40 Find the frequency of each character in a string

Algorithm

Step-1 Start

Step-2 Input a string

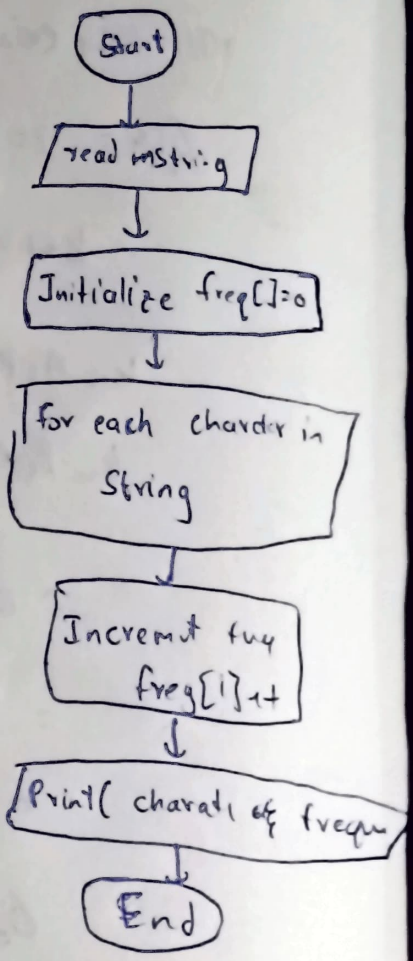
Step-3 Initialize an array freq[256] to 0.

Step 4 For each character c in the string:

Increment freq[c].

Step-5 Print characters with their frequency

Step-6 end.



41. factorial using recursion.

Step-1 start

Step-2 Define a recursive function fact()

Step-3 If n==0 (or) n==1 -> return 1

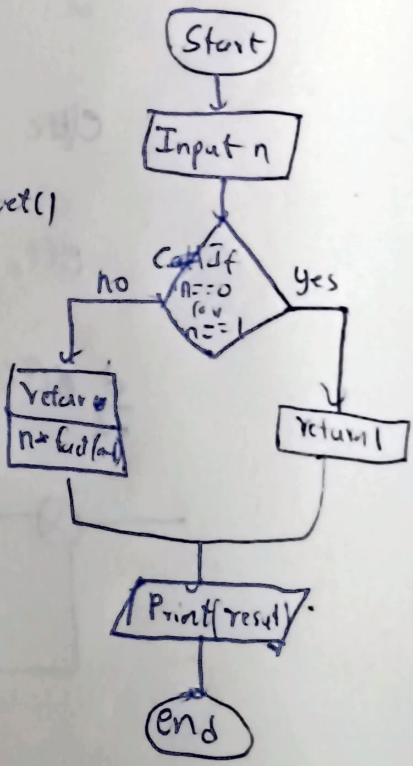
Step-4 else return n* fact(n-1)

Step-5 Input n.

Step-6 Call fact(n)

Step-7 Print result

Step-8 end.



Q4 Sum of array elements using pointers

Step-1 start

Step-2 Input size of array n

Step-3 Input n elements into array

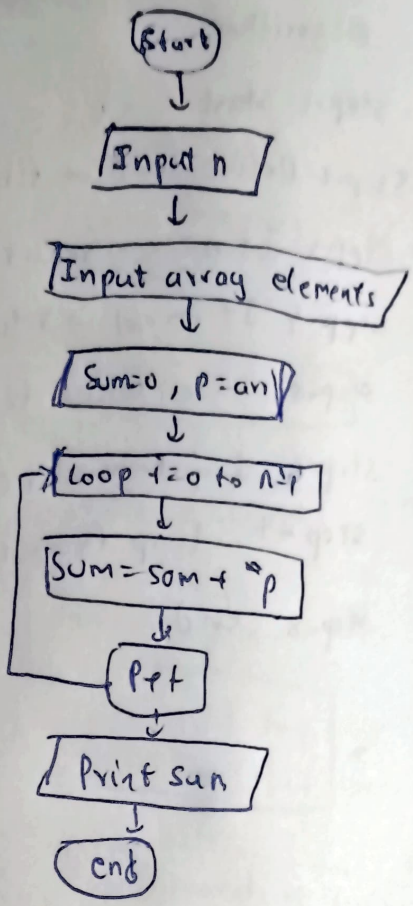
Step-4 Initialize sum=0

Step-5 Use pointer p to traverse array

Step-6 Add *p to sum for each element

Step-7 Print sum

Step-8 end



Q5 Reverse a string using recursion.

