Project 15:

In this project you have to enter a positive integer range [A, B] and system will find out the status (Prime or composite) of each number available in the given range. At the end print the count also.

Note: Make use of efficient approach to check prime status of the number.

For example:

Range is (7,10)

Then the status of each number in the range is:

7 is prime

8 is composite or not prime

9 is composite

10 is composite

Count: 1 prime and 3 composite numbers in the range.

(Student is free to decide the input and output layout for this mini project)

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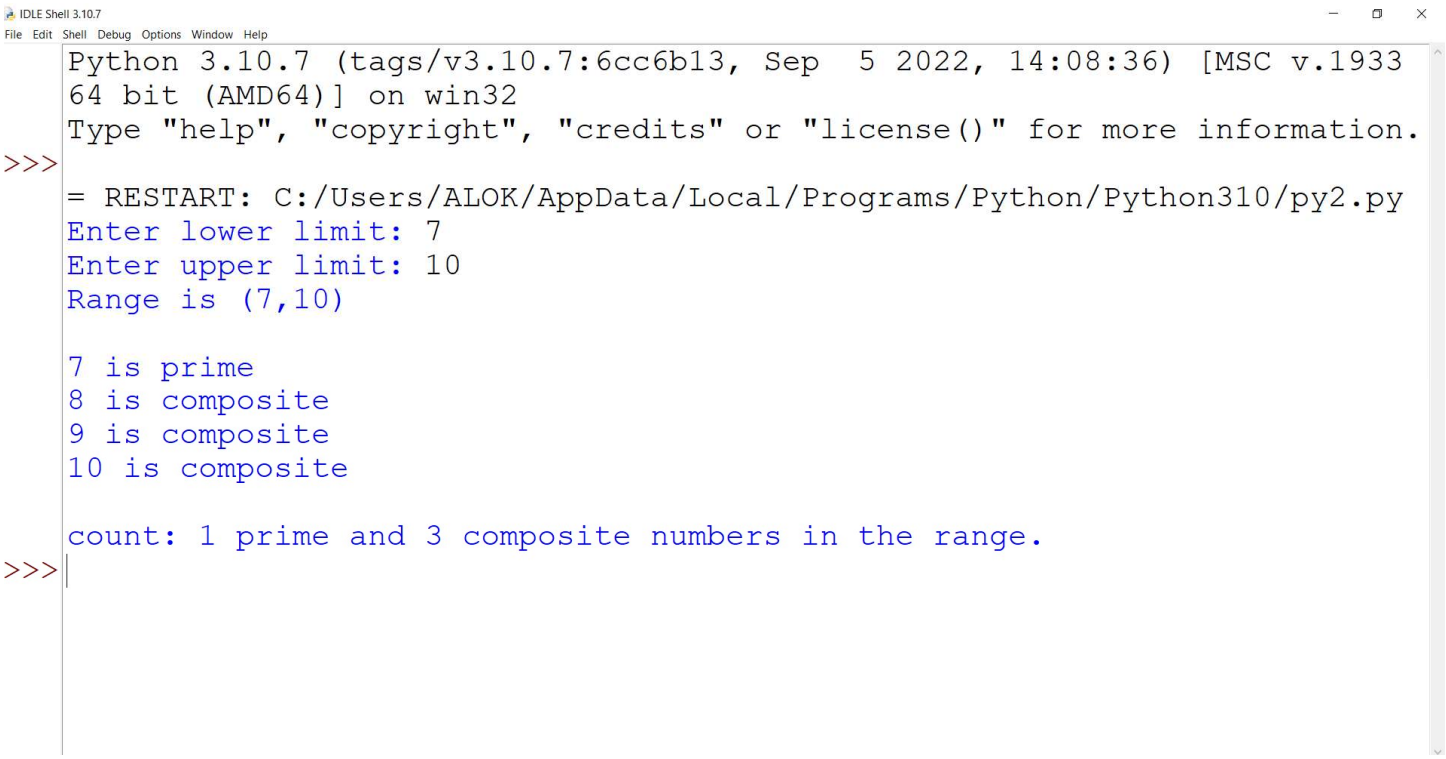
CODE:-

untitled

File Edit Format Run Options Window Help

```
a=int(input("Enter lower limit: "))
b=int(input("Enter upper limit: "))
s1,s2=0,0
print(f"Range is ({a},{b})")
print()
for j in range(a,b+1):
    for i in range(2,int((a/2)+1)):
        if a%i==0:
            print(f"{a} is composite")
            s1=s1+1
            break
    else:
        print(f"{a} is prime")
        s2+=1
    a+=1
print()
print(f"count: {s2} prime and {s1} composite numbers in the range.")
```

OUTPUT:-


IDLE Shell 3.10.7
File Edit Shell Debug Options Window Help
Python 3.10.7 (tags/v3.10.7:6cc6b13, Sep 5 2022, 14:08:36) [MSC v.1933
64 bit (AMD64)] on win32
Type "help", "copyright", "credits" or "license()" for more information.
>>>
= RESTART: C:/Users/ALOK/AppData/Local/Programs/Python/Python310/py2.py
Enter lower limit: 7
Enter upper limit: 10
Range is (7,10)
7 is prime
8 is composite
9 is composite
10 is composite
count: 1 prime and 3 composite numbers in the range.
>>>