Netaji Subhash Engineering College

Department of Computer Science & Engineering

B. Tech CSE 2nd Year 3rd Semester

2021-2022

Name of the Course: IT Workshop

Course Code: PCC-CS393

Name of the Student: Sanjoy Saha

Class Roll No.: 3

University Roll No.: 10900120003

Date of Experiment: 12/11/2021

Date of Submission: 15/11/2021

- **Assignment No.: 15**

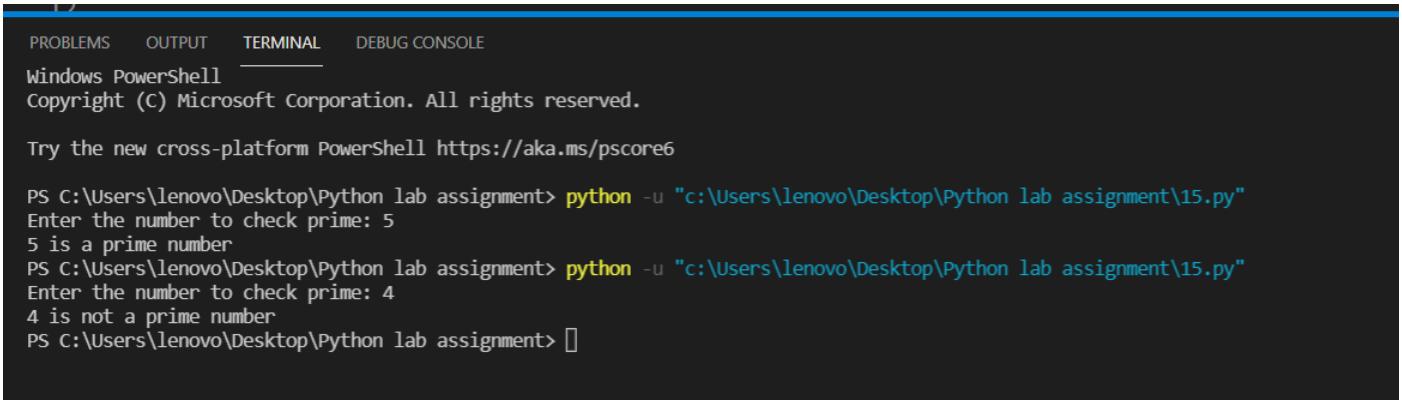
  Problem Statement: Write a program to check whether a given number is a prime number or not.

  Python Code:

```
num = int(input("Enter the number to check prime: "))
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")
```

Sample Output(s):



- **Assignment No.: 16**

Problem Statement: Write a program to check whether a given number is an Armstrong number or not.

Python Code:

```
num = int(input("Enter a number: "))
sum = 0
temp = num
while temp > 0:
   digit = temp % 10
   sum += digit ** 3
   temp //= 10
if num == sum:
   print(num,"is an Armstrong number")
else:
   print(num,"is not an Armstrong number")
```

Sample Output(s):

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE
PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users\lenovo\Desktop\Python lab assignment\16.py"
Enter a number: 153
153 is an Armstrong number
PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users\lenovo\Desktop\Python lab assignment\16.py"
Enter a number: 123
123 is not an Armstrong number
PS C:\Users\lenovo\Desktop\Python lab assignment>
```

- **Assignment No.: 17**

Problem Statement: Write a program to get the LCM of two positive integers.

Python Code:

```
x=int(input("Enter the first number:"))
y=int(input("Enter the second number:"))
if x > y:
       greater = x
else:
    greater = y

while(True):
       if((greater % x == 0) and (greater % y == 0)):
           lcm = greater
           break
       greater += 1
```

```
print("The L.C.M.of",x,"and",y,"is", lcm)
```

Sample Output(s):

```
PROBLEMS    OUTPUT    TERMINAL    DEBUG CONSOLE
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users\lenovo\Desktop\
Enter the first number:12
Enter the second number:18
The L.C.M.of 12 and 18 is 36
PS C:\Users\lenovo\Desktop\Python lab assignment>
```

Assignment No.: 18

Problem Statement: 18. Write a program to find the sum of all prime numbers below two thousand.

Python Code:

```
num = int(input("Enter the range: "))
sum=0
for i in range (2,num+1):
    for j in range(2, int(i/2)+1):
        if (i % j) == 0:
            break
    else:
        sum=sum+i;
print("Sum of the prime numbers between 2 and",num,"is=",sum)
```

OUTPUT –

```
PROBLEMS    OUTPUT    TERMINAL    DEBUG CONSOLE
Windows PowerShell
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PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users\lenovo\
Enter the range: 25
Sum of the prime numbers between 2 and 25 is= 100
PS C:\Users\lenovo\Desktop\Python lab assignment>
```

- **Assignment No.: 19**

  Problem Statement: Write a program that prompts users to enter numbers. This process repeats until the user enters -1. Finally, the program prints the count of prime and composite numbers entered.

  Python Code:

```
p,c = 0,0
while(True):
 num=int(input("Enter a number:"))
 if num==-1:
    break
 else:
    if num > 1:
     for i in range(2, int(num/2)+1):
        if (num % i) == 0:
            c=c+1
            break
     else:
        p=p+1


print("Number of Prime numbers=",p,";Number of Composite
numbers=",c)
```

  Sample Output(s):

```
Windows PowerShell
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PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users\
Enter a number:5
Enter a number:7
Enter a number:9
Enter a number:2
Enter a number:2
Enter a number:-1
Number of Prime numbers= 4 ;Number of Composite numbers= 1
PS C:\Users\lenovo\Desktop\Python lab assignment>
```

Assignment No.: 20

Problem Statement: Write a program to find the sum of the even-valued terms of the Fibonacci series up to 100.

Python Code:

```
num= int(input("Til which number you want the sum:"))
n1, n2 = 0, 1
sum=0
while n1 < num:
    if (n1%2)==0:
        #print(n1):to print even terms
        sum=sum+n1
    nth = n1 + n2
    n1 = n2
    n2 = nth
print("Sum of the even terms of the fibonacci series
upto",num,"is=",sum)
```

Sample Output(s):

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE
Windows PowerShell
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Try the new cross-platform PowerShell https://aka.ms/pscore6

PS C:\Users\lenovo\Desktop\Python lab assignment> python -u "c:\Users
Til which number you want the sum:30
Sum of the even terms of the fibonacci series upto 30 is= 10
PS C:\Users\lenovo\Desktop\Python lab assignment>
```

----------END----------