Step-1 Start

Step-2 Define function reverse(str,i,n)

Step-3 If i>= n/2 -> return

Step-4 Swap str[i] and str[n-i-1]

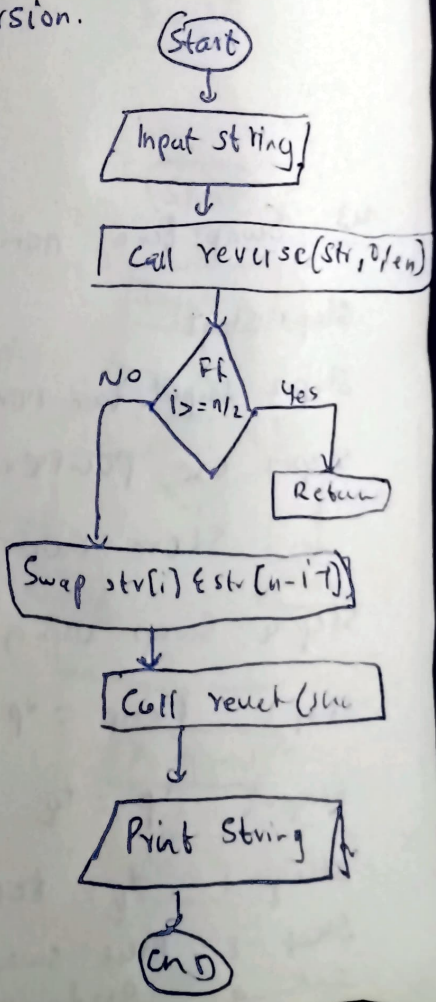
Step-5 Call reverse(str, i+1, n)

Step-6 Input String

Step-7 Call reverse (str, 0, length)

Step-8 Print reversed String

Step-9 end



3. Print address of a variable using pointer

Step1: start

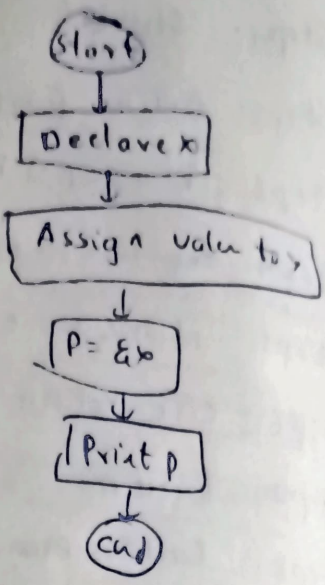
Step2: Declare a variable x.

Step3: Assign some value to x.

Step4: Declare a pointer p = &x

Step5: Print address using p.

Step6: end.



4. call by value and call by reference.

Step1: Start

Step2: For call by value:

Step3: Pass a copy of variable to fut.

Step4: Function modifies copy, original unchanged.

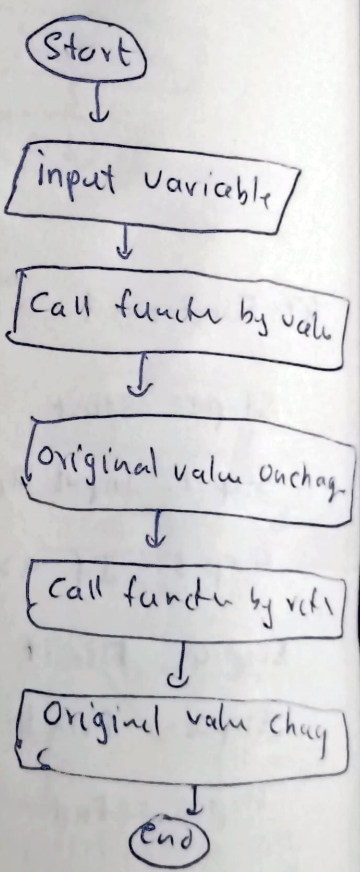
Step5: for call by reference:

Step6: Pass address of variable to fuction.

