

# python\_basic\_programming\_3

May 12, 2023

1. Write a Python program to check if a Number is Positive, Negative or Zero ?

```
[1]: def checkNumber(num):  
    if num > 0:  
        print('{} is a Postive number'.format(num))  
    elif num < 0:  
        print('{} is a Negative number'.format(num))  
    else:  
        print("Number is Zero")  
  
num = int(input("Enter a number: "))  
checkNumber(num)
```

Enter a number: -5  
-5 is a Negative number

2. Write a Python program to check if a Number is Odd or Even ?

```
[2]: def AnyNumber(num):  
    if num%2 == 0:  
        print('{} is a Even number'.format(num))  
    else:  
        print('{} is a Odd number'.format(num))  
  
num = int(input("Enter a number: "))  
AnyNumber(num)
```

Enter a number: 28  
28 is a Even number

3. Write a Python program to check Leap Year ?

```
[4]: def checkYear(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')  
  
year = int(input("Enter year: "))  
checkYear(year)
```

Enter year: 2023  
2023 is not a Leap year

4. Write a Python program to check Prime Number ?

```
[5]: def isPrime(num):  
    flag = False  
    for i in range(2,num):  
        if num%i ==0:  
            flag= True  
            break  
    if(not flag):  
        print(f'{num} is a prime number')  
    else:  
        print(f'{num} is not a prime number')  
  
number = int(input("Enter a number: "))  
isPrime(number)
```

Enter a number: 5  
5 is a prime number

5. Write a Python program to print all Prime Numbers in an interval of 1-10000 ?

```
[7]: PrimeNumbersList = []  
  
def generatePrimeNumbers():  
    for x in range(1,10000):  
        flag=False  
        for y in range(2,x):  
            if (x%y ==0):  
                flag = True  
                break  
        if (not flag):  
            PrimeNumbersList.append(x)  
  
generatePrimeNumbers()  
print(PrimeNumbersList)
```

[1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97, 101, 103, 107, 109, 113, 127, 131, 137, 139, 149, 151, 157, 163, 167, 173, 179, 181, 191, 193, 197, 199, 211, 223, 227, 229, 233, 239, 241, 251, 257, 263, 269, 271, 277, 281, 283, 293, 307, 311, 313, 317, 331, 337, 347, 349, 353, 359, 367, 373, 379, 383, 389, 397, 401, 409, 419, 421, 431, 433, 439, 443, 449, 457, 461, 463, 467, 479, 487, 491, 499, 503, 509, 521, 523, 541, 547, 557, 563, 569, 571, 577, 587, 593, 599, 601, 607, 613, 617, 619, 631, 641, 643, 647, 653, 659, 661, 673, 677, 683, 691, 701, 709, 719, 727, 733, 739, 743, 751, 757, 761, 769, 773, 787, 797, 809, 811, 821, 823, 827, 829, 839, 853, 857, 859, 863, 877, 881, 883, 887, 907, 911, 919, 929, 937, 941, 947, 953, 967, 971, 977, 983, 991, 997, 1009, 1013, 1019, 1021, 1031, 1033, 1039, 1049, 1051, 1061, 1063,

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