

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

```
num = int(input("enter the number : "))
```

```
if num > 1:
```

```
    for i in range(2, int(num/2)+1):
```

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

```
            print(num, "is not a prime number")
```

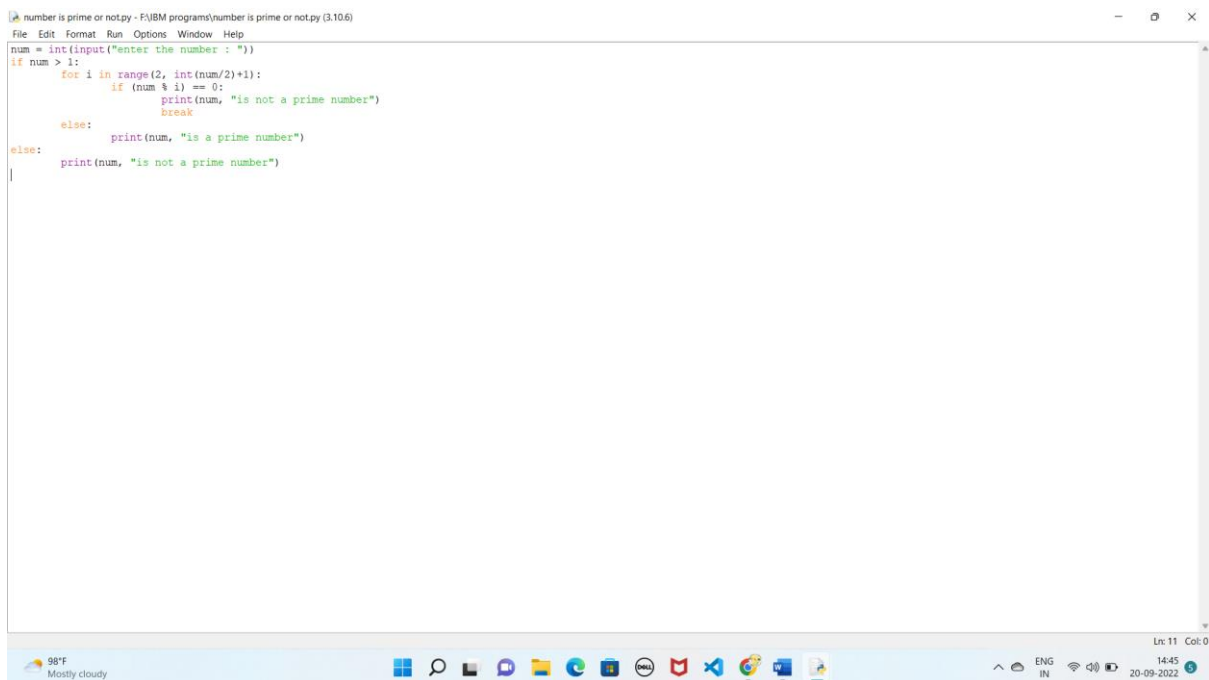
```
            break
```

```
    else:
```

```
        print(num, "is a prime number")
```

```
else:
```