Step 6: Function modifies original variable.

Step7: Show result with print statements

Step 8: end.



2. Find length of a string without using strlen().

Step1: start

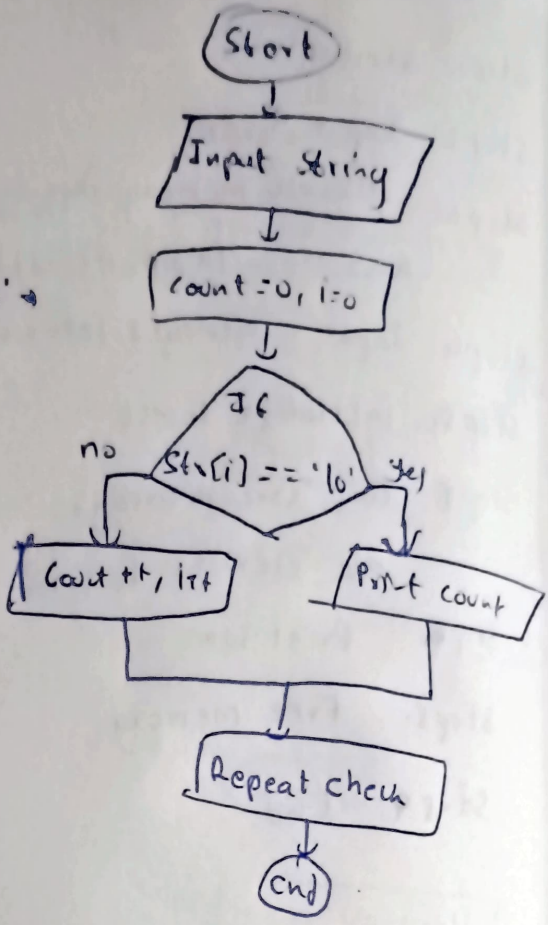
Step2: Input string

Step3: Initialize count=0

Step4: while string[i] != '\0'
→ increment count

Step5: Print count

Step6: end



3. Reverse a string

Step1: Start

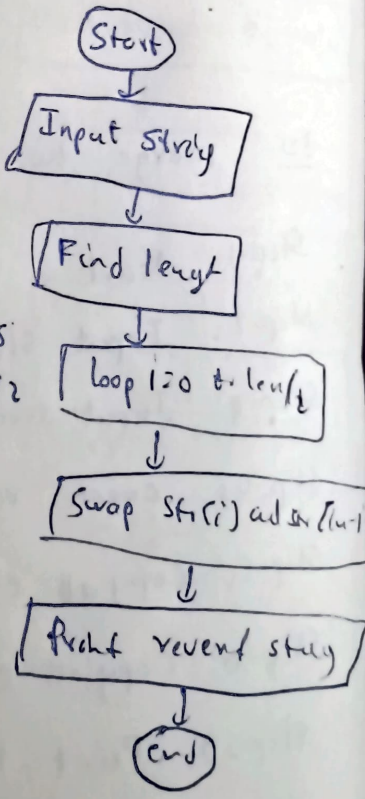
Step2: Input string

Step3: Find length of string.

Step4: Swap Characters: str[i] <-> str[len-1-i] until i < len/2

Step5: Print reversed string.

Step6: End.



