

**Assignment -4**  
**Python Programming**

Assignment Date	19 September 2022
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Student Roll Number	820419104037
Maximum Marks	2 Marks

**Question-1:**

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

```
a = int(input("enter the no : "))
```

```
if a > 1:
```

```
    for i in range(2, int(a/2)+1):
```

```
        if (a % i) == 0:
```

```
            print(a, "is not a prime number")
```

```
            break
```

```
else:
```

```
    print(a, "is a prime number")
```

```
else:
```

```
    print(a, "is not a prime number")
```

The screenshot displays a Python IDE with two windows. The left window, titled 'prime.py - C:\Users\admin\prime.py (3.10.6)', contains the following code:

```
a = int(input("enter the no : "))
if a > 1:
    for i in range(2, int(a/2)+1):
        if (a % i) == 0:
            print(a, "is not a prime number")
            break
    else:
        print(a, "is a prime number")
else:
    print(a, "is not a prime number")
```

The right window, titled 'IDLE Shell 3.10.6', shows the execution output:

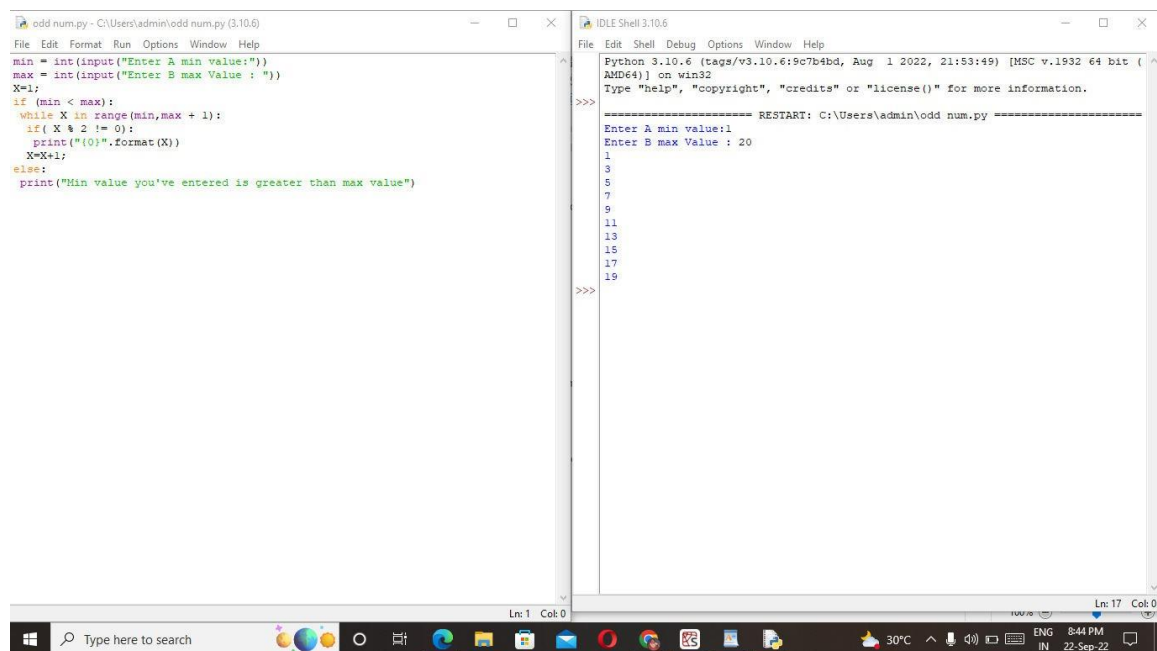
```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\admin\prime.py =====
enter the no : 37
37 is a prime number
>>>
```

The Windows taskbar at the bottom shows the date as 22-Sep-22 and the time as 8:42 PM.

## Question-2:

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

```
min = int(input("Enter A min value:"))
max = int(input("Enter B max Value : "))
X=1;
if (min < max):
    while X in range(min,max + 1):
        if( X % 2 != 0):
            print("{0}".format(X))
            X=X+1;
else:
    print("Min value you've entered is greater than max value")
```



The screenshot displays a Python IDE with two windows. The left window, titled 'odd num.py - C:\Users\admin\odd num.py (3.10.6)', contains the following code:

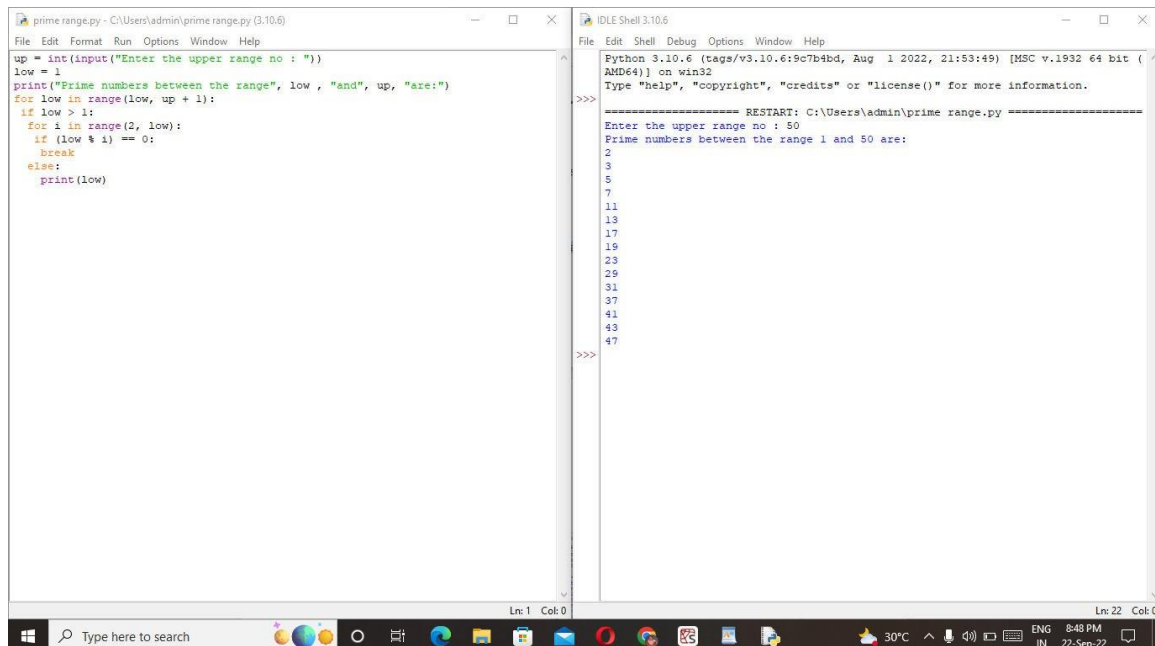
```
min = int(input("Enter A min value:"))
max = int(input("Enter B max Value : "))
X=1;
if (min < max):
    while X in range(min,max + 1):
        if( X % 2 != 0):
            print("{0}".format(X))
            X=X+1;
else:
    print("Min value you've entered is greater than max value")
```

The right window, titled 'IDLE Shell 3.10.6', shows the program's execution. It prompts for 'Enter A min value:1' and 'Enter B max Value : 20'. The output displays the odd numbers from 1 to 19, each on a new line. The shell also shows a 'RESTART' message and the file path 'C:\Users\admin\odd num.py'.

## Question-3:

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

```
up = int(input("Enter the upper range no : "))
low = 1
print("Prime numbers between the range",low,"and", up, "are:")
for low in range(low, up + 1):
    if low > 1:
        for i in range(2, low):
            if (low % i) == 0:
                break
        else:
            print(low)
```



The screenshot shows a Python IDE with two windows. The left window, titled 'prime range.py - C:\Users\admin\prime range.py (3.10.6)', contains the following code:

```
up = int(input("Enter the upper range no : "))
low = 1
print("Prime numbers between the range", low, "and", up, "are:")
for low in range(low, up + 1):
    if low > 1:
        for i in range(2, low):
            if (low % i) == 0:
                break
        else:
            print(low)
```

The right window, titled 'IDLE Shell 3.10.6', shows the output of the program. It displays the prompt 'Enter the upper range no : 50' and the output 'Prime numbers between the range 1 and 50 are:'. Below this, the prime numbers from 2 to 47 are listed, one per line.

```
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\admin\prime range.py =====
Enter the upper range no : 50
Prime numbers between the range 1 and 50 are:
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
>>>
```

#### Question-4:

Write a python program to generate Fibonacci series

```

num = int(input ("How many terms want to print? "))
num1= 0
num2= 1
count = 0
if num <= 0:
    print ("The given no is not valid,please enter +ve integer")
elif num == 1:
    print ("The Fibonacci sequence of the numbers up to", num, ": ")
    print(num1)
else:
    print ("The fibonacci sequence of the no is:")
    while count < num:
        print(num1)
        nth = num1 + num2
        num1= num2
        num2= nth
        count += 1

```

The screenshot shows a Python IDE with two panes. The left pane contains the source code for a program that calculates the Fibonacci sequence. The right pane shows the output of the program when executed with 20 terms.

**Source Code (Left Pane):**

```

fibonacci.py - C:\Users\admin\fibonacci.py (3.10.6)
File Edit Format Run Options Window Help
num = int(input ("How many terms want to print? "))
num1= 0
num2= 1
count = 0
if num <= 0:
    print ("The given no is not valid,please enter +ve integer")
elif num == 1:
    print ("The Fibonacci sequence of the numbers up to", num, ": ")
    print(num1)
else:
    print ("The fibonacci sequence of the no is:")
    while count < num:
        print(num1)
        nth = num1 + num2
        num1= num2
        num2= nth
        count += 1

```

**Output (Right Pane):**

```

Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (
AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\admin\fibonacci.py =====
How many terms want to print? 20
The fibonacci sequence of the no is:
0
1
1
2
3
5
8
13
21
34
55
89
144
233
377
610
987
1597
2584
4181
>>>

```

The output displays the first 20 terms of the Fibonacci sequence, starting from 0 and ending at 4181. The sequence is printed on a single line after the prompt "The fibonacci sequence of the no is:". The IDE status bar at the bottom shows "Ln: 27 Col: 0".