

- 1) **Sorting an Array** Write pseudocode to implement a bubble sort algorithm to arrange a list of integers in ascending order.
Step1: Initialize an array with the integers that need to be get sorted.
Step2: Use an outer for loop for traversing the entire array.
Step3: Use an inner for loop to perform comparison between adjacent elements.
Step4: The swapping should be done if one element is greater than other.
Step5: Once the traversing completes. We will get an array of sorted elements.
- 2) **The Largest Number** Write pseudocode to find the largest number in an array of integers.
Step1: Initialize an array with the integers. Also initialize variable largest to another array with size 0.
Step 2: Everytime comparison happens between the current number and largest and each time update the largest value to other array if the current number is greater.
Step3: The end result will give the largest number.
- 3) **Check for Palindrome** Write pseudocode to check whether a given string is a palindrome.
Step1: Initialize an input string.
Step2: Also initialize a variable reversed to store the reversed string.
Step3: If both input string and reversed string are same..Return True.
Step 4: Else return False.
- 4) **Prime Number Verification** Write pseudocode to determine whether a given number is a prime number.
Step1: Provide a number 7 to check. Since the number is greater than 1 we proceed.
Step2: □ We loop through numbers from 2 to 6.
Step3: Since no divisors were found, 7 is a prime number, and we return True.
- 5) **Fibonacci Series** Write pseudocode to generate the first N terms of the Fibonacci series
Step1: Read the number of terms.
Step2: Initialize a=0, b=1.
Step 3: print a and calculate the next term as a+b, then update a and b for next iteration.

- 6) **Basic Calculator** Write pseudocode to implement a calculator that performs addition, subtraction, multiplication, and division based on user input.

Step1: Begin the program.

Step2:Get the two numbers from user

Step3:Get the operator (addition, subtraction, multiplication, or division) from the user.

Step4:Carry out the chosen arithmetic operation (add, subtract, multiply, or divide) using the two numbers.

Step5:Show the result of the calculation and end the program.

- 7) **Factorial Calculation** Write pseudocode to compute the factorial of a given number using recursion.

Step1:Define a function factorial(n).

Step2:Check whether $n=0$ and return 1 since factorial(0) is 1.

Step3: If n is not equal to 0, then the function calls itself with $n - 1$ and multiplies the result by n.

Step4:End the function.

- 8) **Count Vowels in a String** Write pseudocode to count the number of vowels in a given string.

