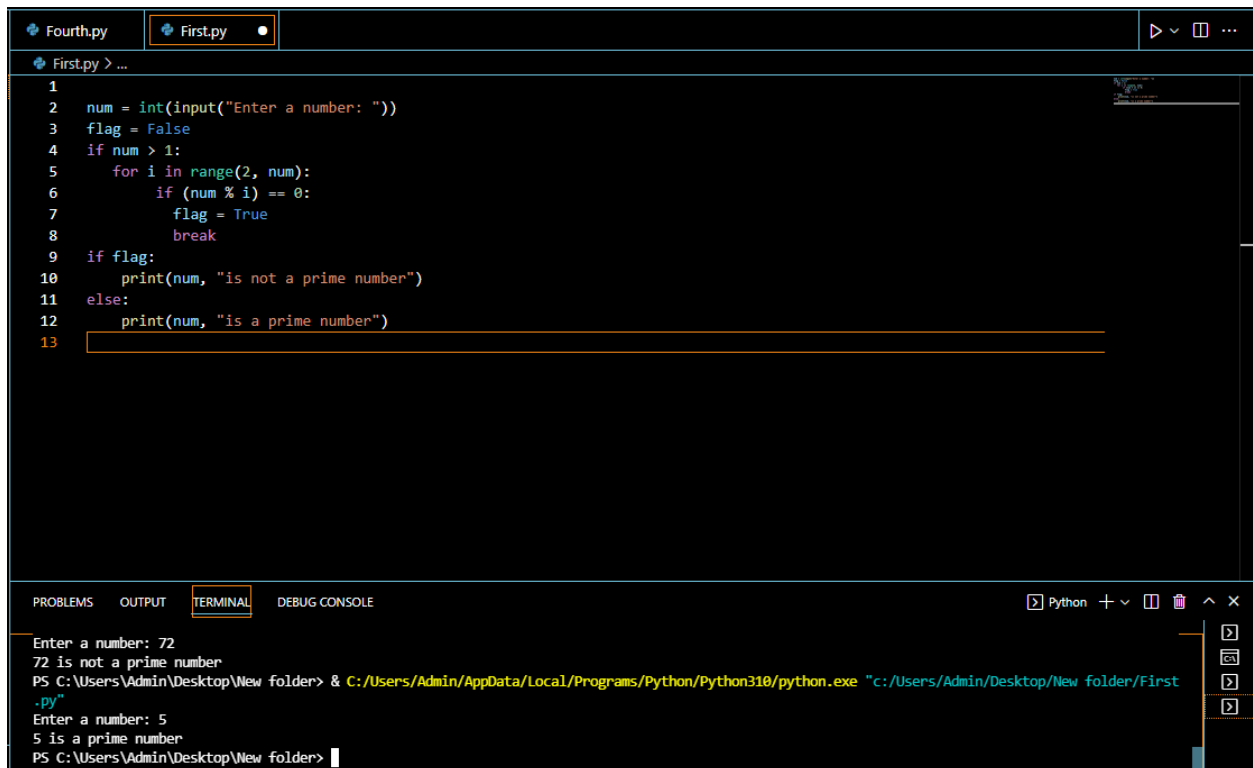


IBM ASSIGNMENT 1

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

Program:

```
num = 29
num = int(input("Enter a number: "))
flag = False
if num > 1:
    for i in range(2, num):
        if (num % i) == 0:
            flag = True
            break
if flag:
    print(num, "is not a prime number")
else:
    print(num, "is a prime number")
```



The screenshot shows a Python IDE with a dark theme. The top pane displays the code for a prime number checker. The bottom pane shows the terminal output, which includes the user input '72' and '5', and the corresponding program output: '72 is not a prime number' and '5 is a prime number'. The terminal also shows the command used to run the program: `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"`.

