

Assignment -3
Python Programming

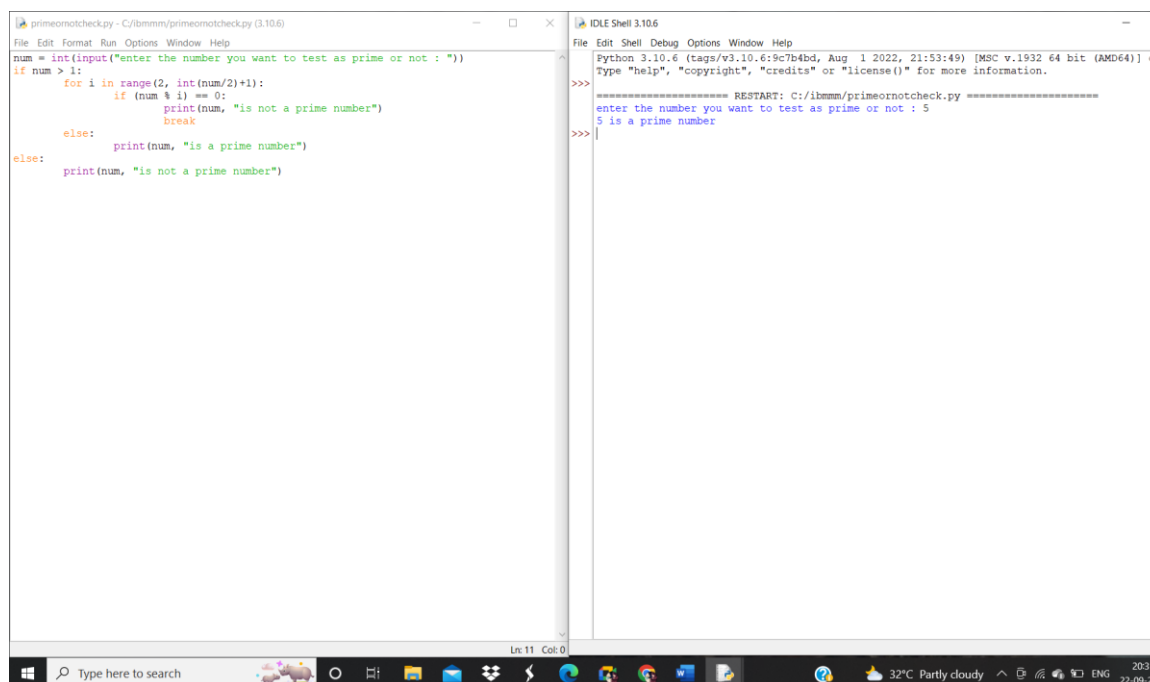
Assignment Date	19 September 2022
Student Name	Ms. Subasri.D.R
Student Roll Number	820419104073
Maximum Marks	2 Marks

Question-1:

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

Solution:

```
num = int(input("enter the number you want to test as prime or not : "))
if num > 1:
    for i in range(2, int(num/2)+1):
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
else:
    print(num, "is not a prime number")
```



The screenshot displays a Python IDE with two windows. The left window, titled 'primeornotcheck.py - C:/lmmm/primeornotcheck.py (3.10.6)', contains the following code:

```
File Edit Format Run Options Window Help
num = int(input("enter the number you want to test as prime or not : "))
if num > 1:
    for i in range(2, int(num/2)+1):
        if (num % i) == 0:
            print(num, "is not a prime number")
            break
    else:
        print(num, "is a prime number")
else:
    print(num, "is not a prime number")
```

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

```
File Edit Shell Debug Options Window Help
Python 3.10.6 (tags/v3.10.6:9c7b4bd, Aug 1 2022, 21:53:49) [MSC v.1932 64 bit (AMD64)] c
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/lmmm/primeornotcheck.py =====
enter the number you want to test as prime or not : 5
5 is a prime number
>>>
```

