:

print("Enter a positive integer")

else:

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

sum += i

print("The sum of first", num, "natural numbers is", sum)