**BTECH CSE (2022-2026)**

**BATCH : KOC49**

**Program Task:**

**Prime And Composite Numbers**

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 range. At the end print the count also.

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

**Members:**

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**Program:**

#Program to check weather numbers betweeen range are prime or composite

print('(a,b) Enter the lower limit in place of a and the upper limit in place of b')

a=int(input('Enter Lower Limit a: '))

b=int(input('Enter Upper Limit b: '))

x=''

y=''

count1=0

count2=0

print(f'The status of each number in the range ({a},{b}) is:')

for i in range(a,b+1):

    #Check Prime

    flag=False

    if i>1:

        for w in range(2,i):

            if i%w ==0:

                flag=True

                break

    if flag:

        x='Not a Prime Number and '

    elif i==1:

        x='Not a Prime Number and'

    else:

        x='Prime Number and'

        count1=count1+1

    #Check Composite

    is\_composite=False

    for q in range(2, i):

        if i % q == 0:

            is\_composite = True

    if is\_composite == True:

        y=" is a composite number"

        count2=count2+1

    else:

        y="not a composite number"

    print(i,'is',x,y)

print(f'The range has {count1} prime number and {count2} composite number.')

**Output:**

