

## Reverse Words in a given string

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

void reverse(char *start, char *end)
{
    char temp;
    while(start < end)
    {
        temp = *start;
        *start++ = *end;
        *end-- = temp;
    }
}

void ReverseWords(char *str)
{
    char *wordBegin, *temp;
    wordBegin = '\0';
    temp = str;
    //reverse the individual words
    while(*temp)
    {
        if((wordBegin == '\0') && (*temp != ' '))
            wordBegin = temp;
        if(wordBegin && ((*temp+1) == ' ') || ((*temp + 1) == '\0'))
        {
            reverse(wordBegin, temp);
            wordBegin = '\0';
        }
        temp++;
    }
    //reverse the whole string from start to end
    reverse(str, temp-1);
}

int main()
{
    char str[100];
    printf("Enter string");
    scanf("%s", str);
    ReverseWords(str);
    printf("%s\n", str);
    return 0;
}
```

Time complexity:  $O(n)$

Space complexity:  $O(1)$