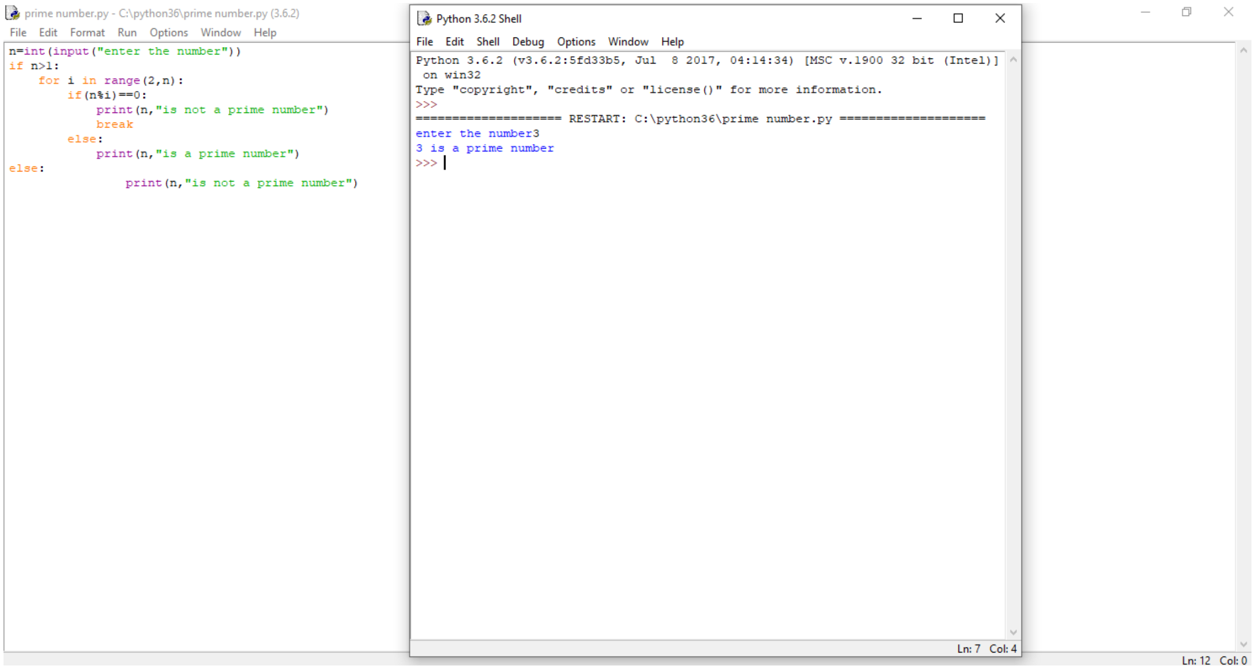
IBM ASSIGNMENT 1:

1.Write a python program to test a given number is prime or not.

PROGRAM

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

OUTPUT


prime number.py - C:\python36\prime number.py (3.6.2)
File Edit Format Run Options Window Help
Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Ln: 7 Col: 4
Ln: 12 Col: 0

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

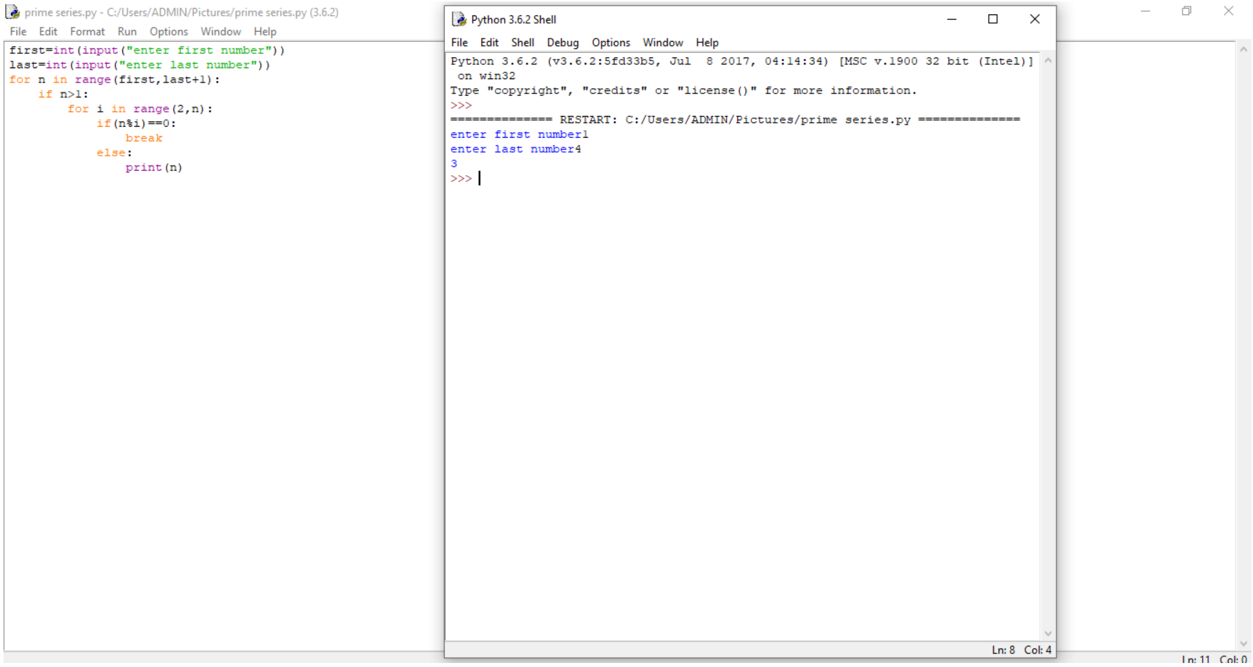
```
Python 3.6.2 (v3.6.2:5fd33b5, Jul  8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
 on win32
Type "copyright", "credits" or "license()" for more information.
>>>
==================== RESTART: C:\python36\prime number.py ====================
enter the number3
3 is a prime number
>>>
```