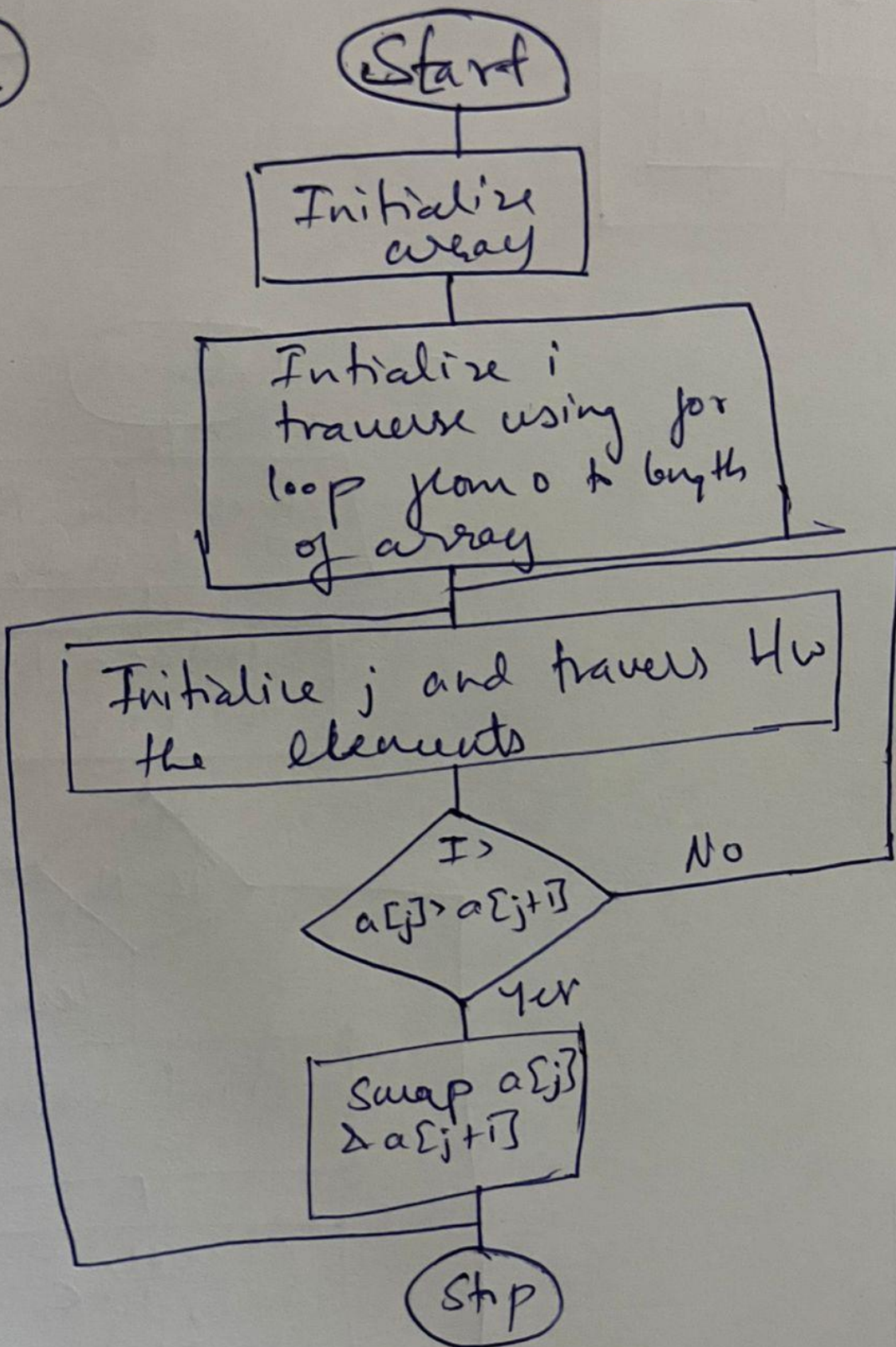
Step1:Initialize a particular string,count variable.

Step2:Declare the array of vowels.

