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

**Sol:**

num = 7

fact = 1

if num<0:

    print("its not possiblr")

elif num ==0:

    print("factorial of 0 is 1")

else:

    for i in range(1,num+1):

        fact = fact\*i

    print(fact)

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

**Sol:**

num = 7

for i in range(1,11):

    print(num,"x",i,"=",num\*i)

**OR**

num = 8

count = 0

while count<=10:

    count=count+1

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

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

Sol:

def fab (n):

    a = 0

    b = 1

    if n == 1:

     print(a)

    elif n <=0:

      print("please enter a positive number")

    else:

     print(a)

     print(b)

    for i in range(2,n):

        c = a+b

        a = b

        b = c

        print(c)

fab(10)

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

Sol:

# Python program to check if the number is an Armstrong number or not

# take input from the user

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

# initialize sum

sum = 0

# find the sum of the cube of each digit

temp = num

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")

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

**Sol:**

# Program to check Armstrong numbers in a certain interval

lower = 100

upper = 2000

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

   # order of number

   order = len(str(num))

   # initialize sum

   sum = 0

   temp = num

   while temp > 0:

       digit = temp % 10

       sum += digit \*\* order

       temp //= 10

   if num == sum:

       print(num)

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

**Sol:**

# Sum of natural numbers up to num

num = 16

if num < 0:

   print("Enter a positive number")

else:

   sum = 0

   # use while loop to iterate until zero

   while(num > 0):

       sum += num

       num -= 1

   print("The sum is", sum)