Assignment - 12 Full Stack Web Development using Python MySirG

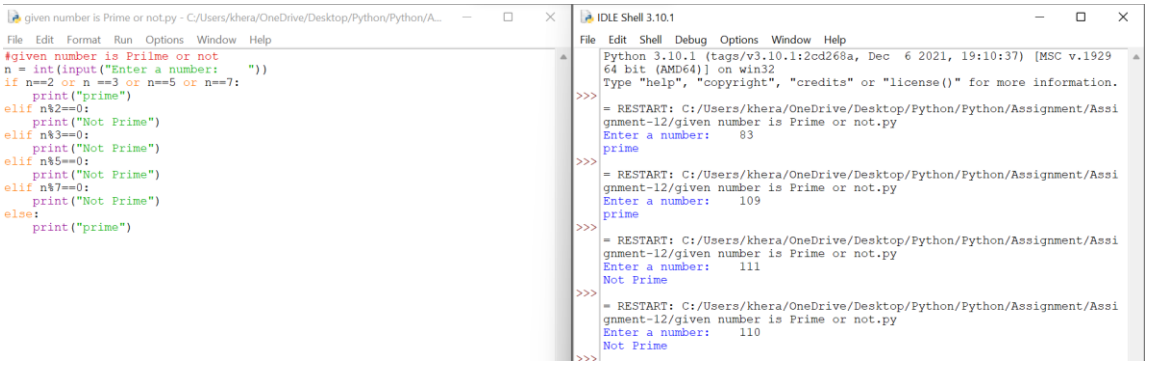
More on loops

1. Write a python script to reverse a number.

```
# a python script to reverse a number
n = int(input("Enter a number which you want to reverse:    "))
print()
r = 0
while (n!=0) :
    r = n%10
    n = n//10
    print(r,end = "")
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/Assignment - 12 (Python)- moreonloops.py
Enter a number which you want to reverse:    123456789

987654321

>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/Assignment - 12 (Python)- moreonloops.py
Enter a number which you want to reverse:    987654321

123456789
>>>
```

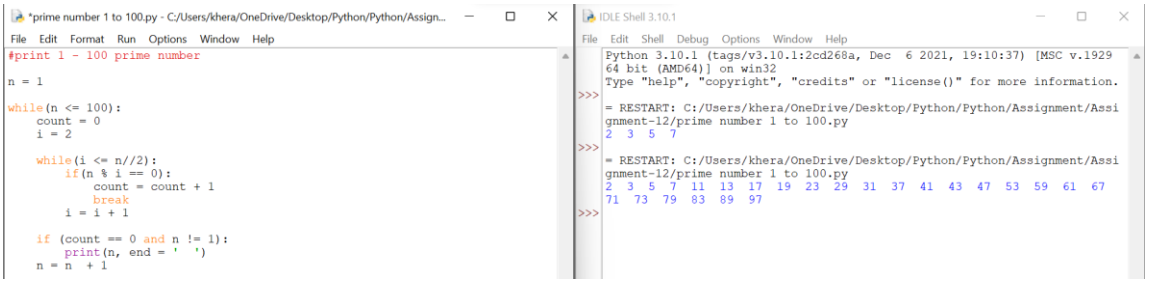
2. Write a python script to check whether a given number is Prime or not



```
#given number is Prilme or not
n = int(input("Enter a number:    "))
if n==2 or n ==3 or n==5 or n==7:
    print("prime")
elif n%2==0:
    print("Not Prime")
elif n%3==0:
    print("Not Prime")
elif n%5==0:
    print("Not Prime")
elif n%7==0:
    print("Not Prime")
else:
    print("prime")
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/given number is Prime or not.py
Enter a number:    83
prime
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/given number is Prime or not.py
Enter a number:    109
prime
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/given number is Prime or not.py
Enter a number:    111
Not Prime
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/given number is Prime or not.py
Enter a number:    110
Not Prime
>>>
```

