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

def check\_number(num):

if num > 0:

return "The number is positive."

elif num < 0:

return "The number is negative."

else:

return "The number is zero."

# Example usage

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

result = check\_number(number)

print(result)

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

def check\_odd\_or\_even(num):

if num % 2 == 0:

return "The number is even."

else:

return "The number is odd."

# Example usage

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

result = check\_odd\_or\_even(number)

print(result)

1. Write a Python Program to Check Leap Year?

def is\_leap\_year(year):

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

return True

else:

return False

# Example usage

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

if is\_leap\_year(year):

print(f"{year} is a leap year.")

else:

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

1. Write a Python Program to Check Prime Number?

def is\_prime(n):

if n <= 1:

return False

for i in range(2, int(n\*\*0.5) + 1):

if n % i == 0:

return False

return True

# Example usage

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

if is\_prime(number):

print(f"{number} is a prime number.")

else:

print(f"{number} is not a prime number.")

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

def is\_prime(n):

if n <= 1:

return False

for i in range(2, int(n\*\*0.5) + 1):

if n % i == 0:

return False

return True

def print\_primes\_in\_interval(start, end):

for num in range(start, end + 1):

if is\_prime(num):

print(num)

# Example usage

print\_primes\_in\_interval(1, 10000)