1.Write a program to check if a number is even or odd

num=int(input("enter a number"))

if num%2==0:

print ("num is even")

else:

print("num is odd")

2. Write a program to check if a number is positive, negative, or zero.

num=int(input("enter a number"))

if num>0:

print("num is posiive")

elif num<0:

print("num is negative")

else:

print("num is zero")

3. Write a program to check if a number is divisible by both 3 and 5.

num=int(input("enter a number"))

if num%3==0 and num%5==0:

print ("num is divisible by both 3 and 5")

else:

print("not divisible")

4. Write a program to find the maximum of two numbers

num1=int(input("enter a number"))

num2=int(input("enter a number"))

if num1>num2:

print("num1 is greater than num2")

elif num2>num1:

print("num2 is greater than num1")

else:

print("nothing")

5. Write a program to check if a year is a leap year

num=int(input("enter a number"))

if num%4==0 and num%400==0:

print("it is a leap year")

else:

print("it is not a leap year")

6. Write a program to determine if a person is eligible to vote (age ≥ 18)

num=int(input("enter a number"))

if num>=18 :

print("you are eligibile")

else:

print("you are not elgible")

7. Write a program to assign a grade based on marks:

A (90–100), B (75–89), C (50–74), Fail (<50)

num=int(input("enter a number"))

if 90<=num<=100:

print("A grade")

elif 75<=num<=89:

print("B grade")

elif 50<=num<=74:

print("C grade")

else:

print("fail")

8.Write a program to check whether a triangle is valid based on its sides.

x=input("enter side a")

y=input("enter side b")

z=input("enter side c")

if (x+y>z) and (x+z>y) and (y+z>x):

print("triangle is vaild")

else:

print("triangle is not valid")

9.Write a program to check if a number is within the range 10 to 50 (inclusive).

num=int(input("enter a number"))

if 10<num<50:

print("number is btw the range")

else:

print("numer is not btw the range")

10.Write a program to check if a number is a three-digit number (i.e., from 100 to 999 or -100 to -999).

num=int(input("enter a number"))

if 100<=num<=999 or -999<=num<=-100:

print("it is a three digit number")

else:

print("it is not a three digit number")

or

num=int(input("enter a number"))

if 100<=abs(num)<=999:

print("it is a three digit number")

else:

print("it is not a three digit number")