TITLE 29

Write a C program to find the reverse of a string recursively and non-recursively

OBJECTIVE:

Implementation of recursions using strings.

PROBLEM STATEMENT:

In this problem, we need to write two programs for finding the reverse of a string. One program is written using recursions while the other program is written in non-recursive manner.

ALGORITHM:

START

INPUT: Read from the user.

COMPUTATION: Computing the reverse of a string

DISPLAY: Displaying the reverse of a string

STOP

PROGRAM:

#include<stdio.h>

#include<conio.h>

char\* reverse(char\* str);

void main()

{

int i, j, k;

char str[100];

char \*rev;

printf("Enter the string: ");

scanf("%s", str);

printf("The original string is: %s\n", str);

rev = reverse(str);

printf("The reversed string is: %s\n", rev);

getch();

}

char\* reverse(char \*str)

{

static int i = 0;

static char rev[100];

if(\*str)

{

reverse(str+1);

rev[i++] = \*str;

}

return rev;

}

#include <stdio.h>  
#include <string.h>

int main()  
{  
   char s[100];

   printf("Enter the string: ");  
   gets(s);

   strrev(s);

   printf("Reverse of the string: %s", s);

   return 0;  
}

CONCLUSION:

This program helps me to write the program using recursion and non-recursion in string applications.

OUTPUT:

Using recursion:

Enter the string: hello

The original string is: hello

The reversed string is: olleh

Non-recursively:

Enter the string:hello

The original string is: hello

Reverse of the string: olleh