35 Copy one string to another without using strcpy()

Step 1: Start

Step 2: Input string1

Step 3: initialize i=0

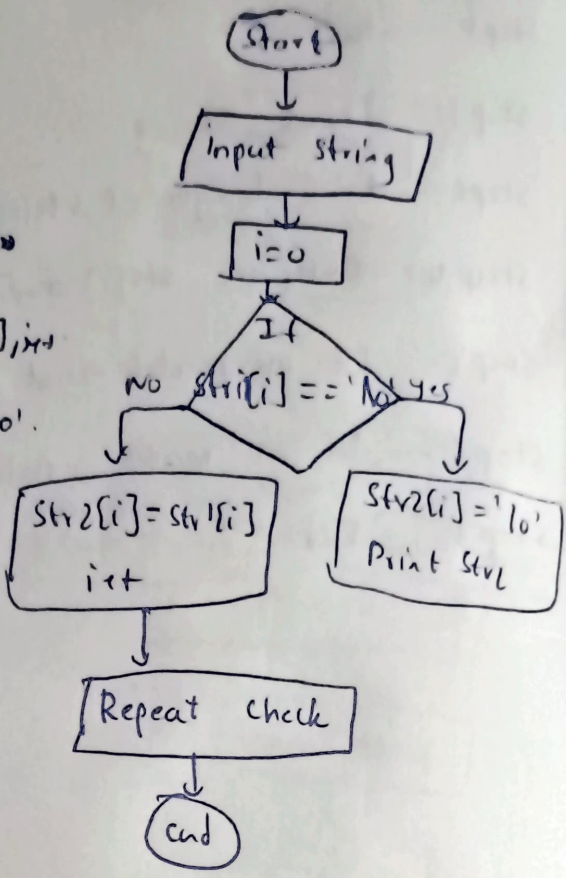
Step 4: While str1[i] != '\0'

Step 5: str2[i] = str1[i], i++

Step 6: Set str2[i] = '\0'

Step 7: Print Str2

Step 8: End



36 Concatenate two strings without using strcat()

Step 1: Start

Step 2: Input String1 and string2.

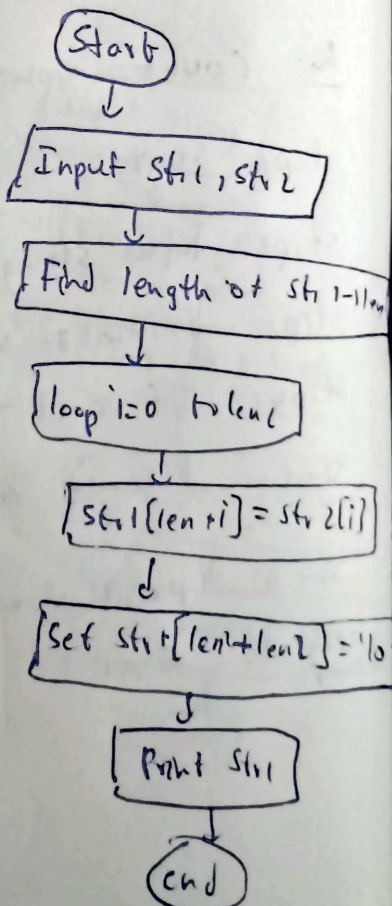
Step 3: Find length of String1

Step 4: Append string2 char to to String1 starting from a new position.

Step 5: Add '\0' at end

Step 6: Print result

Step 7: End.



19 Remove all spaces from a string

Step 1 Start

Step 2 Input string

Step-3 initialize j=0.

Step 4: for each character:

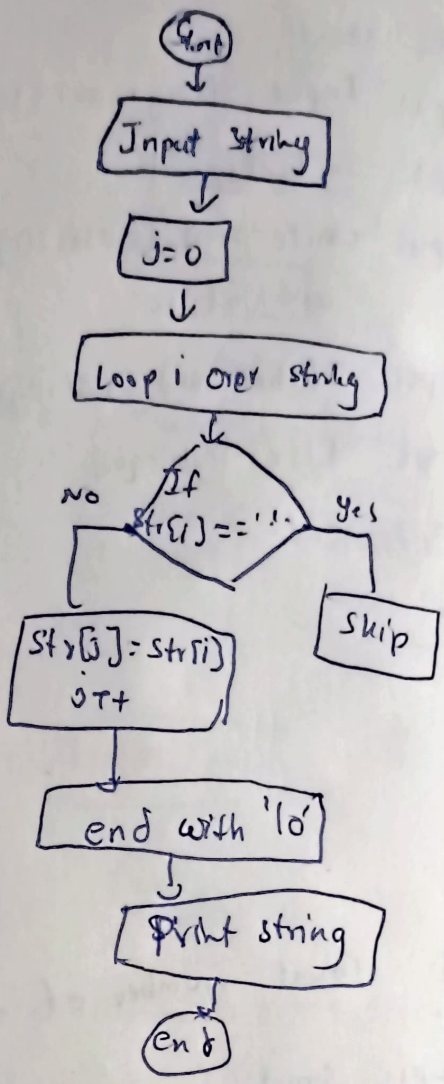
Step-5 If not space

Step-6 str[j] = str[i], j++

Step-7 End with '\0'.

Step-8 Print modified string

Step-9 End



20 Find GCD of two numbers.

Step-1 Start

Step-2 Input a and b

Step-3 while b!=0

Step-4 temp = b

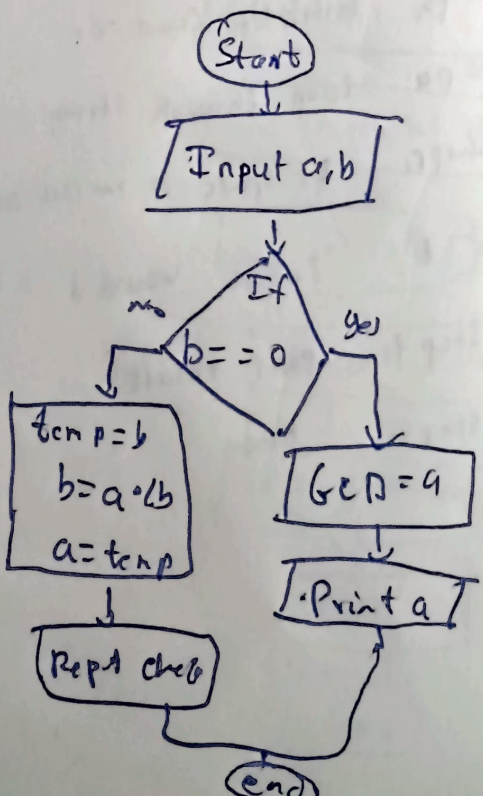
Step-5 b = a % b

Step-6 a = temp

Step-7 GCD = a

Step-8 Print GCD

Step 9 End



3. i, j sum of array elements

Step 1: Start

Step 2: Input n and array elements

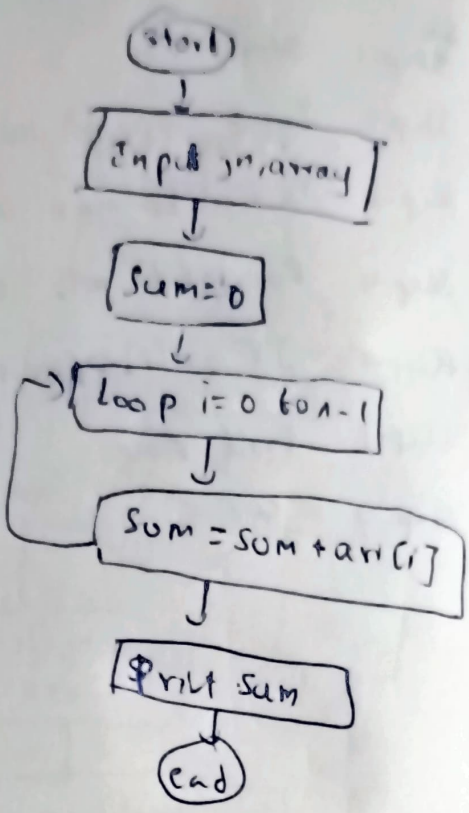
Step 3: Initialize sum=0

Step 4: for i=0 to n-1

Step 5: sum = sum + arr[i]

