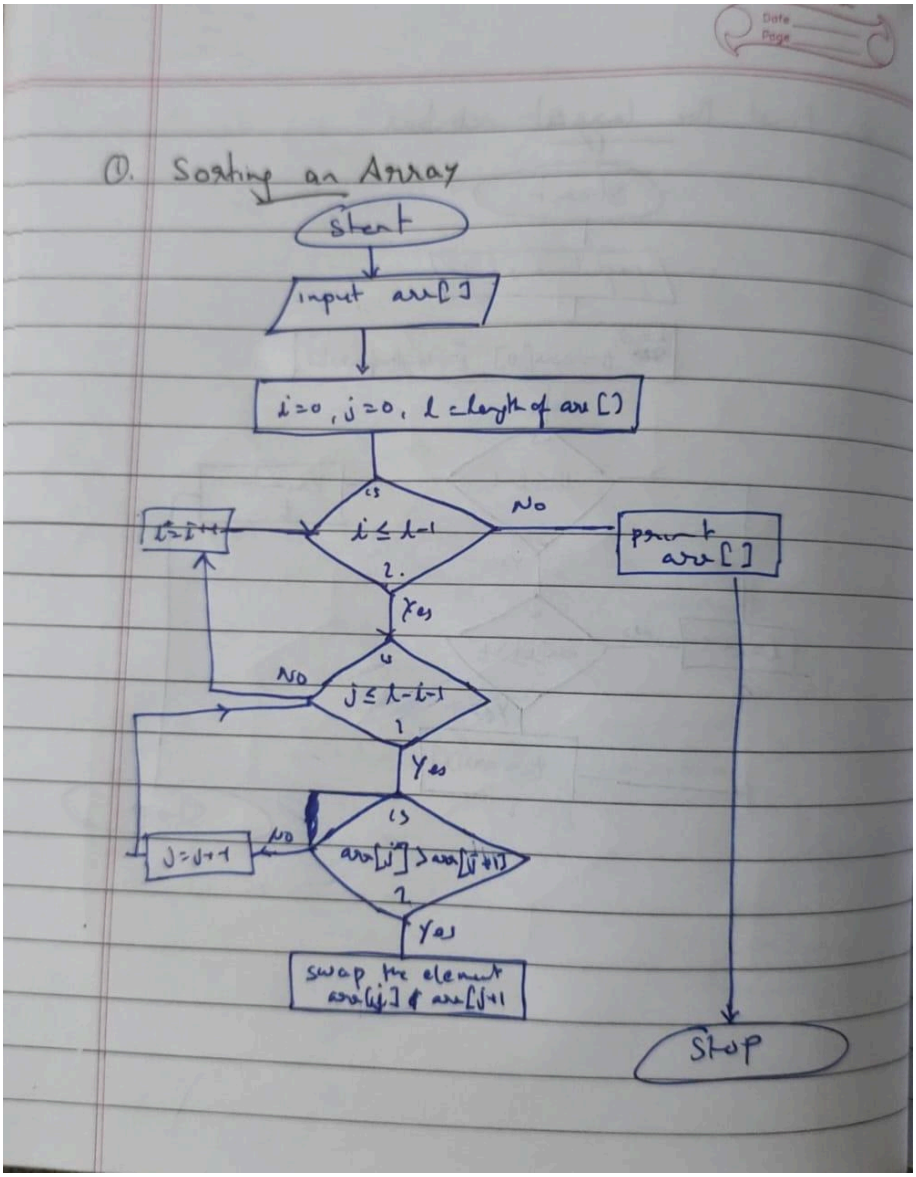
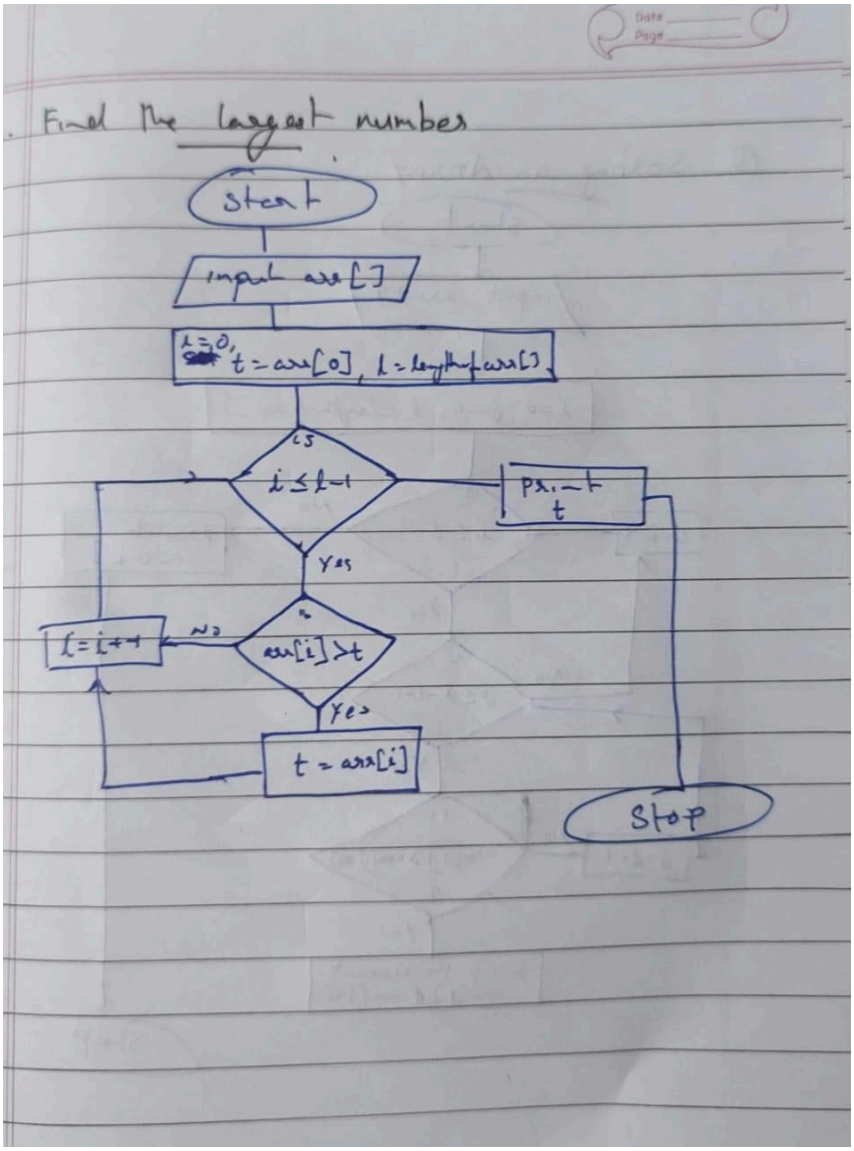
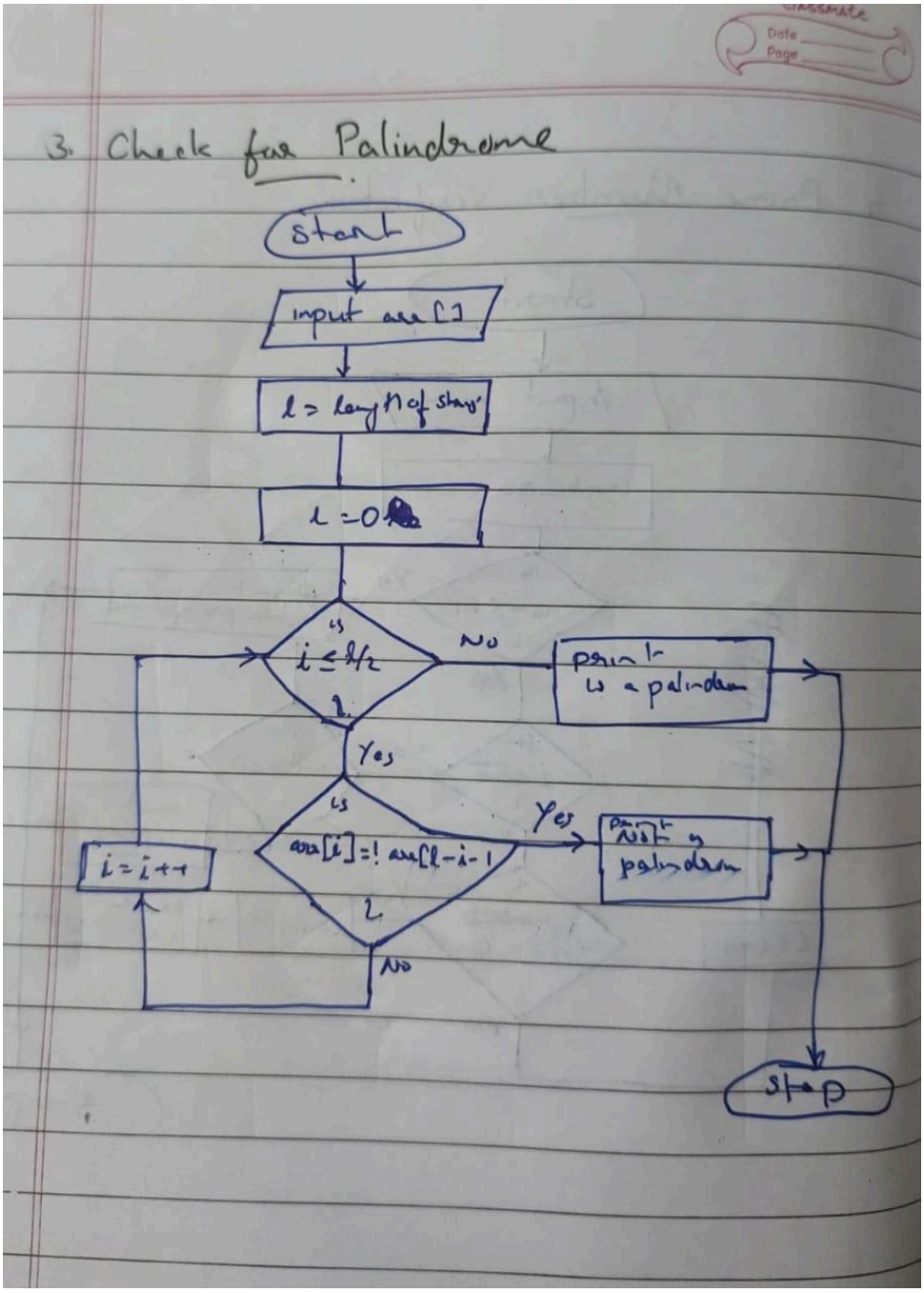
1. **Sorting an Array** Write pseudocode to implement a bubble sort algorithm to arrange a list of integers in ascending order.
    - ➢ Get the list of integers, arr[]
    - ➢ Create a variable l to store the size of the list
    - ➢ For i from 0 to l-1
    - ➢ For j from 0 to l-i-1.
