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

A. # take input for the number

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

# check if the number is positive, negative or zero

if num > 0:

print("The number is positive.")

elif num < 0:

print("The number is negative.")

else:

print("The number is zero.")

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

A. # take input for the number

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

# check if the number is odd or even

if num % 2 == 0:

print("The number is even.")

else:

print("The number is odd.")

1. Write a Python Program to Check Leap Year?

A. # take input for the year

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

# check if the year is a leap year or not

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

print(year, "is a leap year.")

else:

print(year, "is not a leap year.")

1. Write a Python Program to Check Prime Number?

A. # take input for the number

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

if num > 1:

for i in range(2, num):

if num % i == 0:

print(num, "is not a prime number.")

break

else:

print(num, "is a prime number.")

else:

print(num, "is not a prime number.")

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

A. # define a function to check if a number is prime or not

def is\_prime(num):

if num > 1:

for i in range(2, num):

if num % i == 0:

return False

else:

return True

else:

return False

# loop through the interval of 1-10000 and print prime numbers

for i in range(1, 10001):

if is\_prime(i):

print(i)