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

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

# A factorial is multiplying consequent numbers from one until the number given.

def factorial():

numb = int(input("Enter your number until which you want to find the factorial: "))

fact = 1

# using backwards iteration until 1

for i in range(numb,0,-1):

fact \*= i

print("The factorial of the number is :",fact)

try:

factorial()

lg.info("Function factorial() has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass

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

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

def tables():

number = int(input("Enter which number table you want to display: "))

values = int(input("Enter upto what value you would like to display table: "))

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

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

try:

tables()

lg.info("Function has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass

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

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

def fibonnacci(number):

a = 1

b = 1

if number == 1:

print(a , end = ", ")

if number == 2:

print(a , end = ", ")

print(b , end = ", ")

if number >2:

print(a, end = ", ")

print(b, end = ", ")

for fib in range(number-2):

c = a+b

print(c, end = ", ")

a = b

b = c

# defining a function to print our required string

try:

fibonnacci(5)

lg.info("Function fibonnacci() has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass

1. Write a Python Program to Check Armstrong Number?

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

def check\_armstrong(number):

armstrong = 0

test = number

for i in range(len(str(number))):

rem = test%10

armstrong += rem\*\*len(str(number))

test = test//10

if armstrong == number:

print(number, " is an Armstrong number")

else:

print("It is not an Armstrong number")

# defining a function to print our required string

try:

check\_armstrong(153)

lg.info("Function check\_armstrong() has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass

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

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

# defining function to find Armstrong number in a limit

def armstrong():

es = []

starting\_limit = int(input("Enter your starting number of range to find Armstrong number : "))

ending\_limit = int(input("Enter last number of range to find Armstrong number : "))

for i in range(starting\_limit, ending\_limit+1):

armstrong = 0

num = i

for j in range(len(str(i))):

rem = num%10

armstrong += rem\*\*len(str(i))

num = num//10

if armstrong == i:

es.append(armstrong)

print("Armstrong numbers in the given limit are :", es)

try:

armstrong()

lg.info("Function has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass

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

Ans.

import logging as lg

# importing logging so every function call of

lg.basicConfig(filename ='C:\\Users\\Home\\Johns python talent\\logging\\testlog1.log', level =lg.INFO , format = '%(asctime)s %(message)s')

# defining the function to find the sum of 'n' natural numbers

def sum\_of\_natural():

print("Enter an integer upto which you want to find the sum of natural numbers")

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

# This is the basic mathematical formula, it is better than a loop, as iterations are less

natural = number \*(number+1)/2

print("The sum of ",number,"natural numbers is", int(natural))

# defining a function to print our required string

try:

sum\_of\_natural()

lg.info("Function sum\_of\_natural() has been called")

except exception as e:

print("There was an error called: ",e)

else:

pass

finally:

pass