2.Write a python program to display prime number series up to given numbers.

PROGRAM

```
first=int(input("enter first number"))

last=int(input("enter last number"))

for n in range(first,last+1):

    if n>1:

        for i in range(2,n):

            if(n%i)==0:

                break

            else:

                print(n)
```

OUTPUT



prime series.py - C:/Users/ADMIN/Pictures/prime series.py (3.6.2)
File Edit Format Run Options Window Help
Ln: 11 Col: 0
Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Ln: 8 Col: 4

```
first=int(input("enter first number"))
last=int(input("enter last number"))
for n in range(first,last+1):
    if n>1:
        for i in range(2,n):
            if(n%i)==0:
                break
            else:
                print(n)
```

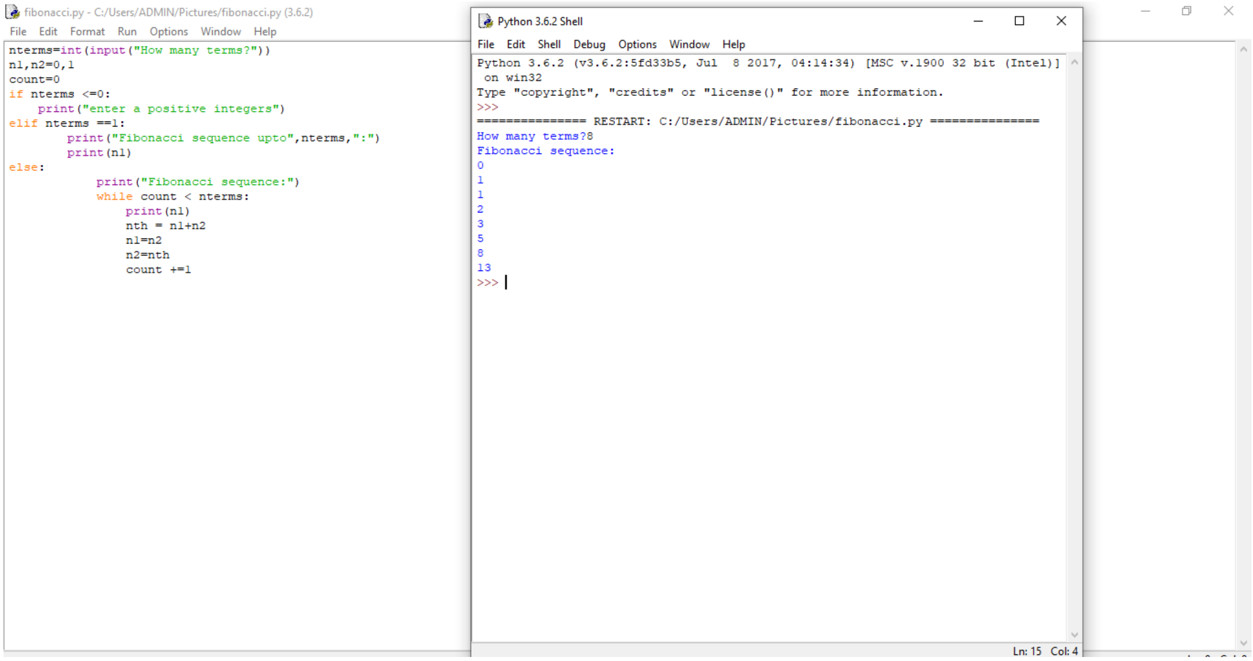
```
Python 3.6.2 (v3.6.2:5fd33b5, Jul  8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
 on win32
Type "copyright", "credits" or "license()" for more information.
>>> 
============== RESTART: C:/Users/ADMIN/Pictures/prime series.py ==============
enter first number1
enter last number4
3
>>> |
```

3.Write a python program to generate Fibonacci series.