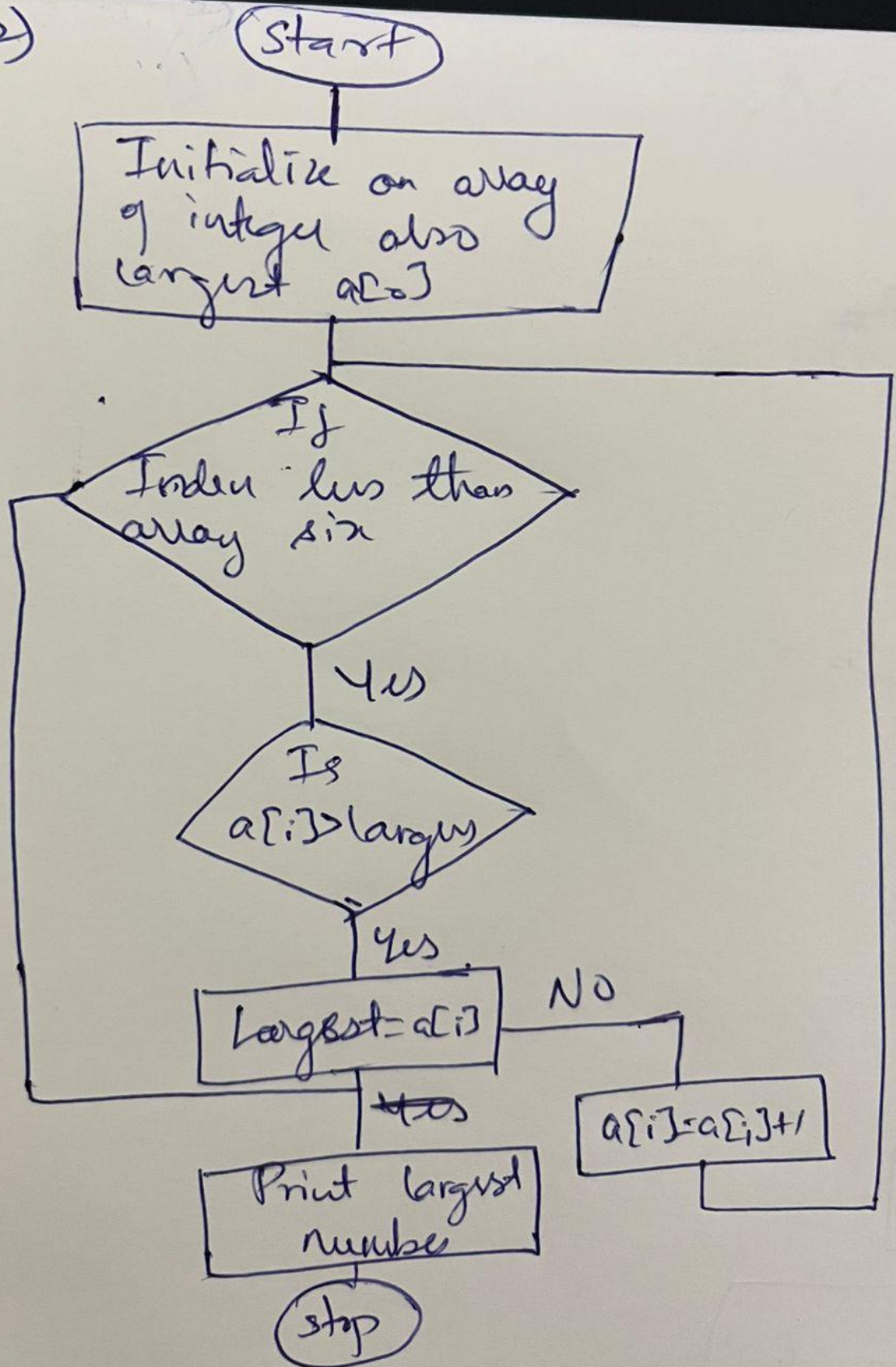
Step3:perform iteration with the help of for and if element of string is present in the particular string.Increment the count.

