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

number = int(input('input any number : '))

if number > 0:

print(f'{number} is a positive number')

elif number < 0:

print(f'{number} is a negative number')

else:

print("it's a zero")

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

number = int(input('input any number : '))

if number % 2 == 0:

print(f'{number} is an even number')

else:

print(f'{number} is an odd number')

1. Write a Python Program to Check Leap Year?

year = int(input('input year : '))

if year % 4 == 0:

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

else:

print(f"{year} isn't a leap year")

1. Write a Python Program to Check Prime Number?

number = int(input('input any number: '))

divisors = [i for i in range(1, number+1)]

factors = [i for i in divisors if number % i == 0]

if len(factors) == 2:

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

else:

print(f"{number} isn't a prime number")

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

numbers = [i for i in range(1, 10001)]

primes = []

for n in numbers:

divisors = [i for i in range(1, n+1)]

factors = [i for i in divisors if n % i == 0]

if len(factors) == 2:

primes.append(n)

else:

continue

print(f'all prime numbers in an interval of 1-10000:\n{primes}')