## Programming Assignment_3

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

```python
number = 10
if number >= 0:
  print("The number is a positive number")
else:
  print("The number is a negative number")
```

```
    The number is a positive number
```

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

```python
def OddEven(number):
  if number % 2 == 0:
    return "The number is even number"
  return "The number is odd number"

number1 = 1
number2 = 2
print(OddEven(number1))
print(OddEven(number2))
```

```
    The number is odd number
    The number is even number
```

## 3. Write a Python Program to Check Leap Year?

```python
def CheckLeap(Year):
  if((Year % 400 == 0) or (Year % 100 != 0) and (Year % 4 == 0)):
    print("Given Year is a leap Year");
  else:
    print ("Given Year is not a leap Year")
Year = 2004
CheckLeap(Year)
```

```
    Given Year is a leap Year
```

## 4. Write a Python Program to Check Prime Number?

```python
def isPrime(number):
  if number == 2:
    return True
  else:
    for i in range(2, number):
      if number % i == 0:
        return False
  return True

number1 = 2
number2 = 4
print(f'Number1 is a {isPrime(number1)}')
print(f'Number1 is a {isPrime(number2)}')
```

```
    Number1 is a True
    Number1 is a False
```

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

```python
list_of_prime_numbers = [2]
for i in range(3, 10000):
  if i % 2 == 0:
    continue
  flag = isPrime(i)
```

```
  if flag == True:
    list_of_prime_numbers.append(i)
  else:
    pass
print(list_of_prime_numbers)
```

    [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,

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