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Class/Sem:	SE/IV
Experiment No.:	6
Title:	To perform program to reverse the word in string
Date of Performance:	14/02/24
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Marks:	
Sign of Faculty:	

Aim: Assembly Language Program to reverse the word in string.

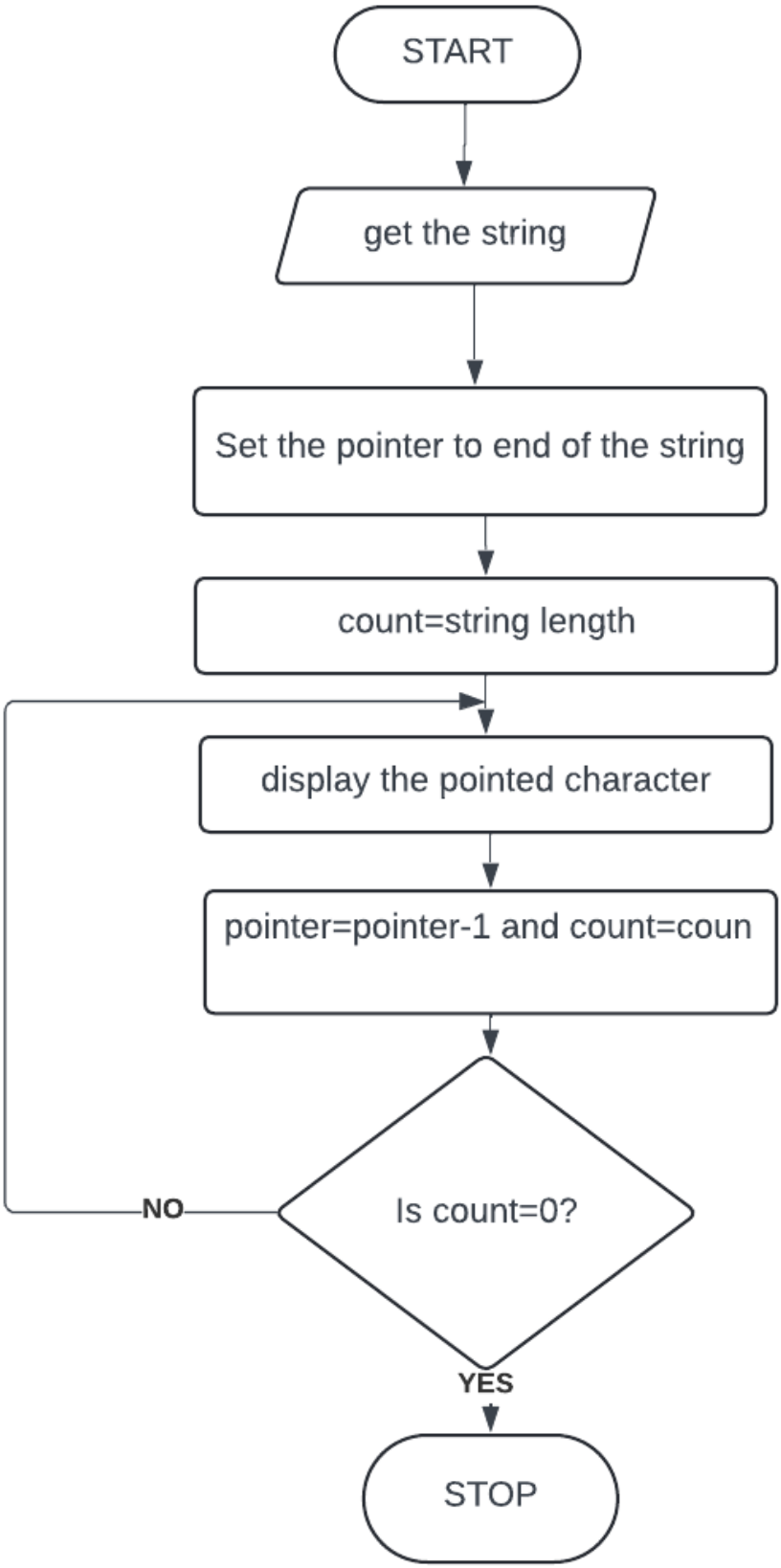
Theory:

This program will read the string entered by the user and then reverse it. Reverse a string is the technique that reverses or changes the order of a given string so that the last character of the string becomes the first character of the string and so on.