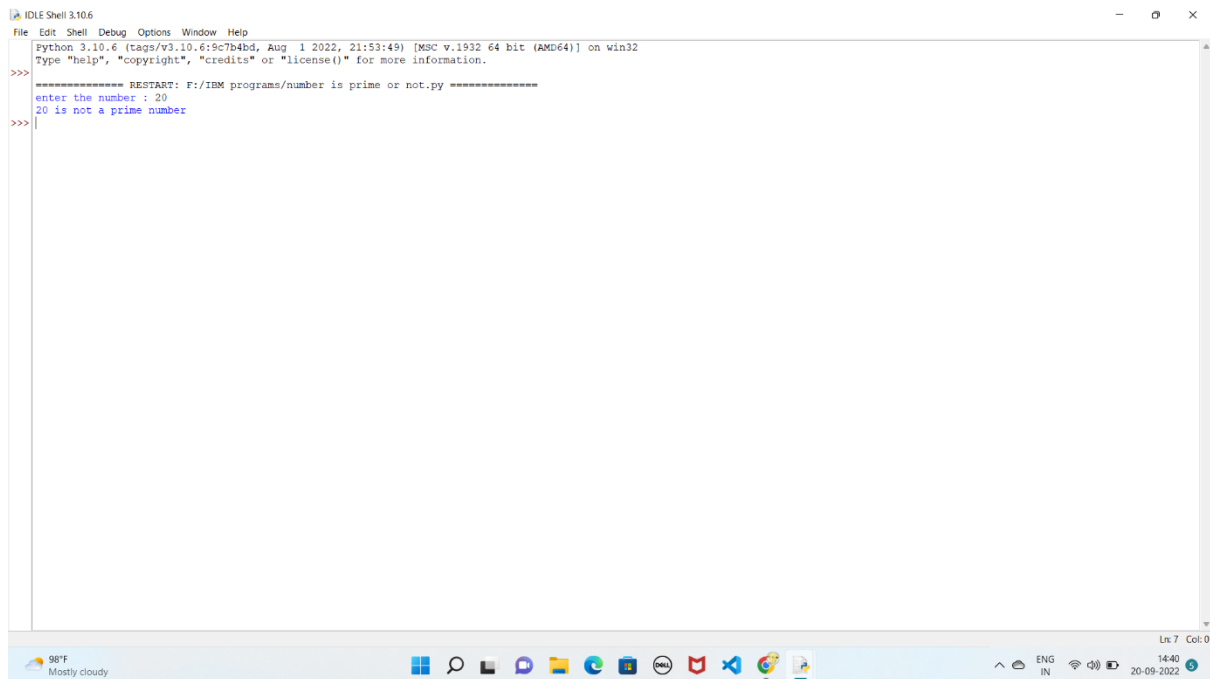
```
    print(num, "is not a prime number")
```

A screenshot of a Python IDE window titled "number is prime or not.py - F:\IBM programs\number is prime or not.py (3.10.6)". The code inside the editor is a Python program to check if a number is prime. It starts with a menu bar (File, Edit, Format, Run, Options, Window, Help) and a toolbar. The code is as follows:

```
num = int(input("enter the number : "))
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 IDE has a light blue theme. At the bottom, there is a Windows taskbar showing the date and time as 14:45 on 20-09-2022, and the system language as ENG IN.

Output:

A screenshot of an IDLE Shell window. The title bar says 'IDLE Shell 3.10.6'. The menu bar includes 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Window', and 'Help'. The shell area shows the following text: '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.', a prompt '>>>', a line of text '===== RESTART: F:/IBM programs/number is prime or not.py =====', a prompt 'enter the number : 20', and the output '20 is not a prime number'. The status bar at the bottom shows 'Ln: 7 Col: 0', '98°F Mostly cloudy', and system icons for Windows, search, taskbar, and network, along with the date '20-09-2022' and time '14:40'.

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

```
minimum = int(input(" please Enter any minimum value:"))
```

```
maximum = int(input(" Please Enter any Maximum Value : "))
```

```
X=1;
```

```
if (minimum < maximum):
```

```
    while X in range(minimum,maximum + 1):
```

```
        if( X % 2 != 0):
```

```
            print("{0}".format(X))
```

```
            X=X+1;
```

```
else:
```

```
    print("Minimum value you've entered is greater than maximum value")
```

```
odddnumber printingbetweenrange.py - F:\IBM programs\odddnumber printingbetweenrange.py (3.10.6)
File Edit Format Run Options Window Help
minimum = int(input(" please Enter any minimum value:"))
maximum = int(input(" Please Enter any Maximum Value : "))
X=1;
if (minimum < maximum):
    while X in range(minimum,maximum + 1):
        if( X % 2 != 0):
            print("{0}".format(X))
            X=X+1;
else:
    print("Minimum value you've entered is greater than maximum value")
|
```

Output:

```
IDLE Shell 3.10.6
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)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: F:\IBM programs\odddnumber printingbetweenrange.py =====
please Enter any minimum value:1
Please Enter any Maximum Value : 11
1
3
5
7
9
11
>>>
```

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

lower = 1

upper = int(input("Enter the number upto which prime numbers are found : "))

print("Prime numbers between", 1, "and", upper, "are:")

for num in range(lower, upper + 1):

