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

ANS: num = 7

# To take input from the user

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

factorial = 1

# check if the number is negative, positive or zero

if num < 0:

print("Sorry, factorial does not exist for negative numbers")

elif num == 0:

print("The factorial of 0 is 1")

else:

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

factorial = factorial\*i

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

The factorial of 7 is 5040

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

ANS: num = 12

# To take input from the user

# num = int(input("Display multiplication table of? "))

# Iterate 10 times from i = 1 to 10

for i in range(1, 11):

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

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

ANS: nterms = int(input("How many terms? "))

# first two terms

n1, n2 = 0, 1

count = 0

# check if the number of terms is valid

if nterms <= 0:

print("Please enter a positive integer")

# if there is only one term, return n1

elif nterms == 1:

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

print(n1)

# generate fibonacci sequence

else:

print("Fibonacci sequence:")

while count < nterms:

print(n1)

nth = n1 + n2

# update values

n1 = n2

n2 = nth

count += 1

1. Write a Python Program to Check Armstrong Number?

ANS: def power(x, y):

if y == 0:

return 1

if y % 2 == 0:

return power(x, y // 2) \* power(x, y // 2)

return x \* power(x, y // 2) \* power(x, y // 2)

# Function to calculate order of the number

def order(x):

# Variable to store of the number

n = 0

while (x != 0):

n = n + 1

x = x // 10

return n

# Function to check whether the given

# number is Armstrong number or not

def isArmstrong(x):

n = order(x)

temp = x

sum1 = 0

while (temp != 0):

r = temp % 10

sum1 = sum1 + power(r, n)

temp = temp // 10

# If condition satisfies

return (sum1 == x)

# Driver code

x = 153

print(isArmstrong(x))

x = 1253

print(isArmstrong(x))

True

False

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

ANS: 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)

153

370

371

407

1637

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

ANS: # 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)

The sum is 36