Step 6: Print sum

Step 7: End



4. Reverse an array

Step 1: Start

Step 2: Input n and array elements

Step 3: Initialize i=0, j=n-1

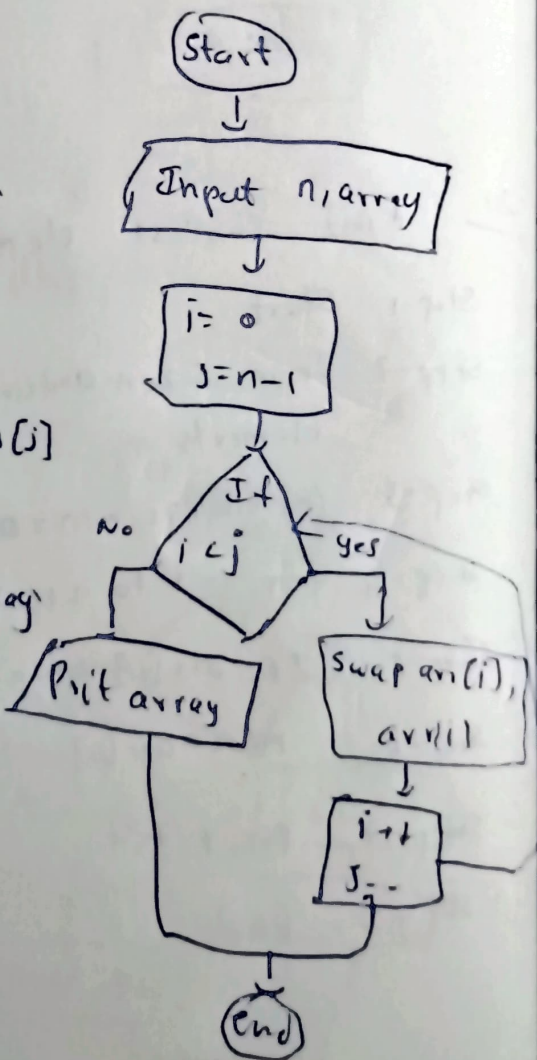
Step 4: while i<j:

Step 5: Swap arr[i] and arr[j]

Step 6: i++, j--

Step 7: Print reversed array

Step 8: End



27. Create a file

Step1:- Start

Step2:- Open file in write mode
Using fopen()

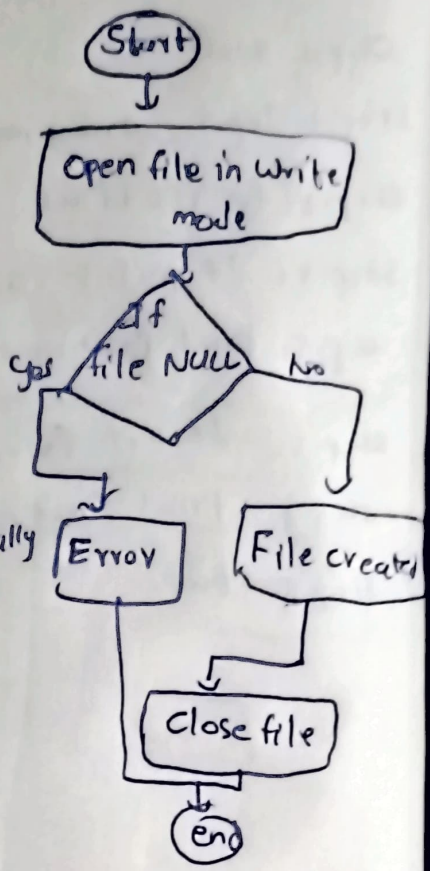
Step3:- Check if file is NULL

Step4:- If case of error Print error

Step5:- else -> File created successfully

Step6:- Close file using fclose()

