

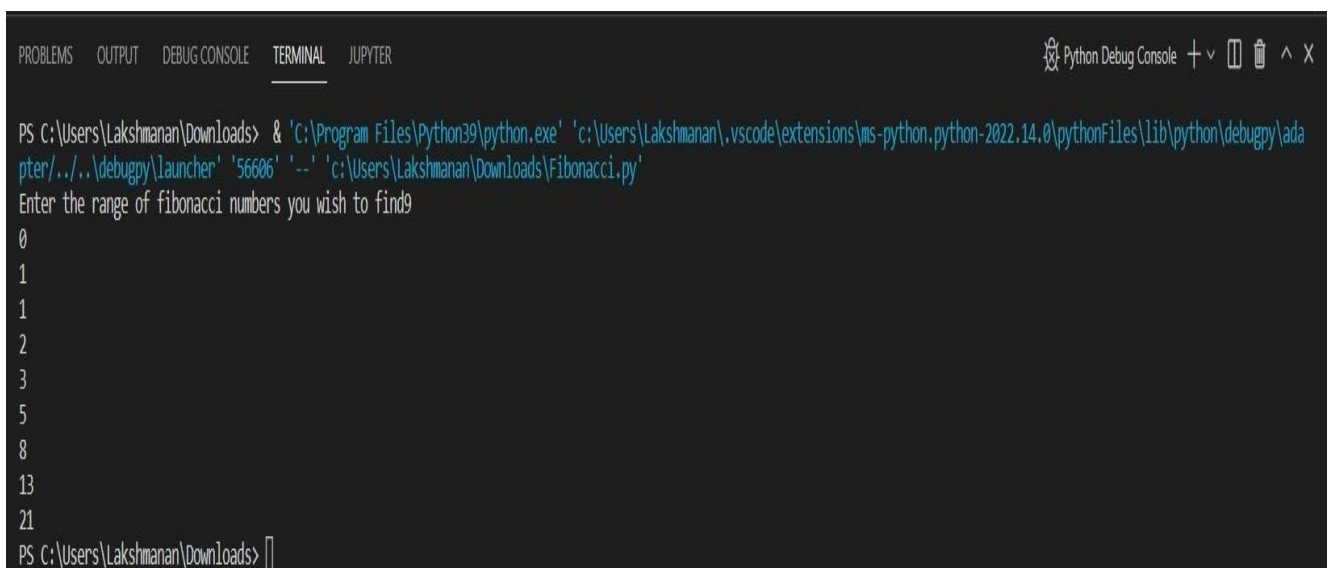
PYTHON ASSIGNMENT

1. FIBONACCI SERIES:

PROGRAM:

```
a = 0
b = 1
n = int (input("Enter the range of Fibonacci numbers you wish to find"))
print(a)
print(b)
for i in range(0,n-2):
    fib = a + b
    print(fib)
    a = b
    b = fib
    i = i + 1
```

OUTPUT:

A screenshot of a terminal window showing the execution of a Python script. The terminal has tabs for PROBLEMS, OUTPUT, DEBUG CONSOLE, TERMINAL, and JUPYTER. The command prompt shows the execution of a Python script named 'Fibonacci.py' with an input of 9. The output displays the first 9 Fibonacci numbers: 0, 1, 1, 2, 3, 5, 8, 13, and 21.

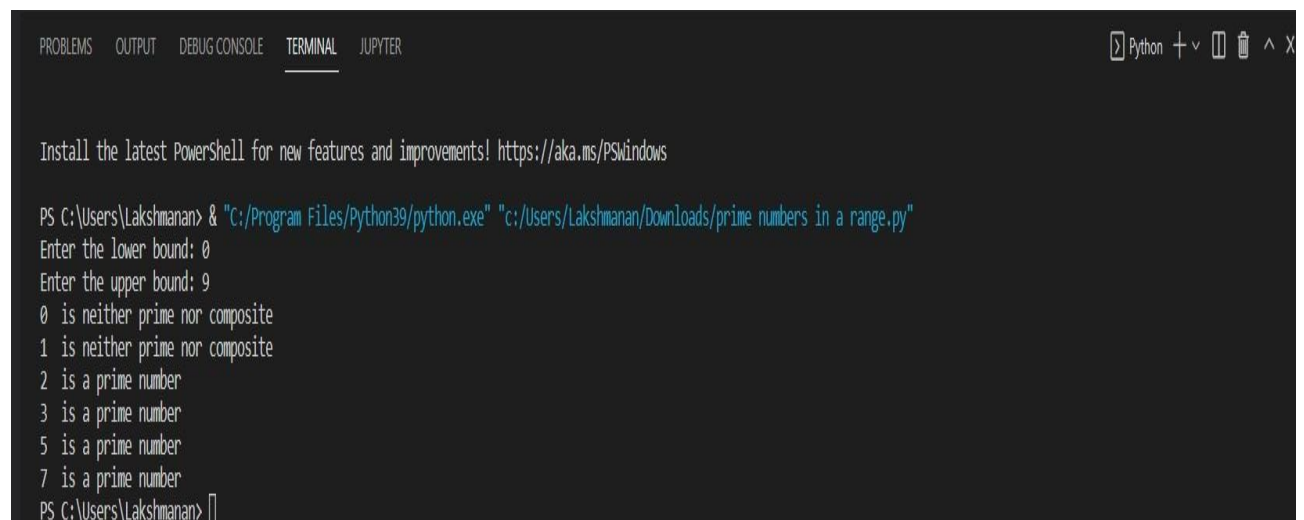
```
PS C:\Users\Lakshmanan\Downloads> & 'C:\Program Files\Python39\python.exe' 'c:\Users\Lakshmanan\.vscode\extensions\ms-python.python-2022.14.0\pythonFiles\lib\python\debugpy\adapter\..\..\debugpy\launcher' '56606' '--' 'c:\Users\Lakshmanan\Downloads\Fibonacci.py'
Enter the range of fibonacci numbers you wish to find9
0
1
1
2
3
5
8
13
21
PS C:\Users\Lakshmanan\Downloads>
```