Step4:Display the value of count

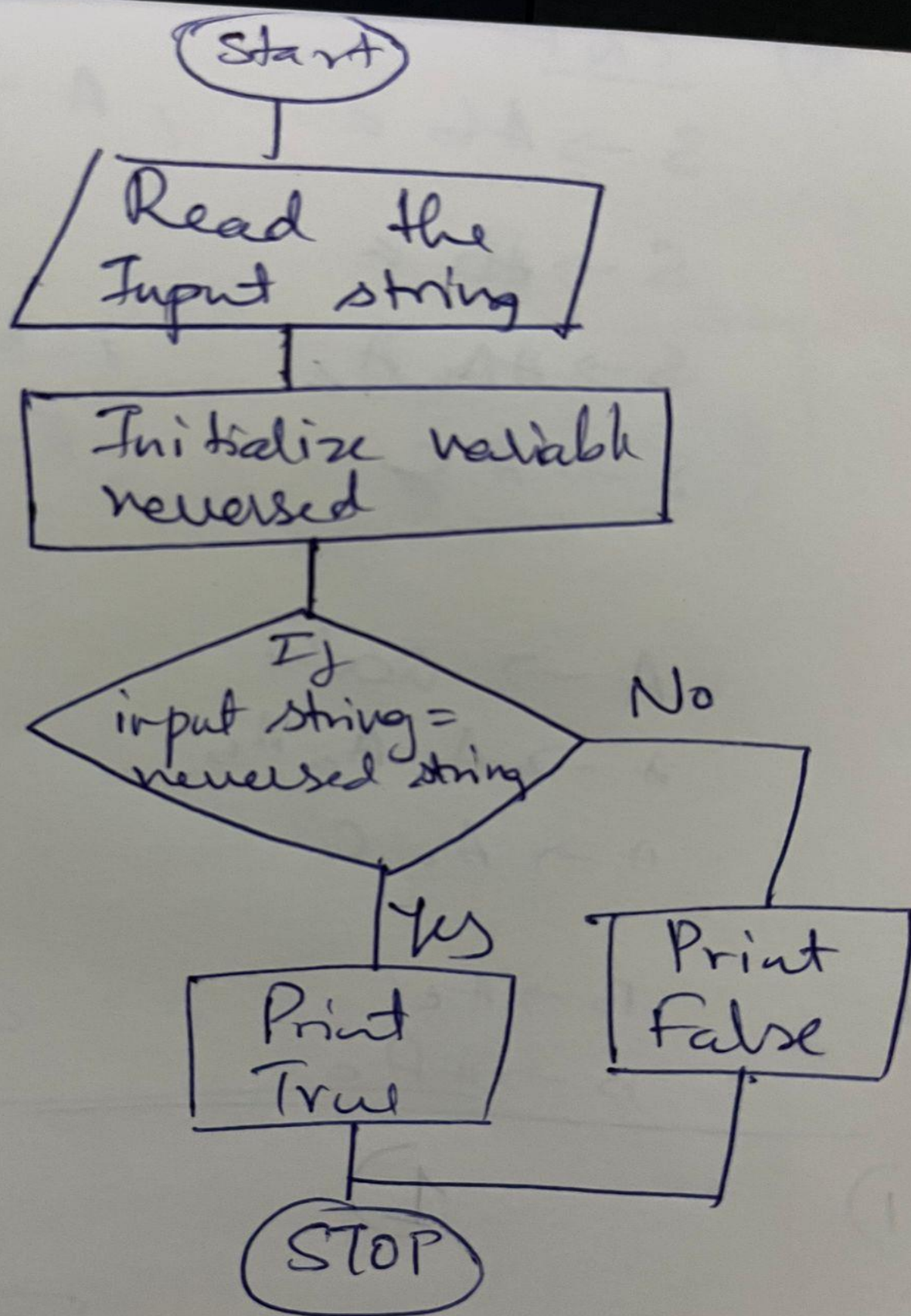
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