

Assignment 3

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

```
In [6]: def check_num(a):
        if a > 0:
            print("This is Positive")
        elif a == 0:
            print("This is Zero")
        else:
            print("This is Negative Number")
```

```
In [8]: check_num(1)

This is Positive
```

```
In [9]: check_num(-1)

This is Negative Number
```

```
In [10]: check_num(0)

This is Zero
```

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

```
In [11]: def check_even(a):
        if a % 2 == 0:
            print("This is a Even Number")
        else:
            print("This is an Odd Number")
```

```
In [12]: check_even(2)

This is a Even Number
```

```
In [13]: check_even(33)

This is an Odd Number
```

3. Write a Python Program to Check Leap Year?

```
In [37]: def check_leap(year):
        if (year % 4) == 0:
            if (year % 100) == 0:
                if (year % 400) == 0:
                    print("{0} is a leap year".format(year))
                else:
                    print("{0} is not a leap year".format(year))
            else:
                print("{0} is a leap year".format(year))
        else:
            print("{0} is not a leap year".format(year))
```

```
In [38]: check_leap1(2000)

2000 is a leap year
```

4. Write a Python Program to Check Prime Number?

```
In [108]: number = int(input("Enter any number: "))

if number > 1:
    for i in range(2, number):
        if (number % i) == 0:
            print(number, "is not a prime number")
            break
    else:
        print(number, "is a prime number")

else:
    print(number, "is not a prime number")

Enter any number: 56
56 is not a prime number
```

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

```
In [ ]: for num in range(1, 100001 + 1):
        if num > 1:
            for i in range(2, num):
                if (num % i) == 0:
                    break
            else:
                print(num)

## not printing the result, will be too lengthy
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```

```
In [ ]:
```