    - ➢ If arr[j] > arr[j+1]
    - ➢ Then swap arr[j] with arr[j+1]
    - ➢ Print the sorted list



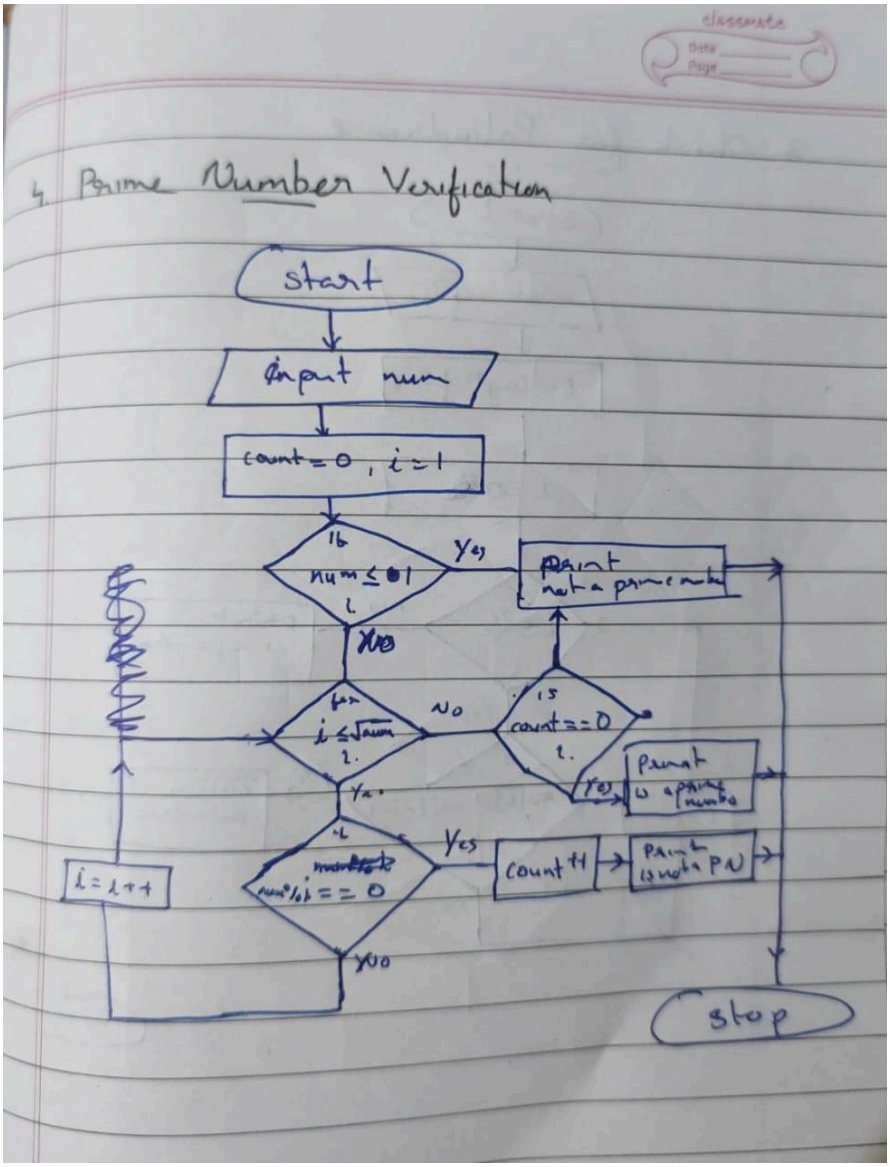
2. **Find the Largest Number** Write pseudocode to find the largest number in an array of integers.
    - ➢ Get the list of integers, arr[]
    - ➢ Create a variable t=arr[0] to hold the largest number and l to store the size of the array.
    - ➢ For i from 0 to l-1
    - ➢ If arr[i] > t
    - ➢ Then t=arr[i]
    - ➢ Print t



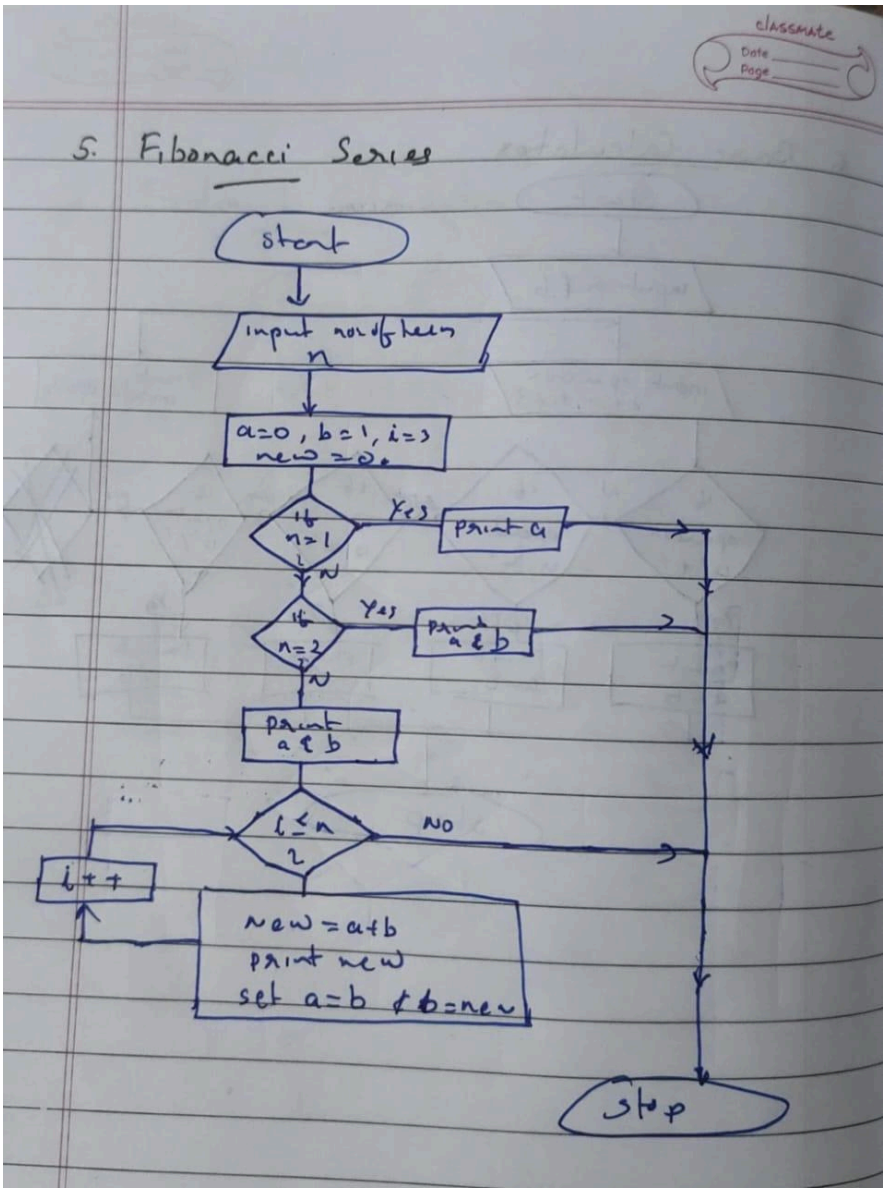
3. **Check for Palindrome** Write pseudocode to check whether a given string is a palindrome.
    - ➢ Get the input string, arr[]
    - ➢ Create a variable l to store the length of the string