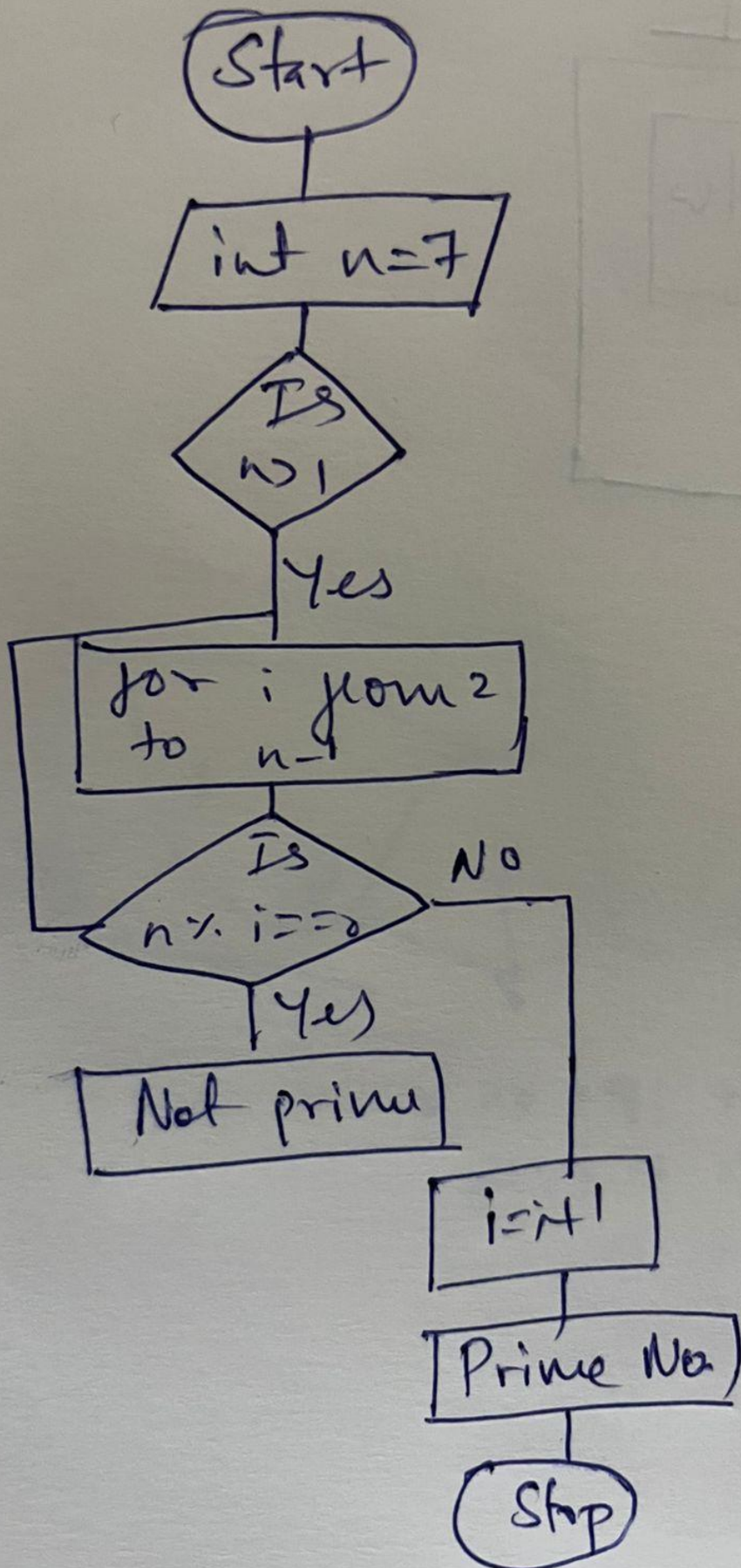
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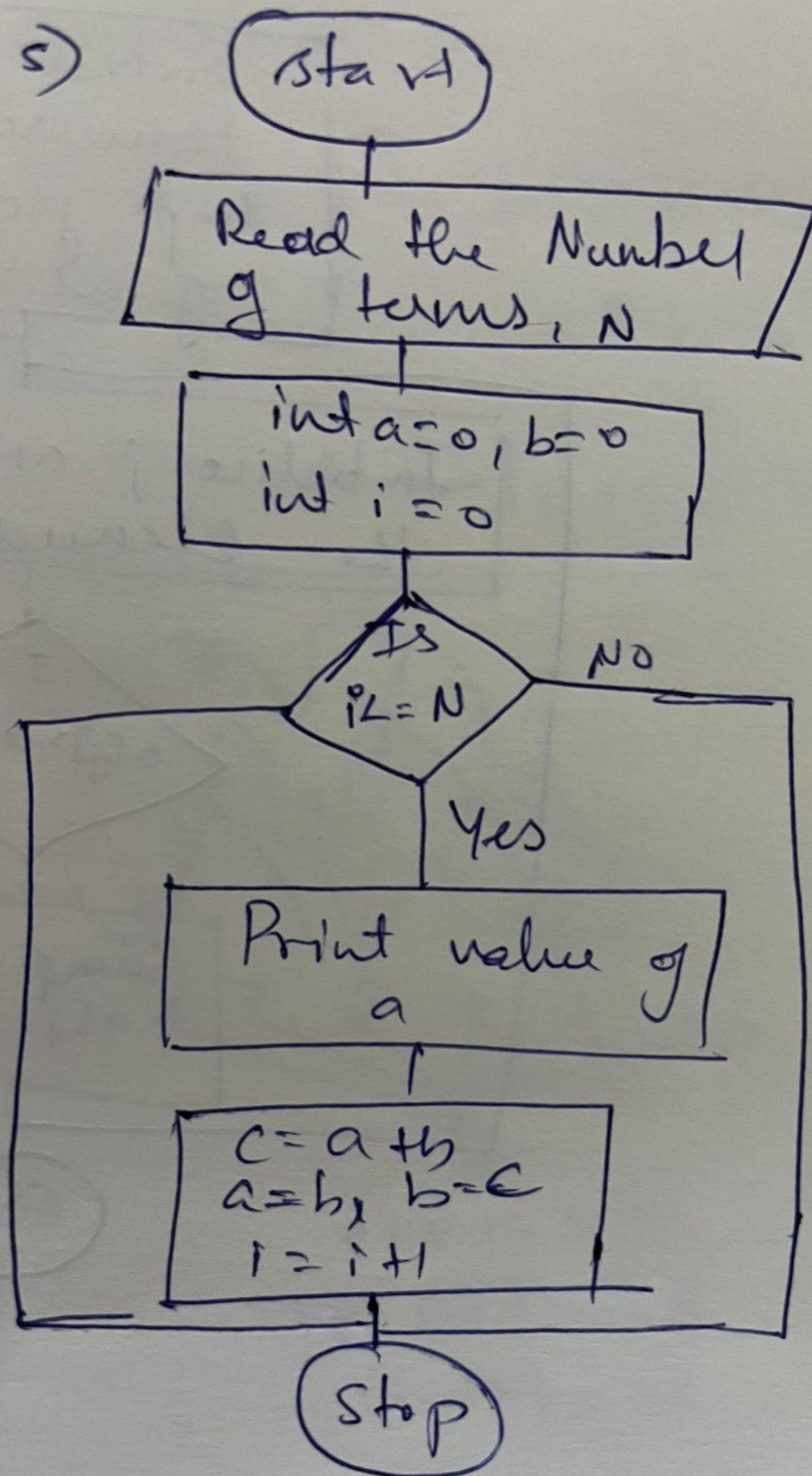