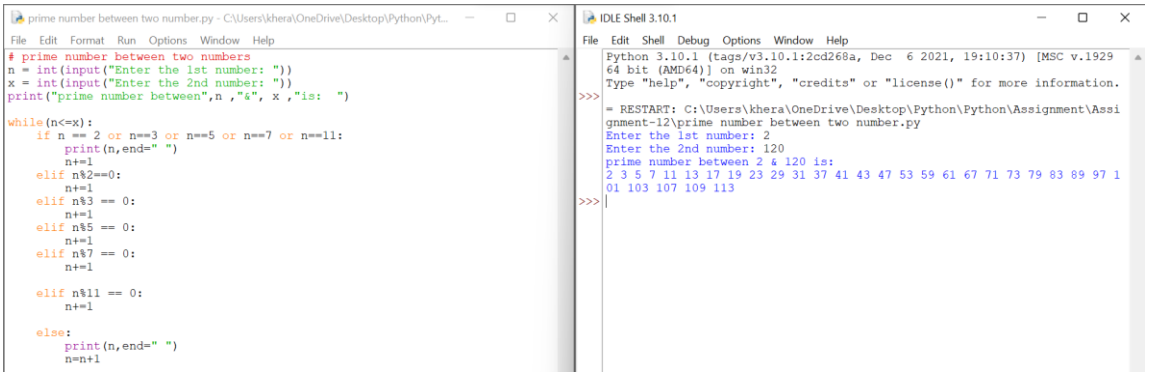
3. Write a python script to print all Prime numbers under 100



```
#print 1 - 100 prime number

n = 1

while(n <= 100):
    count = 0
    i = 2

    while(i <= n//2):
        if(n % i == 0):
            count = count + 1
            break
        i = i + 1

    if (count == 0 and n != 1):
        print(n, end = '  ')
    n = n  + 1
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/prime number 1 to 100.py
2  3  5  7
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/prime number 1 to 100.py
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
>>>
```

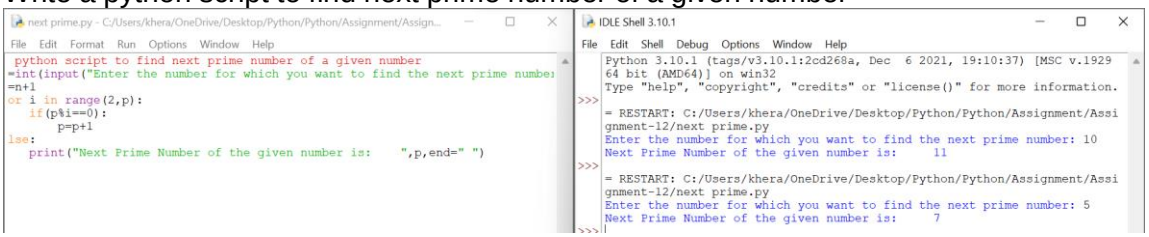
4. Write a python script to print all Prime numbers between two given numbers (both values inclusive)



```
# prime number between two numbers
n = int(input("Enter the 1st number: "))
x = int(input("Enter the 2nd number: "))
print("prime number between",n ,"&", x ,"is:  ")

while(n<=x):
    if n == 2 or n==3 or n==5 or n==7 or n==11:
        print(n,end=" ")
        n+=1
    elif n%2==0:
        n+=1
    elif n%3 == 0:
        n+=1
    elif n%5 == 0:
        n+=1
    elif n%7 == 0:
        n+=1

    elif n%11 == 0:
        n+=1

    else:
        print(n,end=" ")
        n=n+1
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:\Users\khera\OneDrive\Desktop\Python\Python\Assignment\Assi
gnment-12\prime number between two number.py
Enter the 1st number: 2
Enter the 2nd number: 120
prime number between 2 & 120 is:
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 1
01 103 107 109 113
>>>
```

5. Write a python script to find next prime number of a given number



```
 python script to find next prime number of a given number
=int(input("Enter the number for which you want to find the next prime numbe
=n+1
or i in range(2,p):
   if(p%i==0):
      p=p+1
lse:
   print("Next Prime Number of the given number is:    ",p,end=" ")
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/next prime.py
Enter the number for which you want to find the next prime number: 10
Next Prime Number of the given number is:     11
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/next prime.py
Enter the number for which you want to find the next prime number: 5
Next Prime Number of the given number is:     7
>>>
```