    - ➢ For i from 0 to l/2
    - ➢ If arr[i] =! arr[l-i-1]
    - ➢ Then return not palindrome
    - ➢ Else return is a palindrome



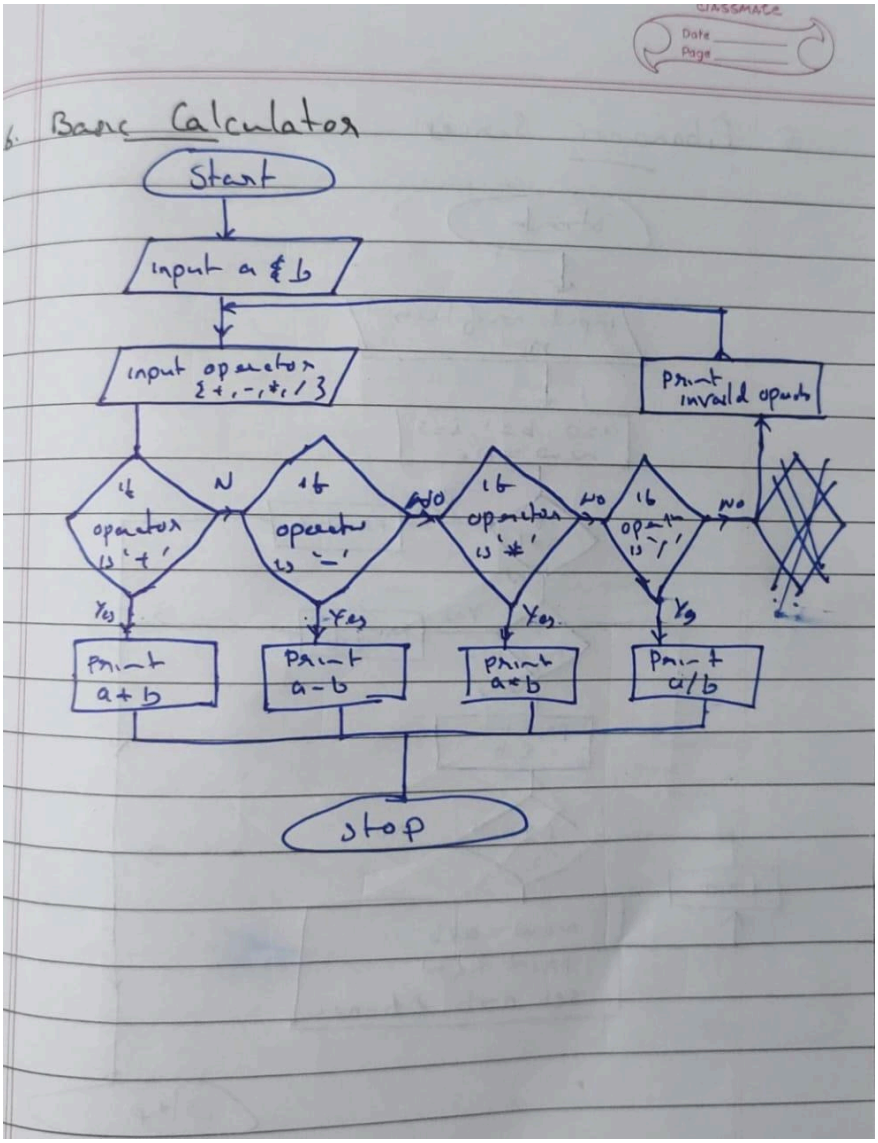
4. **Prime Number Verification** Write pseudocode to determine whether a given number is a prime number.
    - ➢ Get the input number, num
    - ➢ Initialize a variable count, count = 0
    - ➢ If num<= 1
    - ➢ Then print not a prime number
    - ➢ For i from 2 to square root(num)
    - ➢ If num%i == 0
    - ➢ Then count++
    - ➢ End
    - ➢ If count ==0
    - ➢ Then print num is a prime number
    - ➢ Else print num is not a prime number



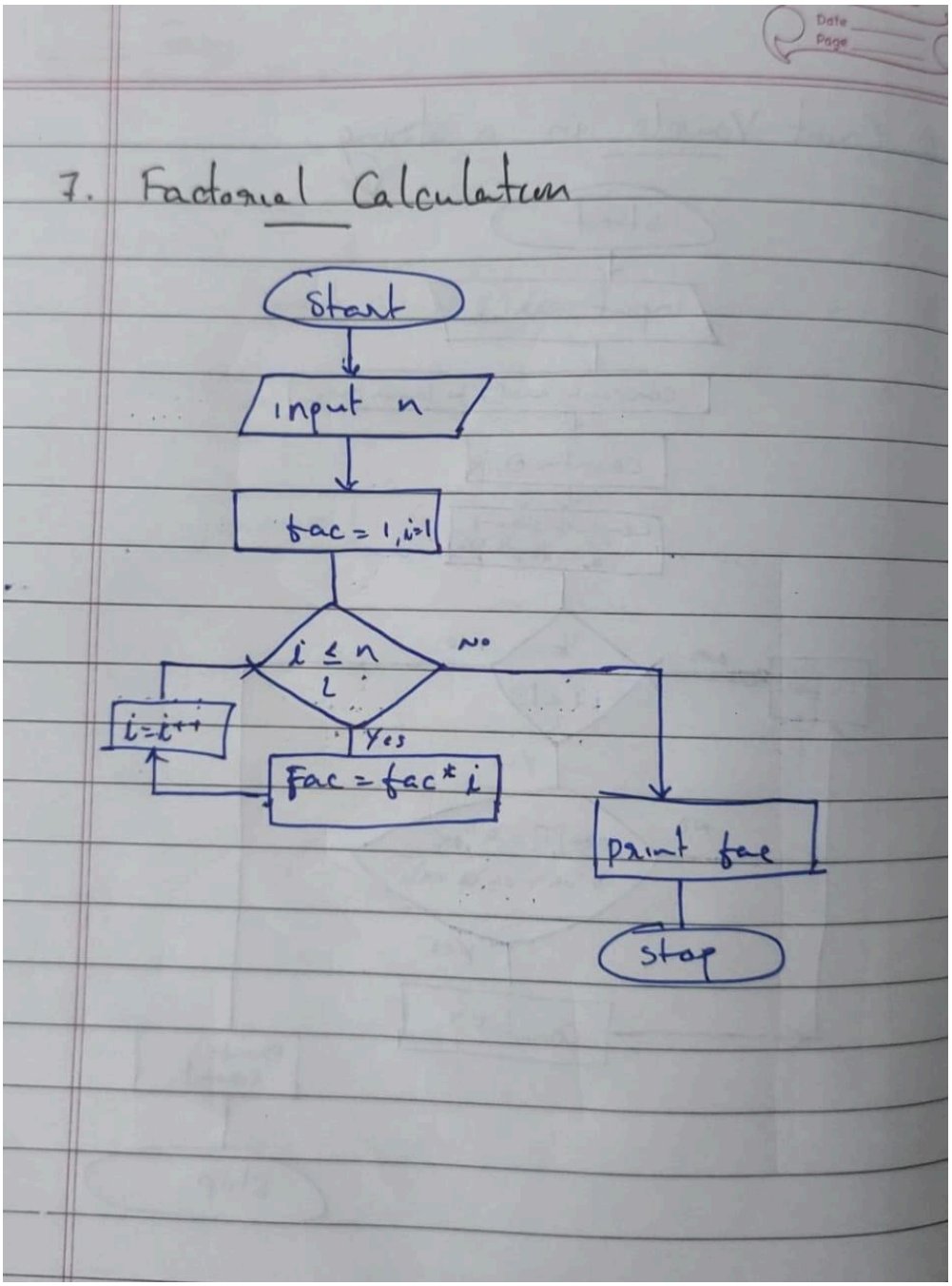
