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| **Netaji Subhash Engineering College**  **Department of Computer Science & Engineering**  **B. Tech CSE 2nd Year 3rd Semester**  **2023-2024**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**Name of the Course: IT Workshop (Python)**  **Course Code: PCC-CS393**  **Name of the Student: ARITTRA BAG**  **Class Roll No.: 103**  **University Roll No.: 10900122105**  **Date of Experiment: 11/08/2023**  **Date of Submission: 25/08/2023**  **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**  **Assignment No.: A3\_01**  **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:"))  if(num==0 or num==1):      print("It is neither Prime nor Composite")  elif num==2:      print("It is a Prime Number")  else:      for i in range(2,num):          if num%i==0:              print("It is a Composite Number")              break          else:              print("It is a Prime Number")              break  **Sample Output(s):**  Enter the Number:13  It is a Prime Number  **Assignment No.: A3\_02**  **Problem Statement:**  Write a program to check whether a given number is an Armstrong number or not.  **Python Code:**  n=int(input("Enter the Number: "))  c=len(str(n))  num=n  sum=0  for i in range(c):      temp=num%10      sum+=temp\*\*c      num=num//10  if(sum==n):      print("It is an Armstrong Number")  else:      print("It is Not an Armstrong Number")  **Sample Output(s):**  Enter the Number: 1634  It is an Armstrong Number  Enter the Number: 123  It is Not an Armstrong Number  **Assignment No.: A3\_03**  **Problem Statement:**  Write a program to get the LCM of two positive integers.  **Python Code:**  def gcd(a,b):      while b:          a,b = b,a % b      return a  def lcm(a,b):      return (a\*b)//gcd(a,b)  num1 = int(input("Enter the First Number: "))  num2 = int(input("Enter the Second Number: "))  result = lcm(num1, num2)  print(f"The LCM of {num1} and {num2} is {result}")  **Sample Output(s):**  Enter the First Number: 12  Enter the Second Number: 18  The LCM of 12 and 18 is 36  **Assignment No.: A3\_04**  **Problem Statement:**  Write a program to find the sum of all prime numbers within a given range.  **Python Code:**  low=int(input("Enter the Lower Limit:"))  high=int(input("Enter the Lower Limit:"))  sum=0  for num in range(low,high+1):      if(num==0 or num==1):          continue      else:          for i in range(2,num):              if num%i==0:                  break          else:              sum+=num  print(“Sum =”,sum)  **Sample Output(s):**  Enter the Lower Limit:1  Enter the Lower Limit:10  Sum = 17  **Assignment No.: A3\_05**  **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:**  i=c=p=0  while(i>=0):      num=int(input("Enter the Number:"))      if num==-1:          break      elif num==1:          continue      else:          for i in range(2,num):              if num%i==0:                  c+=1          else:              p=p+1  print("Count of Prime No.s=",p)  print("Count of Composite No.s=",c)  **Sample Output(s):**  Enter the Number:1  Enter the Number:3  Enter the Number:4  Enter the Number:5  Enter the Number:9  Enter the Number:-3  Enter the Number:-5  Enter the Number:1  Enter the Number:-1  Count of Prime No.s= 6  Count of Composite No.s= 2  **Assignment No.: A3\_06**  **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("Enter the Final Number:"))  a=c=sum=0  b=1  print(a,b,sep=' ',end=' ')  while(b<num):      if((a+b)>num):          break      else:          c=a+b          a=b          b=c          print(c,sep=' ',end=' ')          if(b%2==0 and b<=num):              sum=sum+b  print("\nThe Sum of Even Valued Terms upto",num,"=",sum)  **Sample Output(s):**  Enter the Final Number:100  0 1 1 2 3 5 8 13 21 34 55 89  The Sum of Even Valued Terms upto 100 = 44 |