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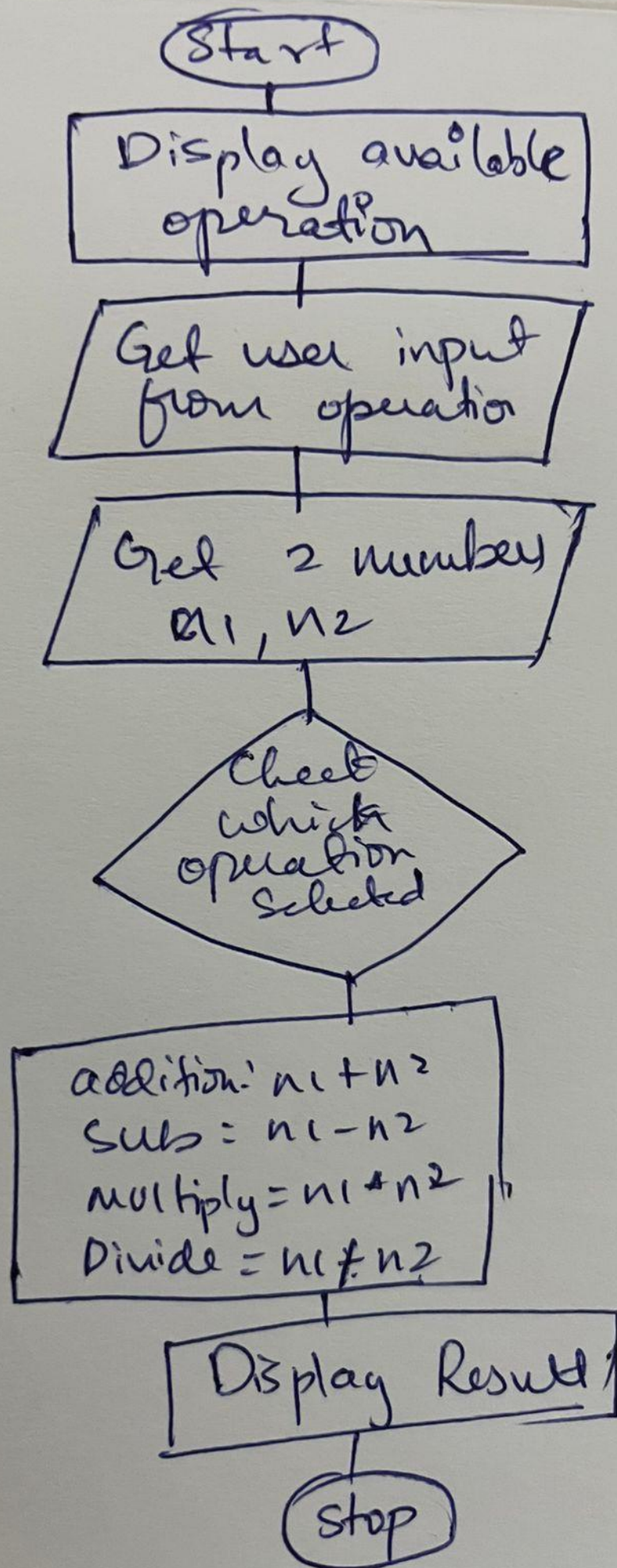