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

Enter a number: 72
72 is not a prime number
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: 5
5 is a prime number
PS C:\Users\Admin\Desktop\New folder>

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

Program:

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

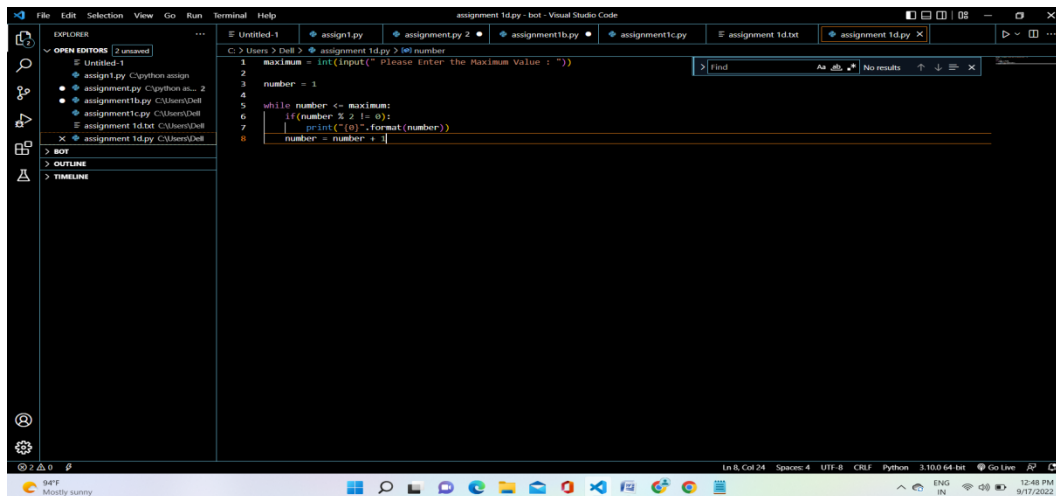
```
number = 1
```

```
while number <= maximum:
```

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

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

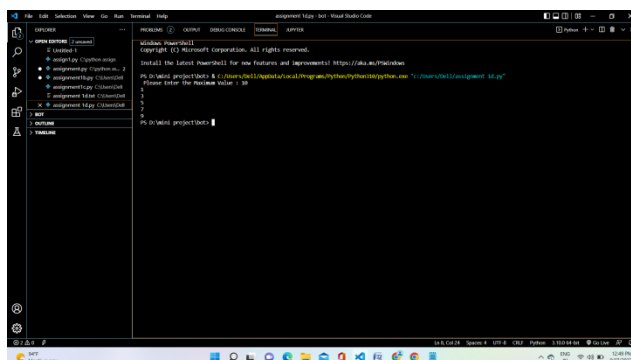
```
    number = number + 1
```

A screenshot of the Visual Studio Code editor interface. The main editor window displays a Python script with the following code:

```
1 maximum = int(input(" Please Enter the Maximum Value : "))
2
3 number = 1
4
5 while number <= maximum:
6     if(number % 2 != 0):
7         print("{0}".format(number))
8     number = number + 1
```

The left sidebar shows the Explorer view with a file named 'assignment1.py' selected. The bottom status bar indicates the file is encoded in UTF-8 with 4 spaces, using the Python interpreter at C:\Users\Del\AppData\Local\Programs\Python\Python310\python.exe.

OUTPUT:

A screenshot of the Visual Studio Code editor interface showing the output of the program. The main editor window displays the output of the program, which is a list of odd numbers from 1 to 10, each on a new line:

```
1
3
5
7
9
```

The left sidebar shows the Explorer view with a file named 'assignment1.py' selected. The bottom status bar indicates the file is encoded in UTF-8 with 4 spaces, using the Python interpreter at C:\Users\Del\AppData\Local\Programs\Python\Python310\python.exe.