PROGRAM

```
nterms=int(input("How many terms?"))
n1,n2=0,1
count=0
if nterms <=0:
    print("enter a positive integers")
elif nterms ==1:
        print("Fibonacci sequence upto",nterms,":")
        print(n1)
else:
            print("Fibonacci sequence:")
            while count < nterms:
                print(n1)
                nth = n1+n2
                n1=n2
                n2=nth
                count +=1
```

OUTPUT



fibonacci.py - C:/Users/ADMIN/Pictures/fibonacci.py (3.6.2)
File Edit Format Run Options Window Help

```
nterms=int(input("How many terms?"))
n1,n2=0,1
count=0
if nterms <=0:
    print("enter a positive integers")
elif nterms ==1:
        print("Fibonacci sequence upto",nterms,":")
        print(n1)
else:
            print("Fibonacci sequence:")
            while count < nterms:
                print(n1)
                nth = n1+n2
                n1=n2
                n2=nth
                count +=1
```

Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Ln: 15 Col: 4

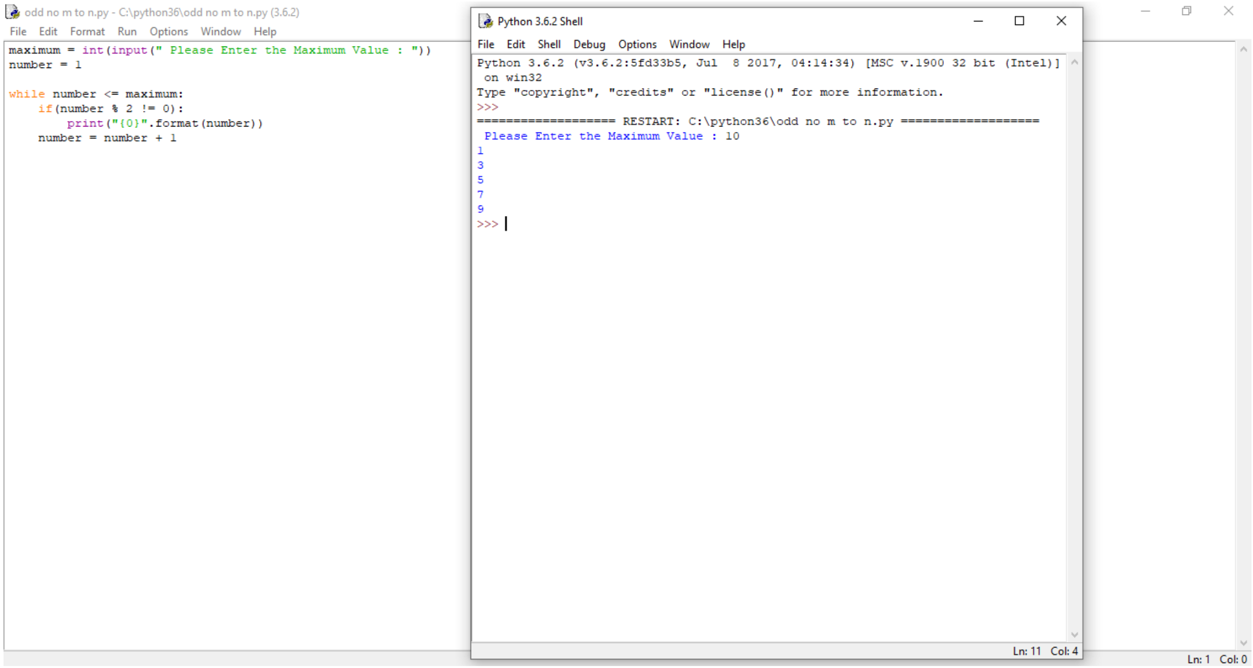
```
Python 3.6.2 (v3.6.2:5fd33b5, Jul  8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
 on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=============== RESTART: C:/Users/ADMIN/Pictures/fibonacci.py ===============
How many terms?8
Fibonacci sequence:
0
1
1
2
3
5
8
13
>>> 
```

4.Write a program to generate odd numbers from m to n using while loop.

PROGRAM

```
maximum = int(input(" Please Enter the Maximum Value : "))
number = 1


while number <= maximum:
    if(number % 2 != 0):
        print("{0}".format(number))
    number = number + 1
```

OUTPUT


odd no m to n.py - C:\python36\odd no m to n.py (3.6.2)
File Edit Format Run Options Window Help
Python 3.6.2 Shell
File Edit Shell Debug Options Window Help
Ln: 11 Col: 4
Ln: 1 Col: 0

```python
maximum = int(input(" Please Enter the Maximum Value : "))
number = 1

while number <= maximum:
    if(number % 2 != 0):
        print("{0}".format(number))
    number = number + 1
```

```
Python 3.6.2 (v3.6.2:5fd33b5, Jul  8 2017, 04:14:34) [MSC v.1900 32 bit (Intel)]
 on win32
Type "copyright", "credits" or "license()" for more information.
>>>
=================== RESTART: C:\python36\odd no m to n.py ===================
 Please Enter the Maximum Value : 10
1
3
5
7
9
>>> 
```