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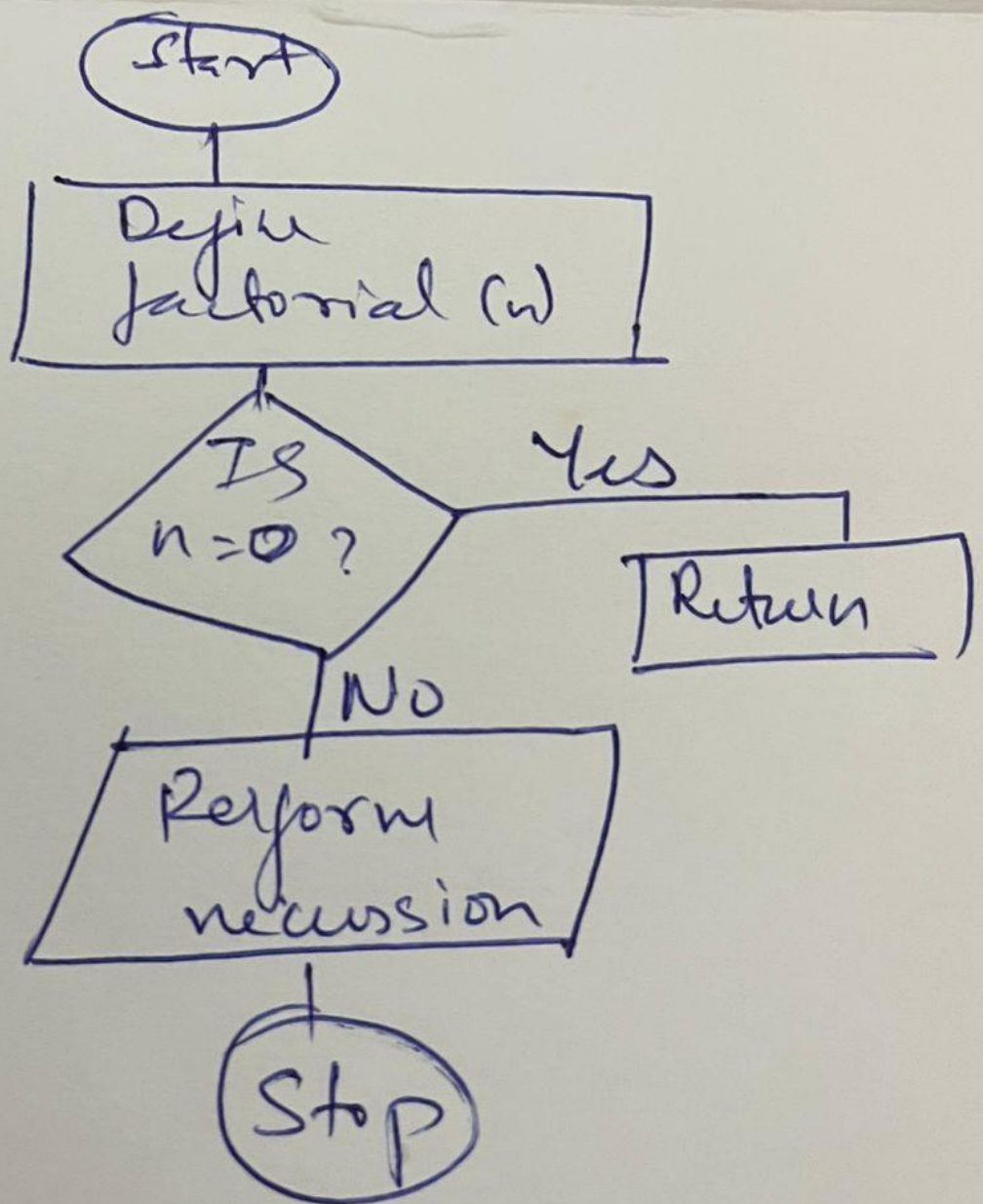
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