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:
```

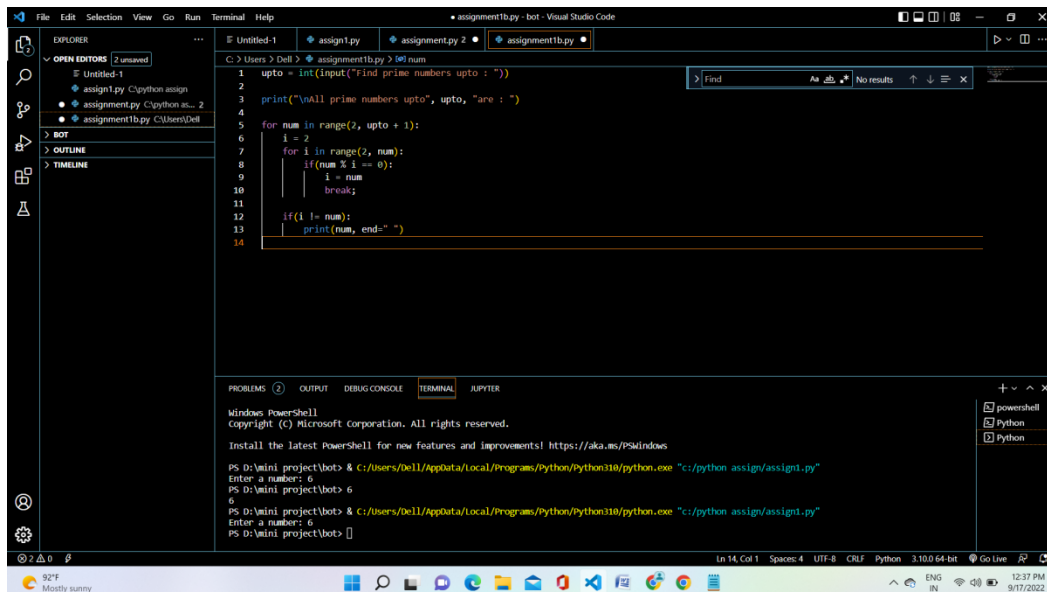
```
        for i in range(2,number):
```

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

```
                break
```

```
    else:
```

```
        print(number)
```



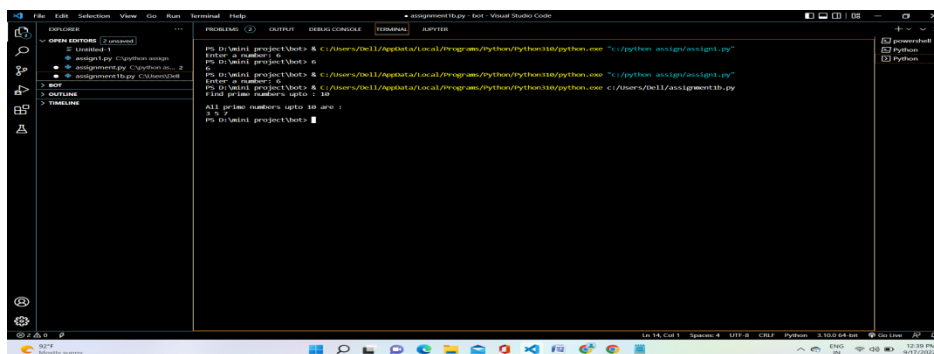
```
1 upto = int(input("Find prime numbers upto : "))
2
3 print("\nAll prime numbers upto", upto, "are : ")
4
5 for num in range(2, upto + 1):
6     i = 2
7     for i in range(2, num):
8         if (num % i == 0):
9             break
10
11 if (i != num):
12     print(num, end=" ")
13
14
```

Windows PowerShell
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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS D:\mini project\bot> C:\Users\bell\AppData\Local\Programs\Python\Python310\python.exe "c:/python assign/assign.py"
Enter a number: 6
PS D:\mini project\bot> 6
PS D:\mini project\bot> C:\Users\bell\AppData\Local\Programs\Python\Python310\python.exe "c:/python assign/assign.py"
Enter a number: 6
PS D:\mini project\bot> 6
PS D:\mini project\bot> All prime numbers upto 6 are :
2 3 5
PS D:\mini project\bot>

OUTPUT:



```
PS D:\mini project\bot> C:\Users\bell\AppData\Local\Programs\Python\Python310\python.exe "c:/python assign/assign.py"  
Enter a number: 6  
PS D:\mini project\bot> 6  
PS D:\mini project\bot> C:\Users\bell\AppData\Local\Programs\Python\Python310\python.exe "c:/python assign/assign.py"  
Enter a number: 6  
PS D:\mini project\bot> 6  
PS D:\mini project\bot> All prime numbers upto 6 are :  
2 3 5  
PS D:\mini project\bot>
```

4. Write a python program to generate fibonacci series

Program:

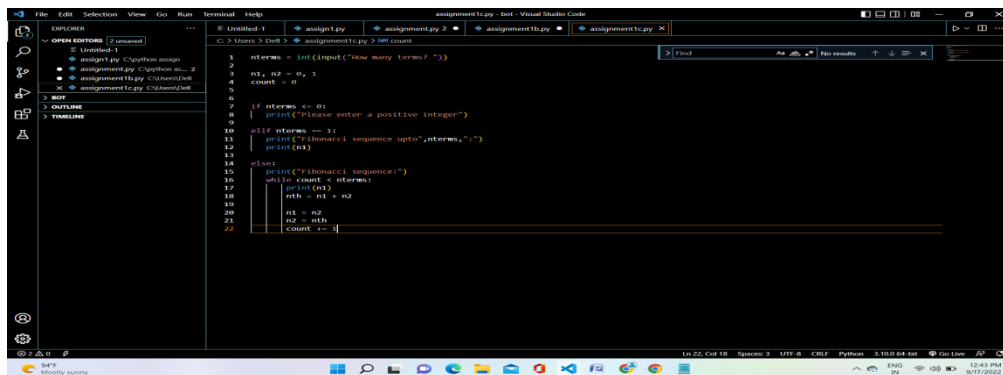
```
nterms = int(input("How many terms? "))
```

```
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

```



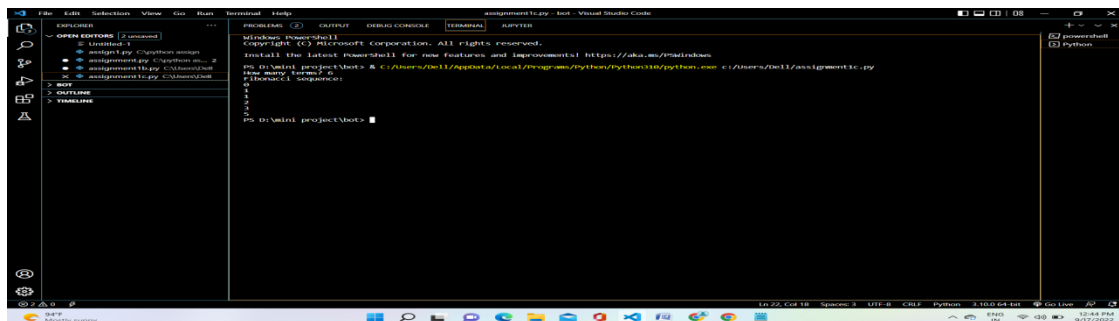
The screenshot shows the Visual Studio Code interface with the file 'assignment1.py' open. The code is as follows:

```

1 nterms = int(input("how many terms? "))
2 n1, n2 = 0, 1
3 count = 0
4
5
6
7 if nterms <= 0:
8     print("Please enter a positive integer")
9
10 elif nterms == 1:
11     print("Fibonacci sequence upto",nterms,":")
12     print(n1)
13
14 else:
15     print("Fibonacci sequence:")
16     while count < nterms:
17         print(n1)
18         nth = n1 + n2
19         n1 = n2
20         n2 = nth
21         count += 1
22

```

OUTPUT:



The screenshot shows the Visual Studio Code interface with the 'TERMINAL' panel active. The output of the program is displayed as follows:

```

PS D:\mini project\chat> python assignment1.py
how many terms? 5
0
1
1
2
3
4
5

```