1. Write a Python Program to Display Fibonacci Sequence Using Recursion?

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 fibo(n):

if n ==1:

return 1

if n ==2:

return 1

if n>2:

fib = fibo(n-1)+fibo(n-2)

return fib

try:

for i in range(1,11):

print(fibo(i), end = " ")

lg.info("Function fibo() has been called 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 Factorial of Number Using Recursion?

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 factorial(n):

facto = 1

if n ==1:

return 1

if n ==2:

return 2

if n >2:

facto \*= n\*factorial(n-1)

return facto

try:

print("the factorial of 5 is", factorial(5))

lg.info("Function factorial(5)has been called has been called")

except exception as e:

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

else:

pass

finally:

pass

1. Write a Python Program to calculate your Body Mass Index?

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 bmi():

weight = float(input("Enter your weightin kgs: "))

height = float(input("Enter your height in meters: "))

BMI = weight/(height\*\*2)

print("your body mass index BMI is", BMI,"kg/m.sq")

if BMI < 18.5:

print("your BMI is low")

if BMI > 18.5 and BMI <24.9:

print("your BMI is in a healthy range")

if BMI > 24.9:

print("your BMI is high , you are over weight")

try:

bmi()

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

except exception as e:

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

else:

pass

finally:

pass

1. Write a Python Program to calculate the natural logarithm of any 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 find\_log(n):

import math

x = 0.0001

while True:

logarithm = (math.e)\*\*x

if logarithm >(n - 0.0001):

print("natural log of", n, "is approximately", x)

break

else:

x += 0.0001

try:

find\_log(6)

lg.info("Function find\_log(6) has been called")

except exception as e:

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

else:

pass

finally:

pass

1. Write a Python Program for cube sum of first n 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')

def sum\_of\_cubes(number):

total = (number\*\*2)\*((number+1)\*\*2)/4

print("sum of cubes upto",number,"terms is", total)

try:

sum\_of\_cubes(5)

lg.info("Function find\_log(6) has been called")

except exception as e:

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

else:

pass

finally:

pass