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

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

if num > 0:

print("Positive number")

elif num == 0:

print("Zero")

else:

print("Negative number")

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

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

if (num % 2) == 0:

print("{0} is Even".format(num))

else:

print("{0} is Odd".format(num))

1. Write a Python Program to Check Leap Year?

Ans : if (year % 400 == 0) and (year % 100 == 0):

print("{0} is a leap year".format(year))

# not divided by 100 means not a century year

# year divided by 4 is a leap year

elif (year % 4 ==0) and (year % 100 != 0):

print("{0} is a leap year".format(year))

# if not divided by both 400 (century year) and 4 (not century year)

# year is not leap year

else:

print("{0} is not a leap year".format(year))

1. Write a Python Program to Check Prime Number?

Ans : # Program to check if a number is prime or not

num = 29

# To take input from the user

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

# define a flag variable

flag = False

# prime numbers are greater than 1

if num > 1:

# check for factors

for i in range(2, num):

if (num % i) == 0:

# if factor is found, set flag to True

flag = True

# break out of loop

break

# check if flag is True

if flag:

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

else:

print(num, "is a prime number")

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

Ans : lower = 900

upper = 1000

print("Prime numbers between", lower, "and", upper, "are:")

for num in range(lower, upper + 1):

# all prime numbers are greater than 1

if num > 1:

for i in range(2, num):

if (num % i) == 0:

break:

else:

print(num)