

Assignment -4
Python Programming

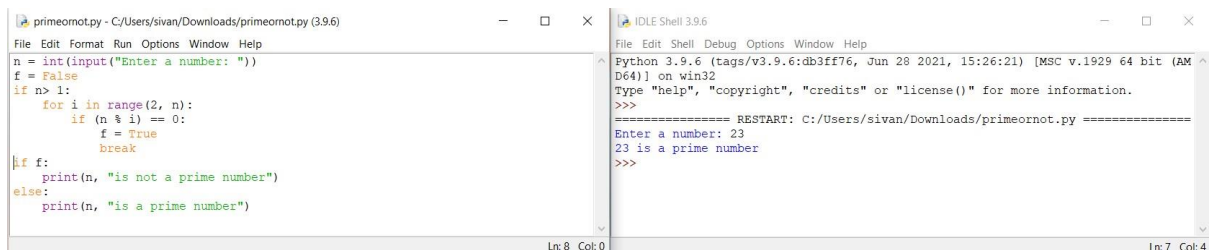
Assignment Date	19 September 2022
Student Name	Sriram M
Student Roll Number	820419104302
Maximum Marks	2 Marks

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 displays the source code for a program to check if a number is prime. The code uses a loop to test divisibility from 2 to n-1. If any divisor is found, it sets a flag 'f' to True and breaks the loop. Finally, it prints whether the number is prime or not. The right window shows the execution output, where the user has entered '23', and the program has correctly identified it as a prime number.

```
primeornot.py - C:/Users/sivan/Downloads/primeornot.py (3.9.6)
File Edit Format Run Options Window Help
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")
Ln: 8 Col: 0

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")

```

```

odd.py - C:\Users\sivan\Downloads\odd.py (3.9.6)
File Edit Format Run Options Window Help
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")
Ln: 1 Col: 0

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\odd.py =====
Enter any min value:1
Enter any max Value : 5
1
3
5
>>>
Ln: 10 Col: 4

```

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)

```

```

primenumberrange.py - C:\Users\sivan\Downloads\primenumberrange.py (3.9.6)
File Edit Format Run Options Window Help
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)
Ln: 10 Col: 11

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\primenumberrange.py =====
Enter the number : 10
Prime numbers between 1 and 10 are:
2
3
5
7
>>>
Ln: 11 Col: 4

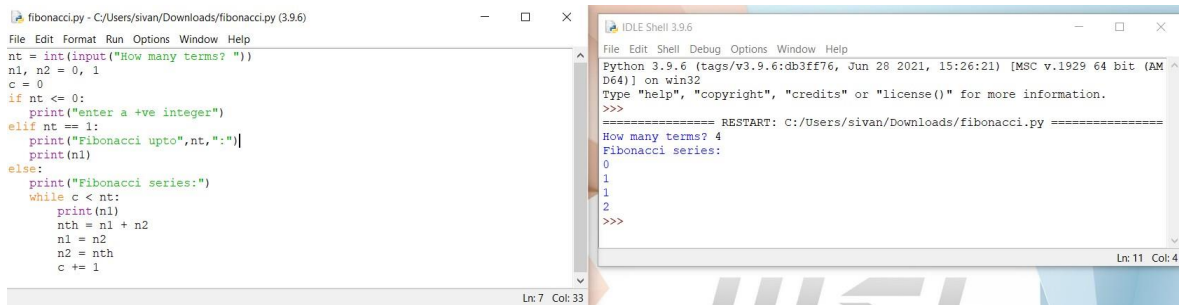
```

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 Python code for generating the Fibonacci series. The right window, titled 'IDLE Shell 3.9.6', shows the program's execution. It prompts the user for the number of terms, which is entered as 4. The program then prints the Fibonacci series: 0, 1, 1, 2. The shell window also shows the restart command and the current line and column numbers (Ln: 11, Col: 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
```