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| **Ex No: 9** | Special string reverse |

**AIM**

Given a string ―a$bcd./fg‖ find its reverse without changing the position of special characters. (Example input:a@gh%;j and output:j@hg%;a).

**PRE-LAB QUESTIONS**

1. What is string concatenation?
2. How do you reverse the string?
3. Name any two library functions used for string handling
4. Give an example for initialization of string array
5. How is a character string declared?

**ALGORITHM**

**Step 1:** Start  
**Step 2:**  Read the string A  
**Step 3:** left = 0; right = strlen(A)-1;  
**Step 4:**  while left < right:  
 Step 4.1: while A[left] is not alphabet, increment left by 1  
 Step 4.2: while A[right] is not alphabet, decrement by 1  
 Step 4.3: if left < right:  
 Step 4.3.1: Swap A[left] with A[right]  
 Step 4.3.2: increment left by 1  
 Step 4.3.3: Decrement right by 1  
**Step 5:** End

**PROGRAM**

#include "stdio.h"

#include "string.h"

#include "ctype.h"

int main**(**void**)** **{**

char A**[**20**];**

char t**;**

int left**,** right**;**

scanf**(**"%s"**,** A**);**

left **=** 0**;**

right **=** strlen**(**A**)** **-** 1**;**

**while** **(**left **<** right**)**

**{**

**while(!**isalpha**(**A**[**left**]))** left**++;**

**while(!**isalpha**(**A**[**right**]))** right**--;**

**if** **(**left **<** right**)**

**{**

t **=** A**[**left**];**

A**[**left**]** **=** A**[**right**];**

A**[**right**]** **=** t**;**

left**++;** right**--;**

**}**

**}**

printf**(**"%s\n"**,** A**);**

**return** 0**;**

**}**

**INPUT**

a@gh%;j

**OUTPUT**

j@hg%;a

**POST-LAB QUESTIONS**

1. Write a C program to count number of vowels in your name
2. Write a C program to find whether given string is palindrome or not

**RESULT**

Thus the C program to reverse the given string without changing special characters was successfully written and executed.