**ANSWERS**

**Q1. Write a Python Program to check if a number is positive, negative or zero?**

**Ans.** Please find below the code to check if a number is positive, negative or zero:

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

if number > 0:

print("Positive")

elif number < 0:

print("Negative")

else:

print("Zero")

**Q2. Write a Python Program to check if a number is odd or even?**

**Ans.** Please find below the code to check if a number is odd or even:

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

if number % 2 == 0:

print("Even")

else:

print("Odd")

**Q3. Write a Python Program to check leap year?**

**Ans.** Please find below the code to check leap year:

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

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

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

else:

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

**Q4. Write a Python Program to check prime number?**

**Ans.** Please find below the code to check prime number:

def is\_prime(number):

if number <= 1:

return False

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

if number % i == 0:

return False

return True

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")

**Q5. Write a Python Program to print all prime numbers in an interval of 1-10000?**

**Ans.** Please find below the code to print all prime numbers in an interval of 1-10000:

def is\_prime(number):

if number <= 1:

return False

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

if number % i == 0:

return False

return True

print("Prime numbers in the interval 1-10000:")

for num in range(1, 10001):

if is\_prime(num):

print(num, end=", ")