Algorithm:

1. Start
2. Initialize the data segment
3. Display the message -1
4. Input the string
5. Display the message 2
6. Take characters count in DI
7. Point to the end character and read it
8. Display the character
9. Decrement the count
10. Repeat until the count is zero
11. To terminate the program using DOS interrupt
    a. Initialize AH with 4ch
    b. Call interrupt INT 21h
12. Stop

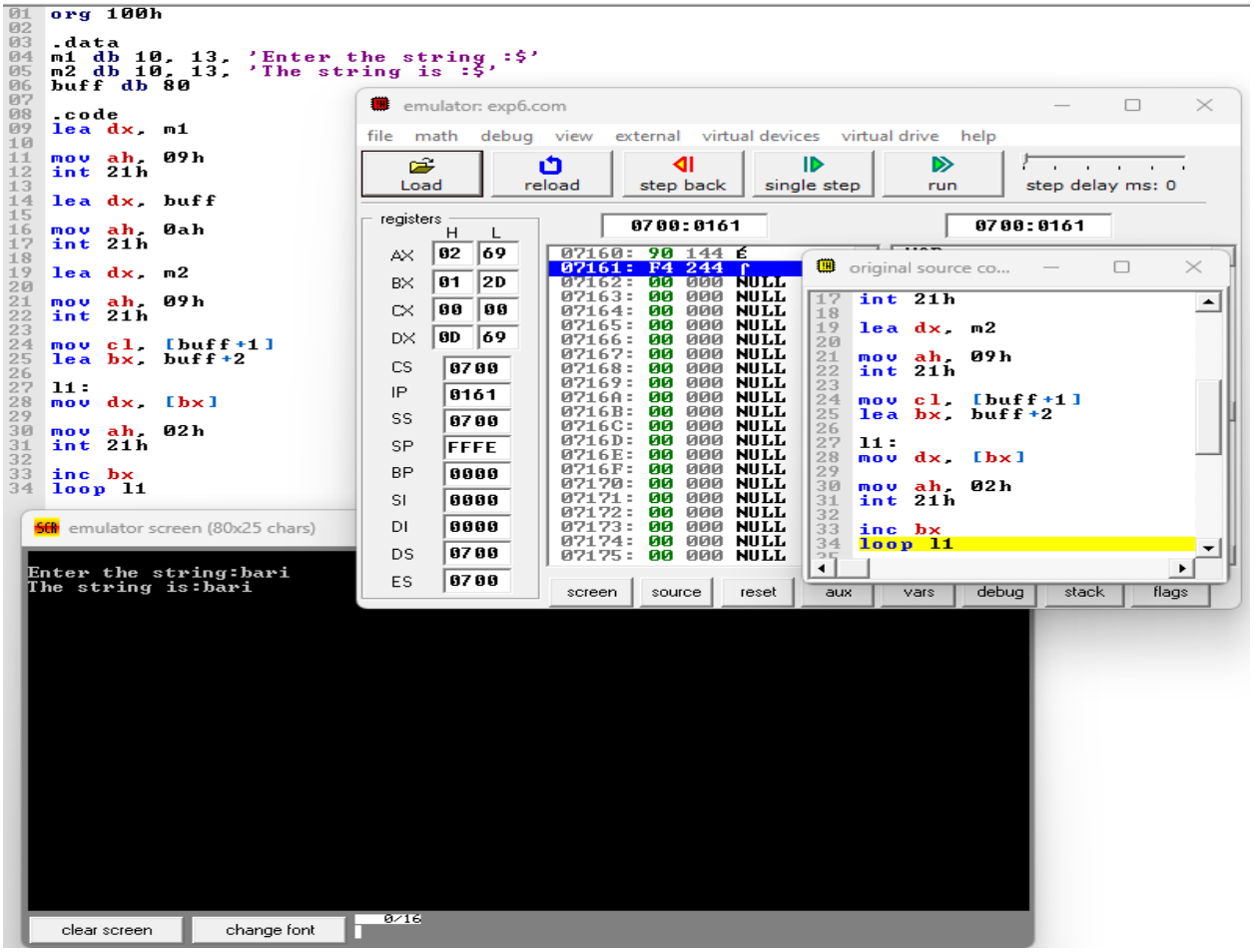
Flowchart:


START
get the string
Set the pointer to end of the string
count=string length
display the pointed character
pointer=pointer-1 and count=coun
Is count=0?
NO
YES
STOP

Code :

```
org 100h

.data
m1 db 10, 13, 'Enter the string :$'
m2 db 10, 13, 'The string is :$'
buff db 80

.code
lea dx, m1

mov ah, 09h
int 21h

lea dx, buff

mov ah, 0ah
int 21h

lea dx, m2

mov ah, 09h
int 21h

mov cl, [buff+1]
lea bx, buff+2

l1:
mov dx, [bx]

mov ah, 02h
int 21h

inc bx
```

Output :



Conclusion :

In conclusion, the task of reversing a word in a string requires careful consideration of string manipulation and algorithmic efficiency. By implementing a systematic approach, we can successfully reverse the order of characters within a word while preserving the integrity of the overall string. Through this process, we enhance our understanding of string manipulation techniques and sharpen our problem-solving skills in programming. As we continue to explore and tackle similar challenges, we reinforce our ability to navigate complex problems and produce effective solutions in the realm of software development.