```
if num > 1:

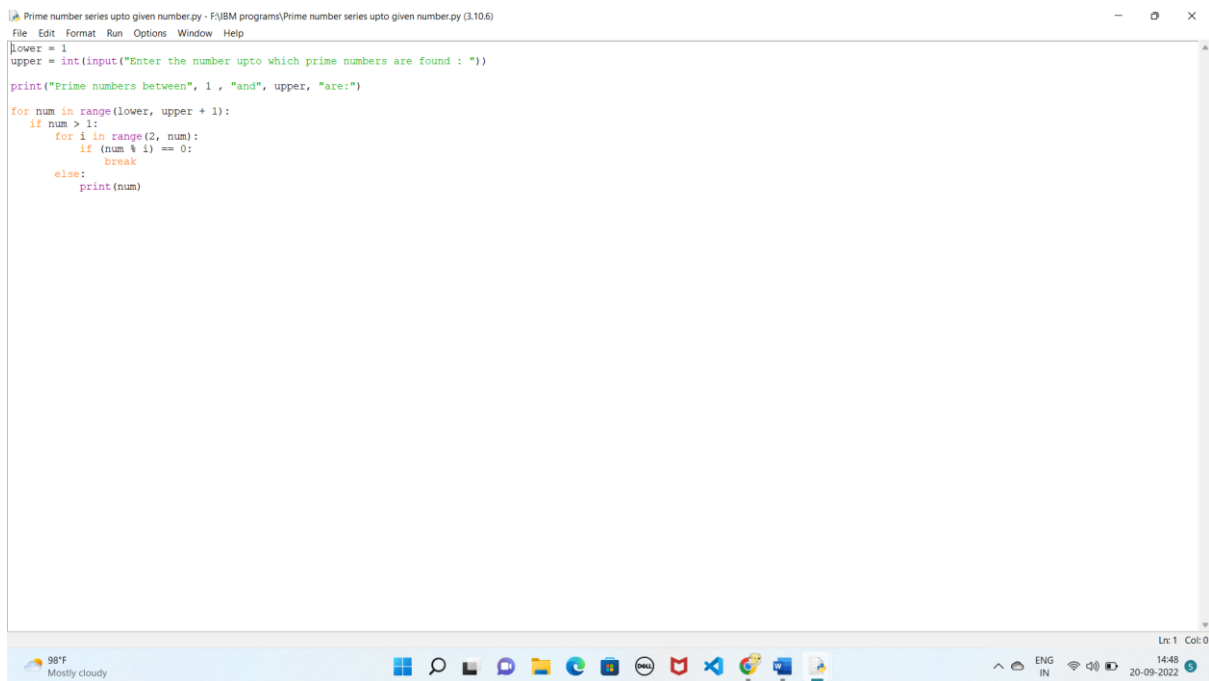
    for i in range(2, num):

        if (num % i) == 0:

            break

    else:

