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

Ans.

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

factorial = 1

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)

OUTPUT:

Enter a number: 5

The factorial of 5 is 120

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

Ans.

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

for i in range(1, 11):

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

OUTPUT:

Display multiplication table of? 5

5 x 1 = 5

5 x 2 = 10

5 x 3 = 15

5 x 4 = 20

5 x 5 = 25

5 x 6 = 30

5 x 7 = 35

5 x 8 = 40

5 x 9 = 45

5 x 10 = 50

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

if nterms <= 0:

print("Please enter a positive integer")

elif nterms == 1:

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

print(n1)

else:

print("Fibonacci sequence:")

while count < nterms:

print(n1)

nth = n1 + n2

# update values

n1 = n2

n2 = nth

count += 1

OUTPUT:

How many terms? 10

Fibonacci sequence:

0

1

1

2

3

5

8

13

21

34

1. Write a Python Program to Check Armstrong Number?

Ans.

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

sum = 0

temp = num

while temp > 0:

digit = temp % 10

sum += digit \*\* 3

temp //= 10

if num == sum:

print(num,"is an Armstrong number")

else:

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

OUTPUT:

Enter a number: 10

10 is not an Armstrong number

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

Ans.

lower = 1

upper = 10000

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)

OUTPUT:

1

2

3

4

5

6

7

8

9

153

370

371

407

1634

8208

9474

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

Ans.

num = 10

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)

OUTPUT:

The sum is 55