1. Write a Python Program to Check if a Number is Positive, Negative or Zero?

Ans.

# program to check if a number is positive , negative or zero

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')

def check\_num():

while True:

try:

print("To exit the program just enter any string in place")

a = int(input("enter your number for testing: "))

if a == 0:

print("The number is equal to zero")

elif a < 0:

print("Number is negative")

else:

print("the number is positive")

except:

print("you have entered something other than a number, you will exit the program now")

break

try:

check\_num()

lg.info("Function check\_num() 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 if a Number is Odd or Even?

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')

def test\_for\_odd\_or\_even():

while True:

try:

print("To exit the program just enter any string in place")

a = int(input("enter your number for testing: "))

if a == 0:

print("The number is neither odd nor even")

elif a%2 == 0:

print("The number is even")

else:

print("Number is odd")

except:

print("you have entered something other than a number, you will exit the program now")

break

try:

test\_for\_odd\_or\_even()

lg.info("Function test\_for\_odd\_or\_even() 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 Leap Year?

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')

def check\_leap\_year():

test\_year = int(input("Enter your year: "))

if test\_year % 400 == 0:

# all years divided by 400 are automatically a leap year according to the astronomy rules

print("It is a leap year")

else:

if test\_year%4 == 0:

# all years which are a multiple of 4 are also leap years

print("It is a leap year")

else:

# if remainder is not zero it is not a multiple of 4 so it is not a leap year

print("It is not a leap year")

try:

check\_leap\_year()

lg.info("Function check\_leap\_year() 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 Prime Number?

Ans.

def check\_if\_prime(sample):

for i in range(1,sample-1):

if i >1:

if sample%i == 0:

print("This is not a prime number")

break

else:

print("It is a prime number")

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')

try:

check\_if\_prime(31)

lg.info("Function check\_if\_prime(41) 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 all Prime Numbers in an Interval of 1-10000?

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')

def find\_prime(starting,ending):

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

if i>1:

for j in range(2,i-1):

if i%j == 0:

break

else:

print(i, end = ", ")

try:

find\_prime(1,1000)

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

except exception as e:

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

else:

pass

finally:

pass