        print(num)
```

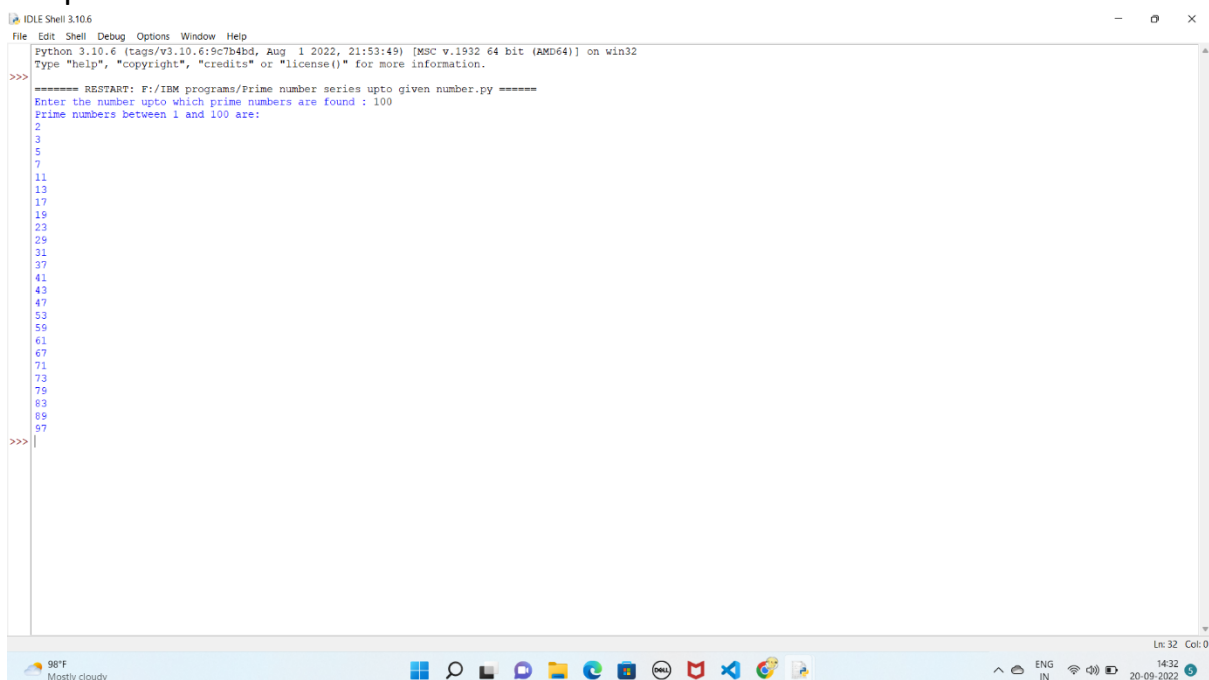


The screenshot shows a Python IDE window titled "Prime number series upto given number.py - F:\IBM programs\Prime number series upto given number.py (3.10.6)". The code in the editor is as follows:

```
lower = 1
upper = int(input("Enter the number upto which prime numbers are found : "))
print("Prime numbers between", 1 , "and", upper, "are:")
for num in range(lower, upper + 1):
    if num > 1:
        for i in range(2, num):
            if (num % i) == 0:
                break
        else:
            print(num)
```

The IDE interface includes a menu bar (File, Edit, Format, Run, Options, Window, Help) and a status bar at the bottom showing "Ln: 1 Col: 0". The Windows taskbar is visible at the bottom of the screen.

Output:



The screenshot shows the same Python IDE window, but now displaying the output of the program. The output text is:

```
>>>
===== RESTART: F:\IBM programs\Prime number series upto given number.py =====
Enter the number upto which prime numbers are found : 100
Prime numbers between 1 and 100 are:
2
3
5
7
11
13
17
19
23
29
31
37
41
43
47
53
59
61
67
71
73
79
83
89
97
>>>
```

The IDE interface is the same as in the previous screenshot, with the status bar showing "Ln: 32 Col: 0".

4.write a python program to generate Fibonacci Series.

```
number = int(input("enter the number :"))
```

```
def Fibonacci(n):
```

```
    if n < 0:
```

```
        print("Incorrect input")
```

```
    # Check if n is 0
```

```
    # then it will return 0
```

```
    elif n == 0:
```

```
        return 0
```

```
    # Check if n is 1,2
```

```
    # it will return 1
```

```
    elif n == 1 or n == 2:
```

```
        return 1
```

```
    else:
```

```
        return Fibonacci(n-1) + Fibonacci(n-2)
```

```
print(Fibonacci(number))
```

```
fibonacci series.py - F:\IBM programs\fibonacci series.py (3.10.6)
File Edit Format Run Options Window Help
number = int(input("enter the number :"))
def Fibonacci(n):
    if n < 0:
        print("Incorrect input")
        # Check if n is 0
        # then it will return 0
        elif n == 0:
            return 0
        # Check if n is 1,2
        # it will return 1
        elif n == 1 or n == 2:
            return 1
    else:
        return Fibonacci(n-1) + Fibonacci(n-2)
print(Fibonacci(number))
```

98°F Mostly cloudy 14:49 20-09-2022

Output:

```
IDLE Shell 3.10.6
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)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
===== RESTART: F:\IBM programs\fibonacci series.py =====
enter the number :12
144
>>>
```

98°F Mostly cloudy 14:37 20-09-2022