

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

```
N = int(input())  
if N > 0:  
    print("Positive")  
elif N < 0:  
    print("Negative")  
else:  
    print("zero")
```

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

```
N = int(input())  
if N % 2 == 0:  
    print("The number is even")  
else:  
    print("the number is odd")
```

3. Write a Python Program to Check Leap Year?

```
year = 2005  
  
if(year % 400 == 0) and (year%100 == 0):  
    print(f"{year} is a leap year")  
elif(year % 4 == 0) and (year % 100 != 0):  
    print(f"{year} is a leap year")  
else:  
    print(f"{year} is not a leap year")
```

4. Write a Python Program to Check Prime Number?

```
num = 25  
  
flag = False  
  
if num == 1:  
    print(num, "is not a prime number")  
elif num > 1:  
    for i in range (2, num):  
        if (num % i) ==0:  
            flag = True  
            break  
if flag == True:  
    print(num, "is not a prime number")  
else:  
    print(num, "is a prime number")
```

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

```
lower = 1  
upper = 10000  
  
print("Prime numbers between", lower, "and", upper, "are:")  
  
for num in range(lower, upper + 1):  
  
    if num > 1:
```

```
for i in range(2, num):  
    if (num % i) == 0:  
        break  
else:  
    print(num)
```