Programming Assignment 3

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?

In [1]:
```python
#1.   Write a Python Program to Check if a Number is Positive, Negative or Zero?
a = float(input('Enter any number'))
if a >0:
    print('Number ', a, ' is positive')
elif a < 0 :
    print('Number ', a, ' is negetive')
else:
    print('Number ', a, ' is Zero')
```

```
Enter any number3
Number  3.0  is positive
```

In [2]:
```python
#2.     Write a Python Program to Check if a Number is Odd or Even?
a = int(input('Enter any integer'))
if a%2==0:
    print('Number ', a, ' is Even')
else:
    print('Number ', a, ' is Odd')
```

```
Enter any integer7
Number  7  is Odd
```

In [3]:
```python
#3.     Write a Python Program to Check Leap Year?
a = int(input('Enter any year:'))
if a%4==0:
    print(a, ' is Leap year')
else:
    print( a, ' is not Leap year')
```

```
Enter any year:2022
2022  is not Leap year
```

In [4]:
```python
#4.     Write a Python Program to Check Prime Number?
a = int(input('Enter any number:'))
prime=True
for i in range(2,a):

    if(a%i==0):
        print(a,' is not prime number, it is divisible by: ',i)
        prime=False
        break
if prime:
    print(a, "is a prime number")
```

```
Enter any number:4
4  is not prime number, it is divisible by:  2
```

In [7]:
```python
#5.     Write a Python Program to Print all Prime Numbers in an Interval of 1-10000?
for a in range(1,10001):
    prime=True

    for i in range(2,a):
```

```
        if(a%i==0):

            prime=False
            break
    if prime:
        print(a, "is a prime number")
```

1 is a prime number
2 is a prime number
3 is a prime number
5 is a prime number
7 is a prime number
11 is a prime number
13 is a prime number
17 is a prime number
19 is a prime number
23 is a prime number
29 is a prime number
31 is a prime number
37 is a prime number
41 is a prime number
43 is a prime number
47 is a prime number
53 is a prime number
59 is a prime number
61 is a prime number
67 is a prime number
71 is a prime number
73 is a prime number
79 is a prime number
83 is a prime number
89 is a prime number
97 is a prime number
101 is a prime number
103 is a prime number
107 is a prime number
109 is a prime number
113 is a prime number
127 is a prime number
131 is a prime number
137 is a prime number
139 is a prime number
149 is a prime number
151 is a prime number
157 is a prime number
163 is a prime number
167 is a prime number
173 is a prime number
179 is a prime number
181 is a prime number
191 is a prime number
193 is a prime number
197 is a prime number
199 is a prime number
211 is a prime number
223 is a prime number
227 is a prime number
229 is a prime number
233 is a prime number
239 is a prime number
241 is a prime number
251 is a prime number
257 is a prime number
263 is a prime number
269 is a prime number
271 is a prime number
277 is a prime number
281 is a prime number

```
283 is a prime number
293 is a prime number
307 is a prime number
311 is a prime number
313 is a prime number
317 is a prime number
331 is a prime number
337 is a prime number
347 is a prime number
349 is a prime number
353 is a prime number
359 is a prime number
367 is a prime number
373 is a prime number
379 is a prime number
383 is a prime number
389 is a prime number
397 is a prime number
401 is a prime number
409 is a prime number
419 is a prime number
421 is a prime number
431 is a prime number
433 is a prime number
439 is a prime number
443 is a prime number
449 is a prime number
457 is a prime number
461 is a prime number
463 is a prime number
467 is a prime number
479 is a prime number
487 is a prime number
491 is a prime number
499 is a prime number
503 is a prime number
509 is a prime number
521 is a prime number
523 is a prime number
541 is a prime number
547 is a prime number
557 is a prime number
563 is a prime number
569 is a prime number
571 is a prime number
577 is a prime number
587 is a prime number
593 is a prime number
599 is a prime number
601 is a prime number
607 is a prime number
613 is a prime number
617 is a prime number
619 is a prime number
631 is a prime number
641 is a prime number
643 is a prime number
647 is a prime number
653 is a prime number
659 is a prime number
661 is a prime number
673 is a prime number
677 is a prime number
683 is a prime number
691 is a prime number
701 is a prime number
709 is a prime number
719 is a prime number
727 is a prime number
```