2. PRIME NUMBER IN A RANGE:

PROGRAM:

```
a = int(input("Enter the lower bound: "))
b = int(input("Enter the upper bound: "))
for i in range(a,b+1):
    if i > 1:
        for j in range(2, i):
            if (i % j) == 0:
                break
        else:
            print(i , " is a prime number")
    else:
        print(i , " is neither prime nor composite")
```

OUTPUT:



The screenshot shows a Jupyter Notebook interface with a terminal window open. The terminal displays the following text:

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER Python + v [trash] ^ X

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

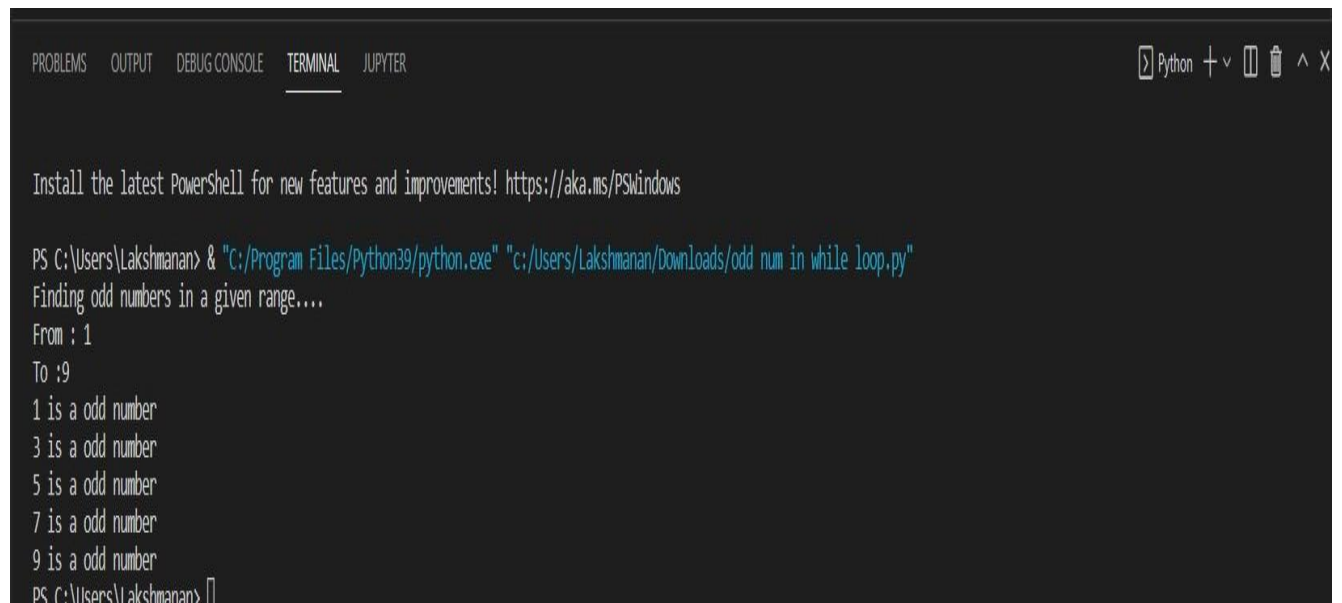
PS C:\Users\Lakshmanan> & "C:/Program Files/Python39/python.exe" "c:/Users/Lakshmanan/Downloads/prime numbers in a range.py"
Enter the lower bound: 0
Enter the upper bound: 9
0 is neither prime nor composite
1 is neither prime nor composite
2 is a prime number
3 is a prime number
5 is a prime number
7 is a prime number
PS C:\Users\Lakshmanan> 
```

3. ODD NUMBER IN WHILE LOOP:

PROGRAM:

