

Assignment -4
Python Programming

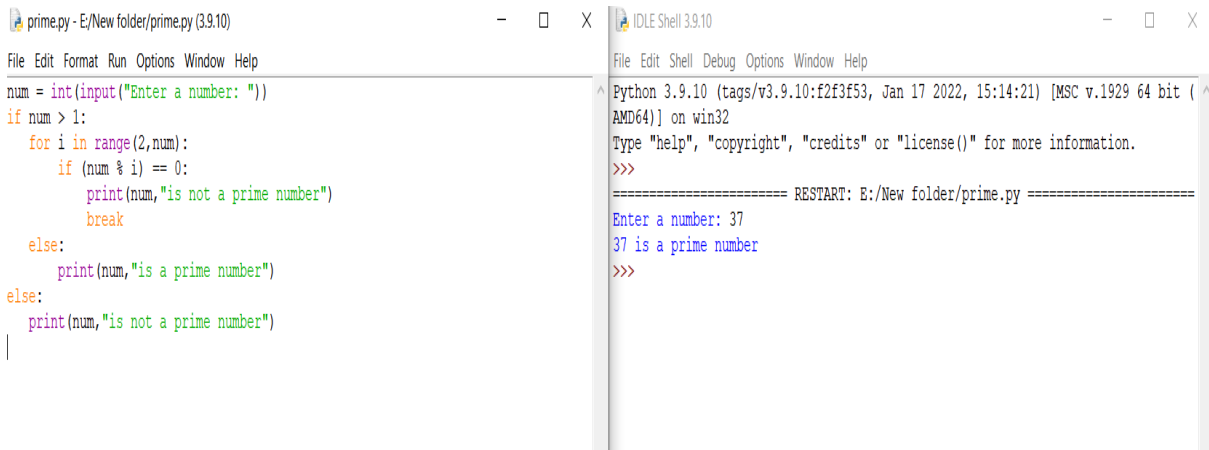
Assignment Date	19 September 2022
Student Name	M.Saraswathi
Student Roll Number	820419104062
Maximum Marks	2 Marks

Question-1:

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

Solution:

```
num = int(input("Enter a number: "))
if num > 1:
    for i in range(2,num):
        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 'prime.py - E:/New folder/prime.py (3.9.10)', contains the following code:

```
num = int(input("Enter a number: "))
if num > 1:
    for i in range(2,num):
        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 3.9.10', shows the execution output:

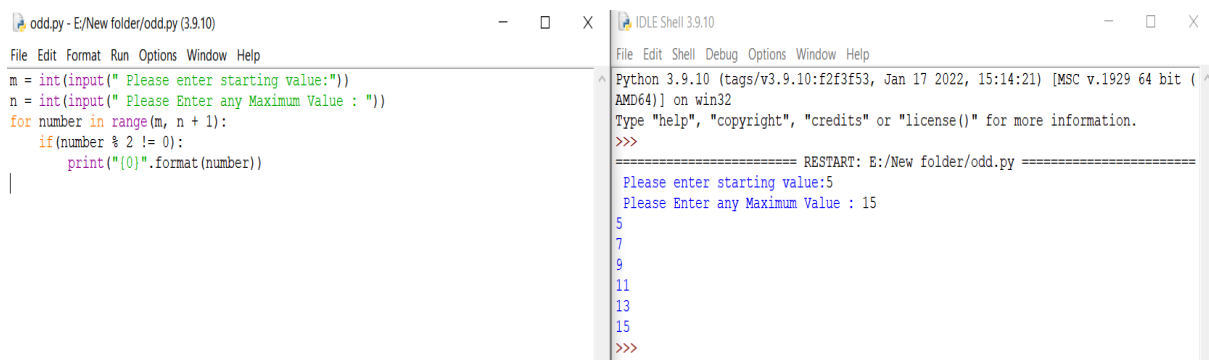
```
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/New folder/prime.py =====
Enter a number: 37
37 is a prime number
>>>
```

Question-2:

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

Solution:

```
m = int(input(" Please enter starting value:"))
n = int(input(" Please Enter any Maximum Value : "))
for number in range(m, n + 1):
    if(number % 2 != 0):
        print("{0}".format(number))
```



The screenshot shows a Python IDE with two windows. The left window, titled 'odd.py - E:/New folder/odd.py (3.9.10)', contains the following code:

```
m = int(input(" Please enter starting value:"))
n = int(input(" Please Enter any Maximum Value : "))
for number in range(m, n + 1):
    if(number % 2 != 0):
        print("{0}".format(number))
```

The right window, titled 'IDLE Shell 3.9.10', shows the execution output:

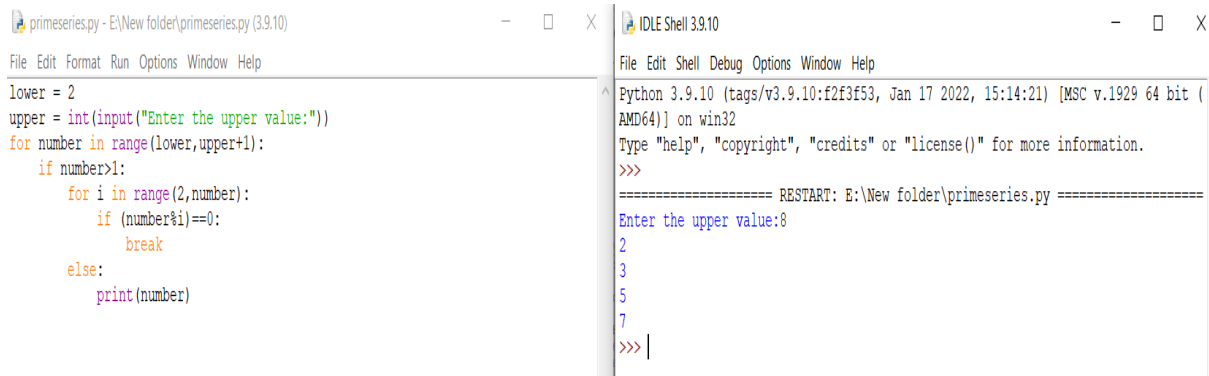
```
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:/New folder/odd.py =====
Please enter starting value:5
Please Enter any Maximum Value : 15
5
7
9
11
13
15
>>>
```

Question-3:

Write a Python program to display prime numbers series upto given number?

Solution:

```
lower = 2
upper = int(input("Enter the upper value:"))
for number in range(lower, upper + 1):
    if number > 1:
        for i in range(2, number):
            if (number % i) == 0:
                break
        else:
            print(number)
```



```
primeseries.py - E:\New folder\primeseries.py (3.9.10)
File Edit Format Run Options Window Help
lower = 2
upper = int(input("Enter the upper value:"))
for number in range(lower,upper+1):
    if number>1:
        for i in range(2,number):
            if (number%i)==0:
                break
        else:
            print(number)

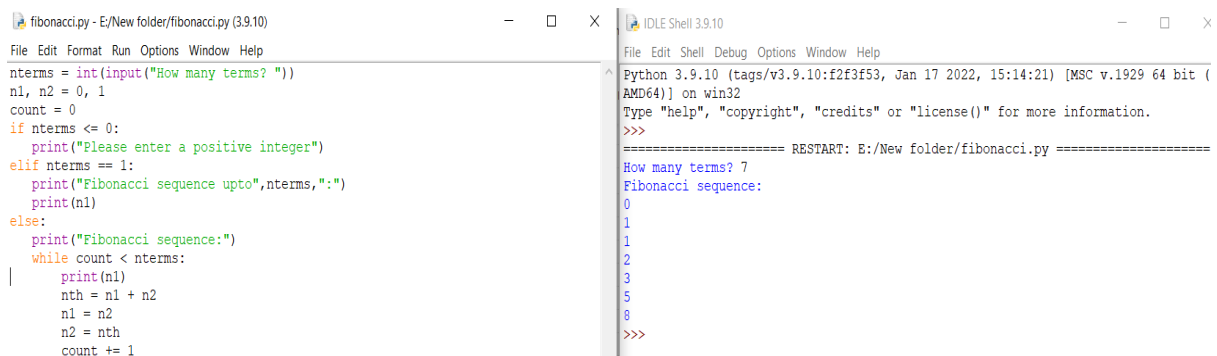
IDLE Shell 3.9.10
File Edit Shell Debug Options Window Help
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\New folder\primeseries.py =====
Enter the upper value:8
2
3
5
7
>>> |
```

Question-4:

Write a Python program to generate Fibonacci series?

Solution:

```
nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
    print("Please enter a positive integer")
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
```



```
fibonacci.py - E:\New folder\fibonacci.py (3.9.10)
File Edit Format Run Options Window Help
nterms = int(input("How many terms? "))
n1, n2 = 0, 1
count = 0
if nterms <= 0:
    print("Please enter a positive integer")
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

IDLE Shell 3.9.10
File Edit Shell Debug Options Window Help
Python 3.9.10 (tags/v3.9.10:f2f3f53, Jan 17 2022, 15:14:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: E:\New folder\fibonacci.py =====
How many terms? 7
Fibonacci sequence:
0
1
1
2
3
5
8
>>>
```