

Assignment -4
Python Programming

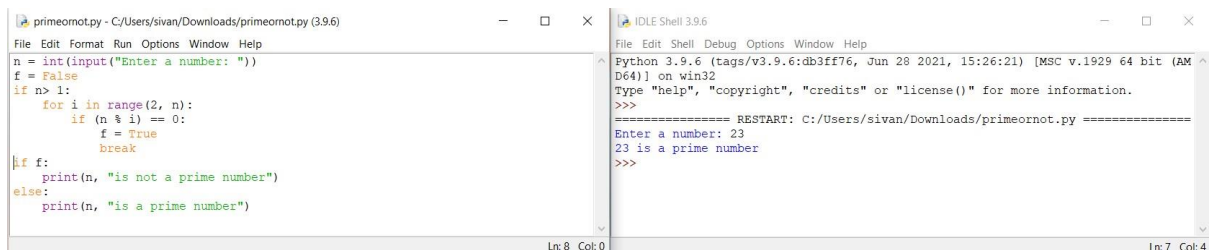
Assignment Date	19 September 2022
Student Name	Sathya Jayasri S
Student Roll Number	820419104064
Maximum Marks	2 Marks

Question-1:

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

Solution :

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



The screenshot shows a Python IDE with two windows. The left window, titled 'primeornot.py - C:/Users/sivan/Downloads/primeornot.py (3.9.6)', contains the following code:

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

The right window, titled 'IDLE Shell 3.9.6', shows the execution output:

```
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/sivan/Downloads/primeornot.py =====
Enter a number: 23
23 is a prime number
>>>
```

Question-2:

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

Solution :

```
min = int(input(" Enter any min value:"))
max = int(input(" Enter any 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 shows an IDE window titled 'odd.py - C:\Users\sivan\Downloads\odd.py (3.9.6)'. The code in the editor is as follows:

```

min = int(input(" Enter any min value:"))
max = int(input(" Enter any 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 output window shows the following execution:

```

Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\sivan\Downloads\odd.py =====
Enter any min value:1
Enter any max Value : 5
1
3
5
>>>

```

Question-3:

Write a Python program to display prime number series upto given number.

Solution :

```

l = 1
u = int(input("Enter the number : "))
print("Prime numbers between",1,"and",u,"are:")
for n in range(l,u + 1):
    if n > 1:
        for i in range(2, n):
            if (n%i) == 0:
                break
        else:
            print(n)

```

The screenshot shows an IDE window titled 'primenumberrange.py - C:\Users\sivan\Downloads\primenumberrange.py (3.9.6)'. The code in the editor is as follows:

```

l = 1
u = int(input("Enter the number : "))
print("Prime numbers between",1,"and",u,"are:")
for n in range(l,u + 1):
    if n > 1:
        for i in range(2, n):
            if (n%i) == 0:
                break
        else:
            print(n)

```

The output window shows the following execution:

```

Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:\Users\sivan\Downloads\primenumberrange.py =====
Enter the number : 10
Prime numbers between 1 and 10 are:
2
3
5
7
>>>

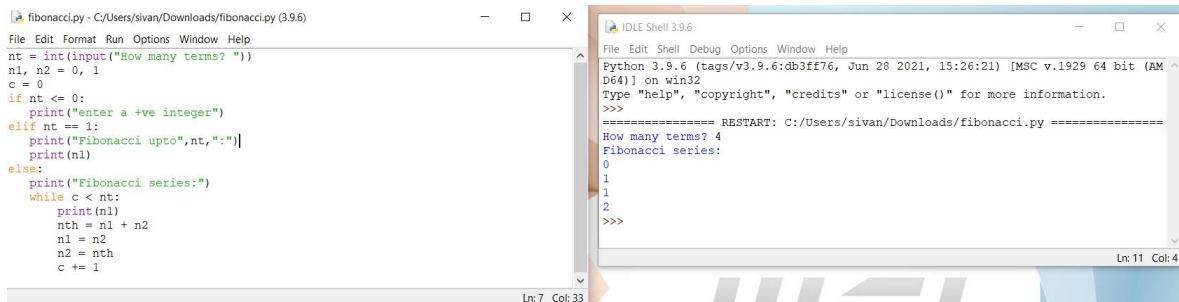
```

Question-4:

Write a Python program to generate Fibonacci series.

Solution :

```
nt = int(input("How many terms? "))
n1, n2 = 0, 1
c = 0
if nt <= 0:
    print("enter a +ve integer")
elif nt == 1:
    print("Fibonacci upto",nt,":")
    print(n1)
else:
    print("Fibonacci series:")
    while c < nt:
        print(n1)
        nth = n1 + n2
        n1 = n2
        n2 = nth
        c += 1
```



The screenshot displays a Python IDE with two windows. The left window, titled 'fibonacci.py - C:/Users/sivan/Downloads/fibonacci.py (3.9.6)', contains the source code for the Fibonacci series program. The right window, titled 'IDLE Shell 3.9.6', shows the program's execution. The user has entered '4' for the number of terms. The output shows the first four terms of the Fibonacci series: 0, 1, 1, 2. The shell also displays a restart message and the current cursor position is at Line 11, Column 4.

```
fibonacci.py - C:/Users/sivan/Downloads/fibonacci.py (3.9.6)
File Edit Format Run Options Window Help
nt = int(input("How many terms? "))
n1, n2 = 0, 1
c = 0
if nt <= 0:
    print("enter a +ve integer")
elif nt == 1:
    print("Fibonacci upto",nt,":")
    print(n1)
else:
    print("Fibonacci series:")
    while c < nt:
        print(n1)
        nth = n1 + n2
        n1 = n2
        n2 = nth
        c += 1
Ln: 7 Col: 33

IDLE Shell 3.9.6
File Edit Shell Debug Options Window Help
Python 3.9.6 (tags/v3.9.6:db3ff76, Jun 28 2021, 15:26:21) [MSC v.1929 64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: C:/Users/sivan/Downloads/fibonacci.py =====
How many terms? 4
Fibonacci series:
0
1
1
2
>>>
Ln: 11 Col: 4
```