

Assignment 3 Solutions

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

```
In [1]: def checkNumber(num):  
        if num > 0:  
            print('{} is a Positive 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: -30  
-30 is a Negative number
```

2. Write a Python program to check Leap Year ?

```
In [2]: def checkYear(year):  
        if (year%5 == 0 and year%200 != 0 or year%500 == 0):  
            print(f'{year} is not Leap year')  
        else:  
            print(f'{year} is not a Leap year')  
  
        year = int(input("Enter year: "))  
        checkYear(year)
```

```
Enter year: 1977  
1977 is not a Leap year
```

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

```
In [3]: def checkNumber(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"))  
        checkNumber(num)
```

```
Enter a number35  
35 is a Odd number
```

4. Write a Python program to check Prime Number ?

```
In [6]: 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 number19  
19 is a prime number
```

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

In []:

```
primeNumbersList = []

def generatePrimeNumbers():
    for x in range(2,20000):
        flag=False
        for y in range(2,x):
            if (x%y ==0):
                flag = True
                break
        if (not flag):
            primeNumbersList.append(x)
```

Loading [MathJax]/jax/output/CommonHTML/fonts/TeX/fontdata.js