

Check whether given two strings are rotations of each other or not

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

int checkRotations(char *str1, char *str2)
{
    int len1 = strlen(str1);
    int len2 = strlen(str2);
    char *temp;
    void *ptr;
    if (len1 != len2)
        return 0;
    temp = (char *)malloc(sizeof(char)*(len1*2 + 1));
    temp[0] = '\0';
    //concatinating string1
    strcat(temp, str1);
    strcat(temp, str1);
    //check string2 is substring of temp or not
    ptr = strstr(temp, str2);
    free(temp);
    return ptr ? 1: 0;
}

int main()
{
    char str1[100], str2[100];
    printf("Enter string1");
    scanf("%s", str1);
    printf("Enter string2");
    scanf("%s", str2);
    if (checkRotations(str1, str2))
        printf("Strings are rotations of each other\n");
    else
        printf("Strings are not rotations to each other");
    return 0;
}
```

Time complexity: $O(n)$

Space complexity: $O(n)$