6. Write a python script to print first N prime numbers

```
# prime number between two numbers
#n = int(input("Enter the 1st number: "))

x = int(input("Enter the  number: "))
n=1
print("prime numbers are:  ", )
count = 0
while(count<x):
    if n == 2 or n==3 or n==5 or n==7 or n==11:
        print(n,end=" ")
        count+=1
        n+=1
    elif n%2==0:
        n+=1
    elif n%3 == 0:
        n+=1
    elif n%5 == 0:
        n+=1
    elif n%7 == 0:
        n+=1

    elif n%11 == 0:
        n+=1

    else:
        print(n,end=" ")
        count+=1
        n=n+1
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/N prime number.py
Enter the  number: 10
prime numbers are:
1 2 3 5 7 11 13 17 19 23
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/N prime number.py
Enter the  number: 20
prime numbers are:
1 2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/N prime number.py
Enter the  number: 30
prime numbers are:
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
>>>
```

7. Write a python script to check whether a given pair of numbers are co-Prime numbers or not.

```
# Co-prime or not
num1 = int(input("Enter the first number:   "))
num2 = int(input("Enter the Secound number:   "))
x = 0
count = 0
if num1>num2:
    x = num2
else:
    x = num1

for i in range(2,x//2):
    if (num1%i==0) and (num2%i==0):
        count+=1
        break
    else:
        count=0

if count>0 :
    print("Not Co-prime")

else:
    print("Co-prime")
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/Co-prime.py
Enter the first number:   1
Enter the Secound number:   99
Co-prime
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/Co-prime.py
Enter the first number:   77
Enter the Secound number:   133
Not Co-prime
>>>
```

8. Write a python script to print first N terms of a Fibonacci series

```
#python script to print first N terms of a Fibonacci series

n = int(input("Enter the number from where to find the fibonacci Series:   "
a,b=0,1
count = 0
if n <= 0:
   print("Please enter a positive integer")
# if there is only one term, return n1
elif n == 1:
   print("Fibonacci sequence upto",nterms,":")
   print(a)
# generate fibonacci sequence
else:
   print("Fibonacci sequence:")
   while count < n:
       print(a)
       nth = a + b
       # update values
       a = b
       b = nth
       count += 1
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/fibonacci series.py
Enter the number from where to find the fibonacci Series:    7
Fibonacci sequence:
0
1
1
2
3
5
8
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/fibonacci series.py
Enter the number from where to find the fibonacci Series:    4
Fibonacci sequence:
0
1
1
2
>>>
```

9. Write a python script to calculate LCM of two numbers

```
#python script to calculate LCM of two numbers
num1 = int(input("First Number:     "))
num2 = int(input("Secound Number:   "))
greater = 0
if num1 > num2:
    greater = num1

else:
    greater = num2

while(1):
    if (greater % num1 == 0) and (greater % num2 == 0):
        lcm = greater
        break
    greater +=1

print("LCM of the two Number is :    ",lcm)
print()
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/LCM.py
First Number:     26
Secound Number:   54
LCM of the two Number is :     702

>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/LCM.py
First Number:     15
Secound Number:   45
LCM of the two Number is :     45

>>>
```

10. Write a python script to calculate HCF of two numbers

```
# HCF of two numbers:
num1 =  int(input("Enter the First number:  "))
num2 = int(input("Enter the second number:  "))
smaller = 0
hcf = 0
if num1 > num2 :
    smaller = num2
else:
    smaller = num1

for i in range(1,smaller+1):
    if ((num1%i==0) and (num2%i==0)):
        hcf = i
print("HCF of the",num1,"and",num2,"is: ",hcf)
```

```
Python 3.10.1 (tags/v3.10.1:2cd268a, Dec  6 2021, 19:10:37) [MSC v.1929
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/HCF.py
Enter the First number:  54
Enter the second number:  24
HCF of the 54 and 24 is:  6
>>>
= RESTART: C:/Users/khera/OneDrive/Desktop/Python/Python/Assignment/Assi
gnment-12/HCF.py
Enter the First number:  10
Enter the second number:  100
HCF of the 10 and 100 is:  10
>>>
```