**13.Write a program to print the reverse of a string using recursion**

**Aim**

To write a program in C that takes a string as input and prints its reverse using recursion.

**Algorithm**

1. **Start**.
2. Read the input string from the user.
3. Create a recursive function reverseString which:
   * Takes the string and its starting index as arguments.
   * If the current index is less than the length of the string:
     + Call the function for the next index.
     + Print the current character after returning from recursion (this reverses the order).
4. Call the recursive function starting from index 0.
5. **End**.

**C Program**

#include <stdio.h>

#include <string.h>

// Recursive function to print string in reverse

void reverseString(char str[], int index) {

if (str[index] == '\0') // Base case: end of string

return;

reverseString(str, index + 1); // Recursive call

printf("%c", str[index]); // Print after recursive call

}

int main() {

char str[100];

printf("Enter a string: ");

scanf("%[^\n]", str); // Read string with spaces

printf("Reversed string: ");

reverseString(str, 0);

return 0;

}

**Input**

csharp

CopyEdit

Enter a string: Hello World

**Output**

csharp

CopyEdit

Reversed string: dlroW olleH

