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

Ans. def checkNumber(num):

    if num > 0:

        print('{} is a Postive number'.format(num))

    elif num < 0:

        print('{} is a Negative number'.format(num))

    else:

        print("Number is Zero")

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

checkNumber(num)

1. Write a Python Program to Check if a Number is Odd or Even?

Ans. def checkNumber(num):

    if num%2 == 0:

        print('{} is a Even number'.format(num))

    else:

        print('{} is a Odd number'.format(num))

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

checkNumber(num)

1. Write a Python Program to Check Leap Year?

Ans. def checkYear(year):

    if (year%4 == 0 and year%100 != 0 or year%400 == 0):

        print(f'{year} is a Leap year')

    else:

        print(f'{year} is not a Leap year')

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

checkYear(year)

1. Write a Python Program to Check Prime Number?

Ans. def isPrime(num):

    flag = False

    for i in range(2,num):

        if num%i ==0:

            flag= True

            break

    if(not flag):

        print(f'{num} is a prime number')

    else:

        print(f'{num} is not a prime number')

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

isPrime(number)

1. Write a Python Program to Print all Prime Numbers in an Interval of 1-10000?

Ans. primeNumbersList = []

def generatePrimeNumbers():

    for x in range(1,10000):

        flag=False

        for y in range(2,x):

            if (x%y ==0):

                flag = True

                break

        if (not flag):

            primeNumbersList.append(x)

generatePrimeNumbers()

print(primeNumbersList)