

## IBM ASSIGNMENT 1

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

Program:

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

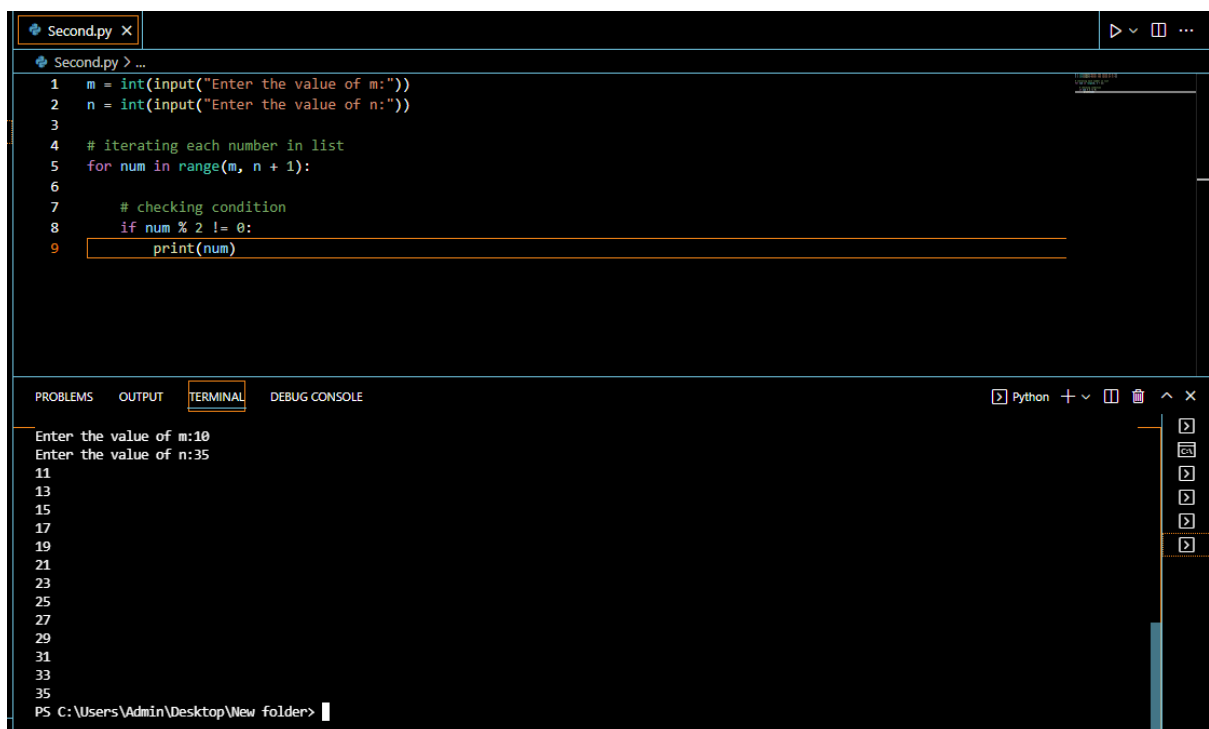


The screenshot shows a Python IDE window titled 'First.py'. The code editor contains the following Python program:

```
1
2 num = int(input("Enter a number: "))
3 flag = False
4 if num > 1:
5     for i in range(2, num):
6         if (num % i) == 0:
7             flag = True
8             break
9 if flag:
10     print(num, "is not a prime number")
11 else:
12     print(num, "is a prime number")
13
```

The bottom panel of the IDE shows the 'TERMINAL' tab with the following output:

```
PS C:\Users\Admin\Desktop\New folder> & C:/Users/Admin/AppData/Local/Programs/Python/Python310/python.exe "c:/Users/Admin/Desktop/New folder/First.py"
Enter a number: 44
44 is not a prime number
PS C:\Users\Admin\Desktop\New folder>
```



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

Program:

```
num = int(input("Enter the Number"))
for number in range(1,num+1):
    if number>1:15

    for i in range(2,number):
        if (number%i)==0:
            break
        else:
            print(number)
```



The screenshot shows a Python IDE with a file named 'Third.py'. The code in the editor is as follows:

```
1 num = int(input("Enter the Number"))
2 for number in range(1,num+1):
3     if number>1:
4         for i in range(2,number):
5             if (number%i)==0:
6                 break
7             else:
8                 print(number)
9
```

The IDE's terminal window shows the execution output:


```
.py"
Enter the Number10
2
3
5
7
PS C:\Users\Admin\Desktop\New folder>
```

The status bar at the bottom indicates the current position is 'Ln 8, Col 9', with 'Spaces: 4', 'UTF-8', 'CRLF', 'Python', and '3.10.1 64-bit'.

4. Write a python program to generate fibonacci series

Program:

```
nterms = int(input("Number of 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
```



The screenshot shows a Python IDE with a file named 'Fourth.py'. The code in the editor is the same as the one provided in the previous block. The terminal window at the bottom shows the execution of the program. The user has entered '8' for the number of terms. The output is 'Fibonacci sequence:' followed by the numbers 0, 1, 1, 2, 3, 5, 8, and 13, each on a new line. The prompt 'PS C:\Users\Admin\Desktop\New folder>' is visible at the bottom of the terminal.

```
Fourth.py > ...
1  n = int(input("Number of terms? "))
2  n1, n2 = 0, 1
3  count = 0
4  if n <= 0:
5      print("Please enter a positive integer")
6  elif n == 1:
7      print("Fibonacci sequence upto", n, ":")
8      print(n1)
9  else:
10     print("Fibonacci sequence:")
11     while count < n:
12         print(n1)
13         nth = n1 + n2
14         n1 = n2
15         n2 = nth
16         count += 1
17

PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE
Number of terms? 8
Fibonacci sequence:
0
1
1
2
3
5
8
13
PS C:\Users\Admin\Desktop\New folder>
```