5. **Fibonacci Series** Write pseudocode to generate the first N terms of the Fibonacci series.
    - ➢ Get the input N term value, n
    - ➢ Initialize a=0 and b=1 new=0
    - ➢ If n=1
    - ➢ Print a
    - ➢ If n=2
    - ➢ Print a and b
    - ➢ For i from 3 to n
    - ➢ New = a+b
    - ➢ Print new
    - ➢ Set a=b & b= new



6. **Basic Calculator** Write pseudocode to implement a calculator that performs addition, subtraction, multiplication, and division based on user input.
    - ➢ Get the operator {+,-,*,/}
    - ➢ Get the two numbers {a & b}
    - ➢ If the operator is +
    - ➢ Then print a+b
    - ➢ If the operator is -
    - ➢ Then print a-b
    - ➢ If the operator is *
    - ➢ Then print a*b
    - ➢ If the operator is /
    - ➢ Then print a/b
    - ➢ Else invalid operator



7. **Factorial Calculation** Write pseudocode to compute the factorial of a given number using recursion.
    - ➢ Get the number, n
    - ➢ Initialize fac=1
    - ➢ For i from 1 to n
    - ➢ fac =fac*i
    - ➢ Print fac



8. **Count Vowels in a String** Write pseudocode to count the number of vowels in a given string
    - ➢ Get the string, arr[]
    - ➢ Convert it into lowercase
    - ➢ Initialize a count variable, count=0 and create a variable for the length of string, l
    - ➢ For i from 0 to l-1
    - ➢ If arr[i]= ‘a’ or arr[i]= ‘e’ or arr[i]= ‘i’ or arr[i]= ‘o’ or arr[i]= ‘u’
    - ➢ Then count++
    - ➢ Print count