```
print("Finding odd numbers in a given range....")  
m = int(input("From : "))  
n = int(input("To :"))  
while m < n+1:  
    if(m%2)!=0:  
        print("{} is a odd number".format(m))  
    m = m + 1
```

OUTPUT:



The screenshot shows a Jupyter Notebook interface with a terminal window. The terminal displays the following output:

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows  
  
PS C:\Users\Lakshmanan> & "C:/Program Files/Python39/python.exe" "c:/Users/Lakshmanan/Downloads/odd num in while loop.py"  
Finding odd numbers in a given range....  
From : 1  
To :9  
1 is a odd number  
3 is a odd number  
5 is a odd number  
7 is a odd number  
9 is a odd number  
PS C:\Users\Lakshmanan>
```

4. CHECK PRIME NOR COMPOSITE:

PROGRAM:

```
a = int(input("Enter the number to check if it is a prime : "))
```

```
if a > 1:
```

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

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

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

```
            break
```

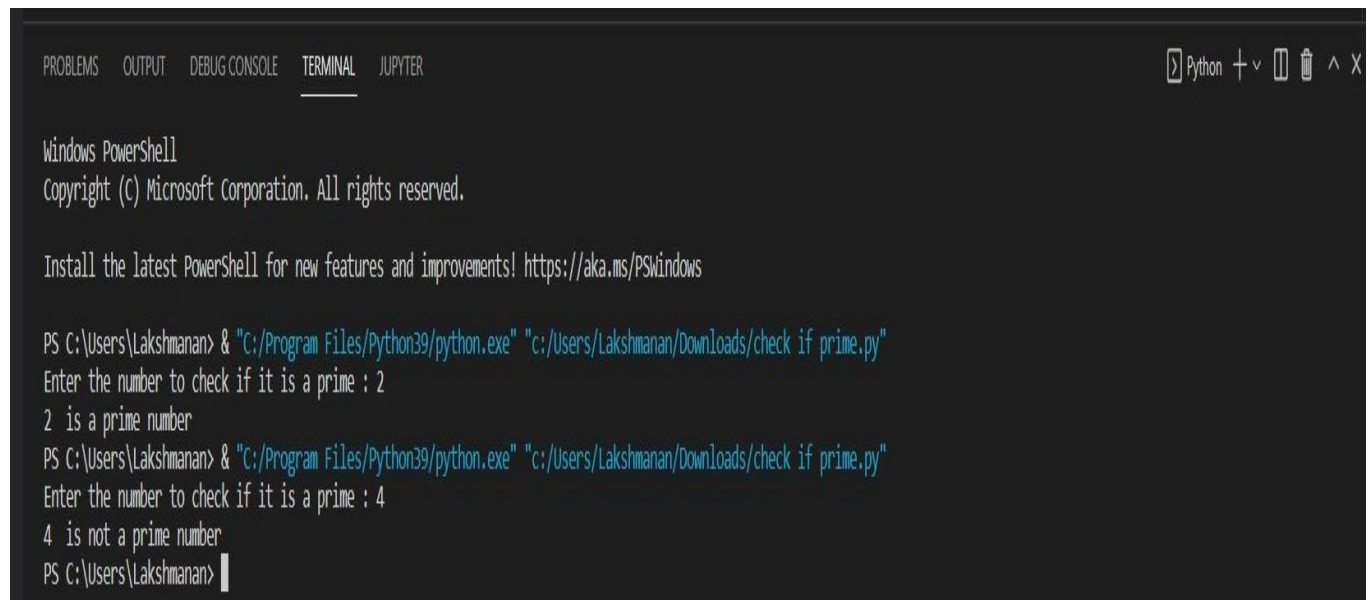
```
    else:
```

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

```
else:
```

```
    print(a, " is neither prime nor composite")
```

OUTPUT:



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL JUPYTER Python + v [icon] [icon] ^ X

Windows PowerShell
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PS C:\Users\Lakshmanan> & "C:/Program Files/Python39/python.exe" "c:/Users/Lakshmanan/Downloads/check if prime.py"
Enter the number to check if it is a prime : 2
2 is a prime number
PS C:\Users\Lakshmanan> & "C:/Program Files/Python39/python.exe" "c:/Users/Lakshmanan/Downloads/check if prime.py"
Enter the number to check if it is a prime : 4
4 is not a prime number
PS C:\Users\Lakshmanan> |
```