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

Ans) num=int(input(**"enter a number:"**))  
 **if** num<0:  
 print(**"number is negative"**)  
 **elif** num>0:  
 print(**"Number is positive"**)  
 **else**:  
 print(**"number is zero"**)

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

Ans) num=int(input(**"enter a number:"**))  
**if** num%2==0:  
 print(**"This is a prime number"**)  
**else**:  
 print(**"This is a odd number"**)

1. Write a Python Program to Check Leap Year?

Ans) year = int(input(**"enter a year:"**))  
**if** (year % 400 == 0) **and** (year % 100 == 0):  
 print(“leap year”)  
**elif** (year % 4 ==0) **and** (year % 100 != 0):  
 print(“leap year”)  
**else**:  
 print(“not a leap year”)

1. Write a Python Program to Check Prime Number?

Ans) num=int(input(**"enter a number:"**))  
**if** num==2:  
 print(**"prime number"**)  
**elif** num%2==0 **and** num>1:  
 print(**"not prime number"**)  
**else**:  
 print(**"prime no"**)

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

Ans (**for** i **in** range(1,10000):  
 **if** (i%2==0) **and** i>2:  
 print(**"not a prime"**,i)  
 **else**:  
 print(**"prime"**,i)