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

# Function to calculate the factorial of a number

def factorial(num):

if num == 0:

return 1

else:

return num \* factorial(num-1)

# Main code

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

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

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

# Main code

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

print("Multiplication table of", num)

for i in range(1, 11):

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

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

# Function to generate the nth Fibonacci number

def fibonacci(n):

if n <= 0:

return 0

elif n == 1:

return 1

else:

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

# Main code

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

print("The first", n, "terms of the Fibonacci sequence:")

for i in range(n):

print(fibonacci(i), end=", ")

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

# Main code

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

# Calculate the sum of the cubes of each digit

sum = 0

temp = num

while temp > 0:

digit = temp % 10

sum += digit \*\* 3

temp //= 10

# Check if the sum is equal to the original number

if num == sum:

print(num, "is an Armstrong number")

else:

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

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

# Function to calculate the sum of the cubes of each digit

def sum\_of\_cubes(num):

sum = 0

temp = num

while temp > 0:

digit = temp % 10

sum += digit \*\* 3

temp //= 10

return sum

# Main code

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

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

print("Armstrong numbers in the interval", lower, "and", upper, ":")

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

if num == sum\_of\_cubes(num):

print(num)

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

# Main code

n = int(input("Enter the number of natural numbers to sum: "))

# Calculate the sum of the first n natural numbers

sum = 0

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

sum += i

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