1. Write a Python program to convert kilometers to miles?

Ans.

import logging as lg

# importing logging so every function call can be logged in a log file

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

# defining tthe main function to convert km to miles, using the defined conversion from km to miles according to physics

def km\_to\_miles():

km = float(input("Enter your kilometers: "))

miles = km \* 0.621371

print("your distance in miles is: ", miles)

try:

# in the try block the defined fucntion will be called first time to see if it is working

km\_to\_miles()

lg.info("Function km\_to\_miles() has been called")

# as astandard procedure we allocate the expection block as well in case the try block doesn't execute

except exception as e:

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

else:

pass

finally:

pass

1. Write a Python program to convert Celsius to Fahrenheit?

Ans.

import logging as lg

# importing logging so every function call of defined function can be logged

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

# defining main function here which converts Celsius to farenheit

def celsius\_to\_farenheit():

celsius = float(input("Enter your Temperature value in celsius: "))

farenheit = (9/5)\*celsius +32

print("your temperature in Farenheit is: ",farenheit)

try:

celsius\_to\_farenheit()

lg.info("Function celsius\_to\_farenheit() 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 calendar?

Ans.

import logging as lg

import calendar

# importing logging so every function call of defined function can be logged into our log sheet

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

def show\_calendar():

import calendar

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

month = int(input("Enter your month from 1 to 12: "))

if month in range(1,13):

print(calendar.month(year,month))

else:

print("kindly enter only integer from 1 to 12 for month to avoid failure of calendar display")

try:

show\_calendar()

lg.info("Function show\_calendar() has been called")

except exception as e:

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

else:

pass

finally:

pass

#Alternate function for showing calendar, this also works

#def show\_calendar1():

# import calendar

# while True:

# print("to exit function kindly put 'exit' in place of year and month")

# year = input("Enter your year: ")

# month = input("Enter your month from 1 to 12: ")

# try:

# if int(month) in range(1,13):

# print(calendar.month(int(year),int(month)))

# except:

# print("you have exited the program now")

# break

1. Write a Python program to solve quadratic equation?

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 solve\_quad():

# it is important to import math so that square root function math.sqrt() can be called inside

# this function basically uses the analytical formyla for roots of a quadratic equation once the constants values are given by user

import math

print(" for solving the quadratic equation Ax^2 +Bx + C")

A = float(input("Enter the value of A: "))

B = float(input("Enter the value of B: "))

C = float(input("Enter the value of C: "))

if ((B\*\*2)-(4\*A\*C)) < 0:

return "The roots are complex"

det = math.sqrt((B\*\*2)-(4\*A\*C))

x1 = (-B + det)/(2\*A)

x2 = (-B - det)/(2\*A)

print("The root X1 of equation is : ", x1)

print("The root X2 of equation is : ", x2)

try:

solve\_quad()

lg.info("Function solve\_quad() has been called")

except exception as e:

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

else:

pass

finally:

pass

1. Write a Python program to swap two variables without temp variable?

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 swap\_two\_numbers():

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

b = int(input("Enter first number: "))

#a= 5 , b = 9 for example

a = a + b

# a = 5 + 9 = 14

b = a - b

# b = 14 - 9 = 5

a = a - b

# a = 14 - 5 = 9

# even if return is used it will give the swapped numbers, unlike simply printing the opposite number

print("The swapped number 'a' is", a )

print("The swapped number 'b' is", b )

print("the numbers have been swapped without using third variable")

try:

swap\_two\_numbers()

lg.info("Function swap\_two\_numbers() has been called")

except exception as e:

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

else:

pass

finally:

pass