1. Write a Python Program to Check if a Number is Positive, Negative or Zero?
2. Write a Python Program to Check if a Number is Odd or Even?
3. Write a Python Program to Check Leap Year?
4. Write a Python Program to Check Prime Number?
5. Write a Python Program to Print all Prime Numbers in an Interval of 1-10000?
6. **Write a Python Program to Check if a Number is Positive, Negative or Zero?**

**Sol:**

def check\_number(num):

    if num == 0:

        return "zero"

    elif num > 0:

        return "positive"

    else:

        return "negative"

print("please enter a number")

number = int(input())

print("The number is "+ check\_number(number))

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

**Sol:**

def check\_odd\_even(num):

if num % 2 == 0:

return "even"

else:

return "odd"

print("please enter a number")

number = int(input())

print("The number is " + check\_odd\_even(number))

**3. Write a Python Program to Check Leap Year?**

**Sol:**

def check\_leap\_year(year):

if year % 4 == 0:

return "leap year"

else:

return "non-leap year"

print("please enter a year to check")

year = int(input())

print("The year is a " + check\_leap\_year(year))

**4. Write a Python Program to Check Prime Number?**

**Sol:**

def check\_prime(num):

i = 2

if(num <= 1):

return False

while(i<=math.sqrt(num)):

if((num % i)==0):

return False

i=i+1

return True

print("please enter a number to check if prime")

number = int(input())

if(check\_prime(number)):

print("The number is a prime number")

else:

print("The number is not a prime number")

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

**Sol:**

import math

def check\_prime(num):

i = 2

if(num <= 1):

return False

while(i<=math.sqrt(num)):

if((num % i)==0):

return False

i=i+1

return True

for number in range(1,10000):

    if(check\_prime(number)):

        print(number)