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

def factorial(n):

if n == 0:

return 1

else:

return n \* factorial(n - 1)

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

result = factorial(number)

print("Factorial of", number, "is", result)

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

def multiplication\_table(number):

for i in range(1, 11):

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

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

multiplication\_table(number)

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

def fibonacci\_sequence(n):

fib\_sequence = [0, 1]

while len(fib\_sequence) < n:

next\_fib = fib\_sequence[-1] + fib\_sequence[-2]

fib\_sequence.append(next\_fib)

return fib\_sequence

num\_terms = int(input("Enter the number of Fibonacci terms: "))

fibonacci\_result = fibonacci\_sequence(num\_terms)

print("Fibonacci Sequence:", fibonacci\_result)

1. Write a Python Program to Check Armstrong Number?

def is\_armstrong\_number(number):

num\_str = str(number)

num\_digits = len(num\_str)

armstrong\_sum = sum(int(digit) \*\* num\_digits for digit in num\_str)

return armstrong\_sum == number

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

if is\_armstrong\_number(num):

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?

def is\_armstrong\_number(number):

num\_str = str(number)

num\_digits = len(num\_str)

armstrong\_sum = sum(int(digit) \*\* num\_digits for digit in num\_str)

return armstrong\_sum == number

start = int(input("Enter the starting number of the interval: "))

end = int(input("Enter the ending number of the interval: "))

armstrong\_numbers = [num for num in range(start, end + 1) if is\_armstrong\_number(num)]

print("Armstrong numbers in the interval:", armstrong\_numbers)

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

def sum\_of\_natural\_numbers(n):

return (n \* (n + 1)) // 2

num\_terms = int(input("Enter the number of natural numbers: "))

sum\_result = sum\_of\_natural\_numbers(num\_terms)

print("Sum of first", num\_terms, "natural numbers is", sum\_result)