Step 7:- end



28. Write text to file.

Step1:- Start

Step2:- Open file in write mode

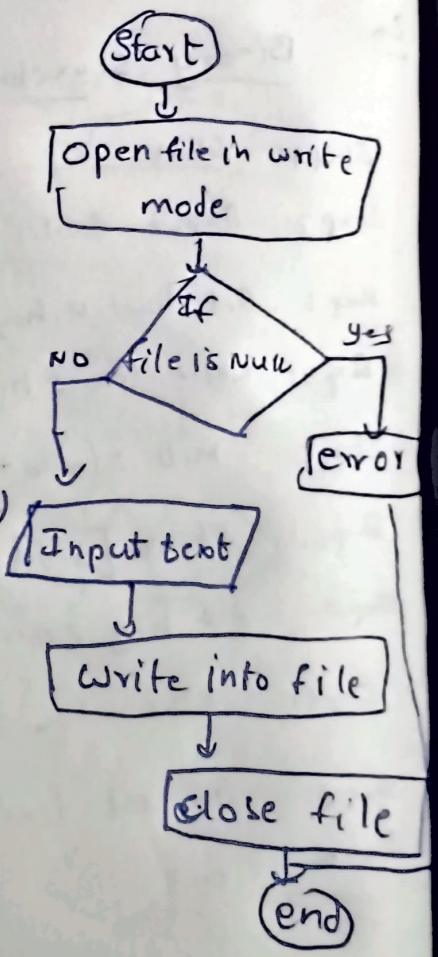
Step3:- Check if file is NULL.

Step4:- If Print error.

Step5:- else write text using fputs()

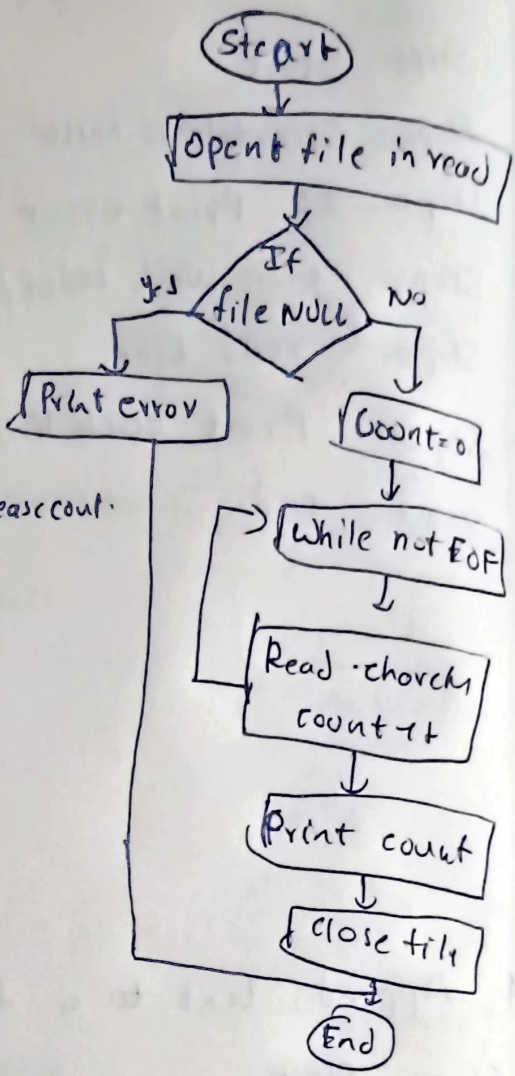
Step-6:- Close file

Step-7:- end



2 Count number of characters in a file

Step1: Start.
Step2: Open file in read mode
Step3: Check if file is NULL.
Step4: Print the error.
Step5: Initialize count=0.
Step6: While not EOF
Step7: read character, increase count.
Step8: Print count
Step9: close file
Step10: end



3 Count number of words in a file

Step1: Start.
Step2: Open file in read mode.
Step3: Check if file is NULL.
Step4: Print error.
Step5: Initialize count=0.
Step6: While not EOF
Step7: read character
Step8: If space/new line/tab
Step9: count++
Step10: Print total words = count+1
Step11: close file
Step12: end