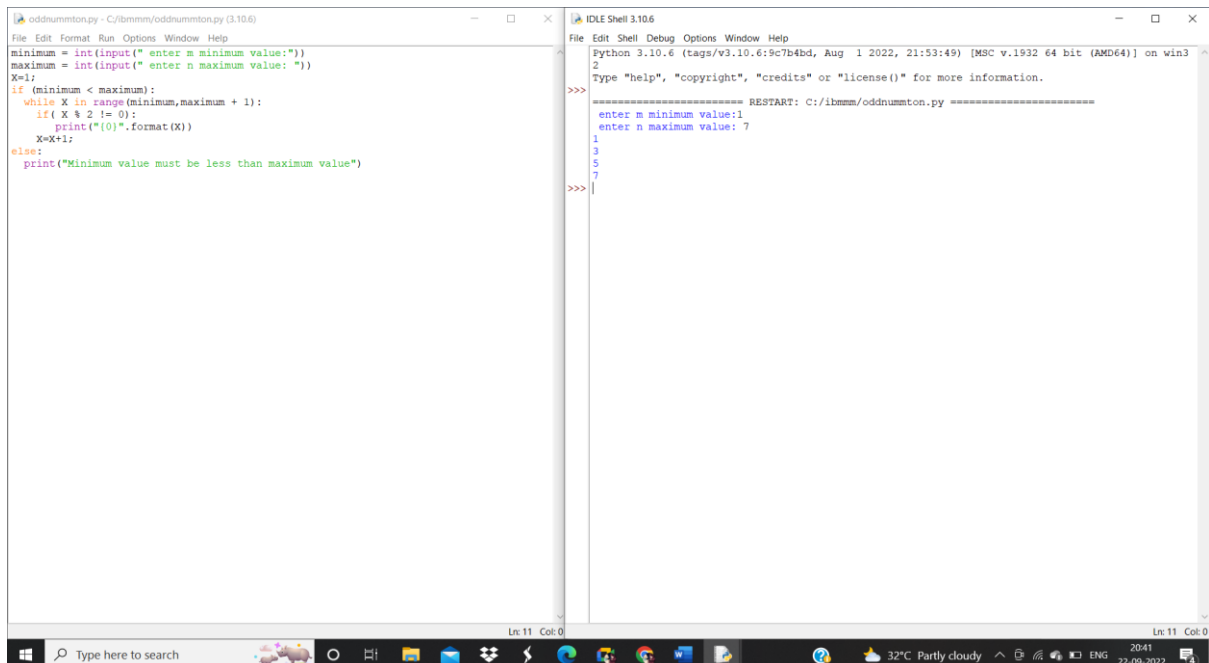
The Windows taskbar at the bottom shows the system clock as 22-09-2022, 11:11 AM, and the temperature as 32°C.

Question-2:

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

Solution:

```
minimum = int(input(" enter m minimum value:"))
maximum = int(input(" enter n maximum value: "))
X=1;
if (minimum < maximum):
    while X in range(minimum,maximum + 1):
        if (X % 2 != 0):
            print("{}".format(X))
            X=X+1;
else:
    print("Minimum value must be less than maximum value")
```



The screenshot displays a Python IDE with two windows. The left window, titled 'odnummton.py - C:/ibmm/odnummton.py (3.10.6)', contains the following code:

```
minimum = int(input(" enter m minimum value:"))
maximum = int(input(" enter n maximum value: "))
X=1;
if (minimum < maximum):
    while X in range(minimum,maximum + 1):
        if (X % 2 != 0):
            print("{}".format(X))
            X=X+1;
else:
    print("Minimum value must be less than maximum value")
```

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:/ibmm/odnummton.py =====
enter m minimum value:1
enter n maximum value: 7
1
3
5
7
>>>
```

The Windows taskbar at the bottom shows the date as 22-09-2022 and the time as 20:41.

Question-3:

Write a python program to display prime number series upto a given number

Solution:

```
upper_value = int(input ("Please, Enter the Upper Range Value: "))
```

```
number=1
```

```
print ("The Prime Numbers in the range are: ")
```

```
for number in range (number,upper_value + 1):
```

```
    if number > 1:
```

```
        for i in range (2, number):
```

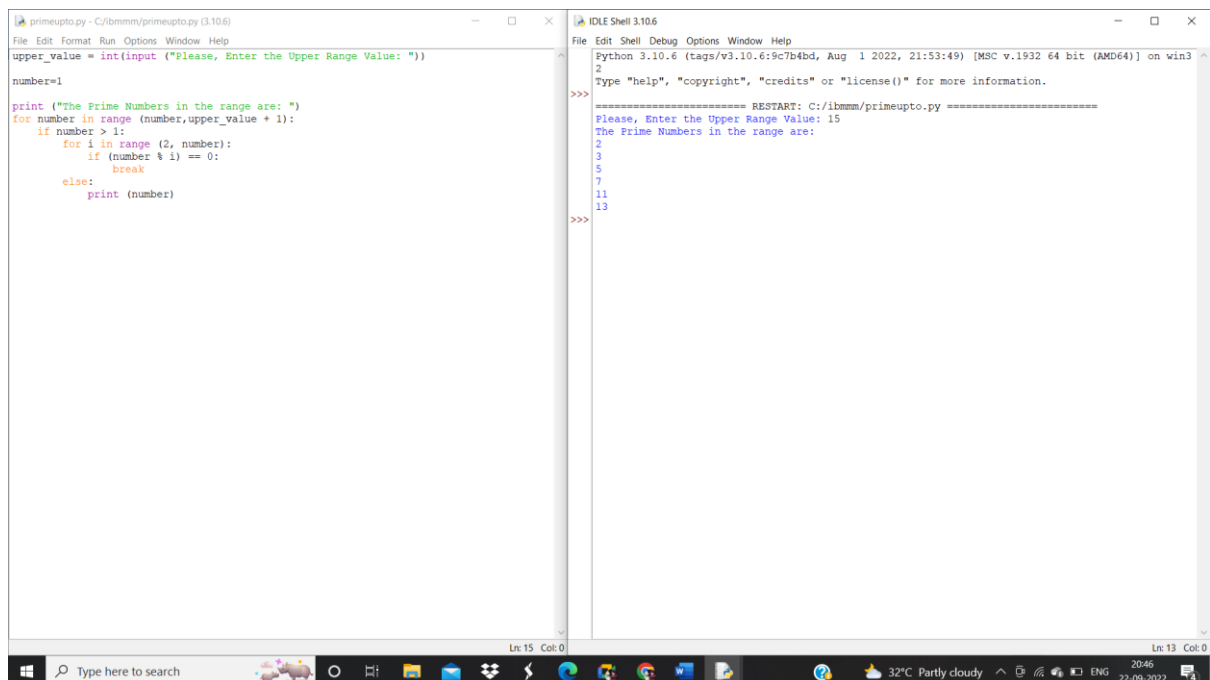
```
            if (number % i) == 0:
```

```
                break
```

```
        else:
```

```
            print (number)
```

output:



The screenshot shows a Python IDE with two windows. The left window displays the source code for a program that prints prime numbers up to a user-defined upper value. The right window shows the execution output, where the user has entered 15 as the upper range value, and the program has printed the prime numbers 2, 3, 5, 7, 11, and 13.

```
primeupto.py - C:/bmmmm/primeupto.py (3.10.6)
File Edit Format Run Options Window Help
upper_value = int(input ("Please, Enter the Upper Range Value: "))
number=1
print ("The Prime Numbers in the range are: ")
for number in range (number,upper_value + 1):
    if number > 1:
        for i in range (2, number):
            if (number % i) == 0:
                break
        else:
            print (number)
```

```
IDLE Shell 3.10.6
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:/bmmmm/primeupto.py =====
Please, Enter the Upper Range Value: 15
The Prime Numbers in the range are:
2
3
5
7
11
13
>>>
```

Question-4:

Write a python program to generate Fibonacci series

Solution:

```
n_terms = int(input("How many terms the user wants to print? "))
```

```
n_1 = 0
```

```
n_2 = 1
```

```
count = 0
```

```
if n_terms <= 0:
```

```
    print("Please enter a positive integer, the given number is not valid")
```

```
elif n_terms == 1:
```

```
    print("The Fibonacci sequence of the numbers up to", n_terms, ": ")
```

```
    print(n_1)
```

```
else:
```

```
    print("The fibonacci sequence of the numbers is:")
```

```
    while count < n_terms:
```

```
        print(n_1)
```

```
        nth = n_1 + n_2
```

```
        n_1 = n_2
```

```
        n_2 = nth
```

```
        count += 1
```

The screenshot shows a Python IDE with two windows. The left window displays the source code for a program that generates the Fibonacci sequence. The code includes input handling, validation, and a loop to print the sequence. The right window shows the program's execution, where the user has entered '5', and the output displays the first five terms of the Fibonacci sequence: 0, 1, 1, 2, 3.

```
fibonacci.py - C:\Users\user\Documents\fibonacci.py (3.10.6)
File Edit Format Run Options Window Help
n_terms = int(input("How many terms the user wants to print? "))
n_1 = 0
n_2 = 1
count = 0
if n_terms <= 0:
    print("Please enter a positive integer, the given number is not valid")
elif n_terms == 1:
    print("The Fibonacci sequence of the numbers up to", n_terms, ": ")
    print(n_1)
else:
    print("The fibonacci sequence of the numbers is:")
    while count < n_terms:
        print(n_1)
        nth = n_1 + n_2
        n_1 = n_2
        n_2 = nth
        count += 1
```

```
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\user\Documents\fibonacci.py =====
How many terms the user wants to print? 5
The fibonacci sequence of the numbers is:
0
1
1
2
3
>>>
```