STRINGS

SARTHAK SANAY

(1) AIM:-

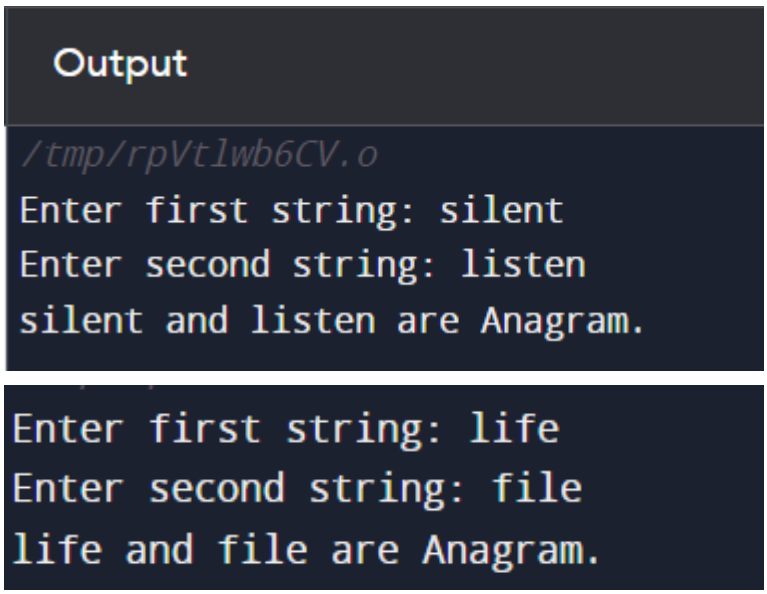
To write a program in C to check whether two strings given by the user are anagrams of each other or not.

CODE :-

```
#include <stdio.h>
#include <string.h>
int main ()
{
    char str1[100], str2[100];
    int len1, len2, len, i, j, found= 0, notFound= 0;
    printf("Enter first string: ");
    scanf("%s", str1);
    printf("Enter second string: ");
    scanf("%s", str2);
    // finding length of the strings
    len1= strlen(str1);
    len2= strlen(str2);
    // use if statement to check the length is equal or not
    if(len1 == len2)
    {
        len= len1; // assign the length to len variable
        for(i=0; i<len; i++)
        {
            found= 0;
            for(j=0; j<len; j++)
            {
                // checking whether each character of str1 is there in str2 or
     not, irrespective of positioning
                if(str1[i] == str2[j])
                {
                    found= 1;
```

```
                    break;
                }
            }
            if(found == 0)
            {
                notFound = 1; // assign 1 to notFound
                break;
            }
        }
        if(notFound == 1)
            printf("%s and %s are not Anagram.\n\n",str1,str2);
        else
            printf("%s and %s are Anagram.\n\n",str1,str2);
    }
    else
        printf("%s and %s are not Anagram as their string size is not
     same.\n\n",str1,str2);
    return 0;
}
```

OUTPUT SCREEN:-



(2) AIM:-

To write a program in C to convert a string given by the user to uppercase or lowercase.

CODE :-

```
// Using built-in functions strupr and strlwr to carry out the operations
#include <stdio.h>
#include <string.h>
int main()
{
    int ch;
    char s[100];
    printf("Enter a string: ");
    gets(s);
    printf("Enter 1 to convert it into uppercase and 2 to convert it into
lowercase: ");
    scanf("%d", &ch);
    if(ch==1)
        printf("Uppercase: \t%s\n", strupr(s));
    else if(ch==2)
        printf("Lowercase: \t%s\n", strlwr(s));
    else
        printf("Enter correct number as input for choice.");
    return 0;
}
```

OUTPUT SCREEN :-

```
Enter a string: sarthak sanay
Enter 1 to convert it into uppercase and 2 to convert it into lowercase: 1
Uppercase:      SARTHAK SANAY
```

```
Enter a string: SARTHAK SANAY
Enter 1 to convert it into uppercase and 2 to convert it into lowercase: 2
Lowercase:      sarthak sanay
```

(3) AIM:-

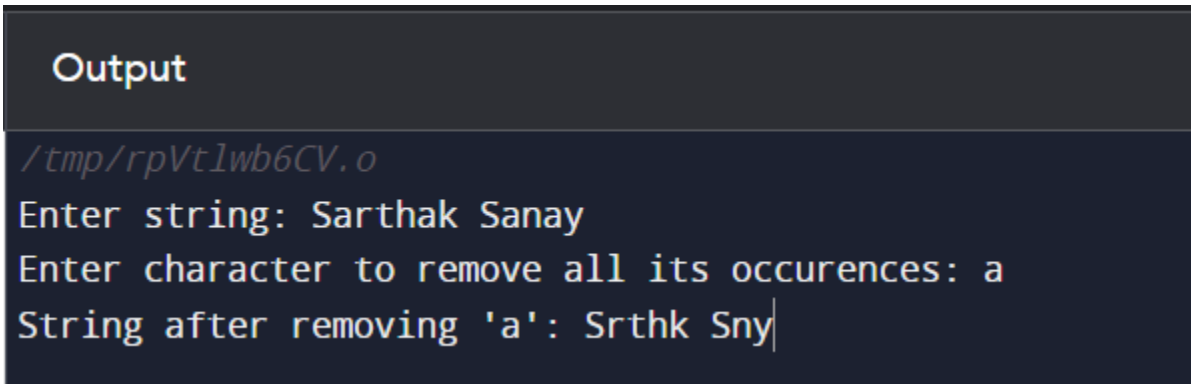
To write a program in C to remove all occurrences of a specified character from a given string by the user.

CODE :-

```
#include <stdio.h>
#include <string.h>
int main()
{
    char str[200], rem;
    printf("Enter string: ");
    gets(str);
    printf("Enter character to remove all its occurences: ");
    scanf("%c", &rem);
    int len = strlen(str);
    for(int i=0; i<len; i++)
    {
        // Shifting all characters to one place left and decrementing the
length of string by 1, if the character is found.
        if(str[i] == rem)
        {
            for(int j=i; j<len; j++)
            {
                str[j] = str[j+1];
            }
            len--;
            i--; // not incrementing i when a character is found, as we
are decreasing the size of string by 1
        }
    }
    printf("String after removing '%c': %s", rem, str);
    return 0;
```

```
}
```

OUTPUT SCREEN :-



P.T.O.

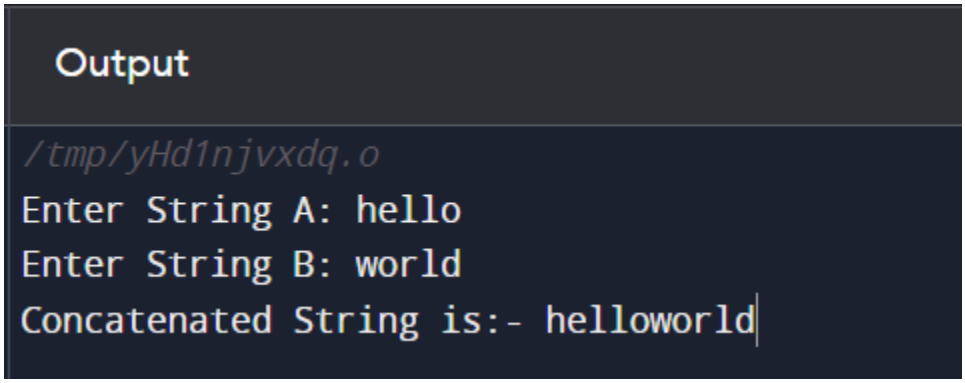
(4) AIM:-

To write programs to perform string manipulation (concatenation, copying).

CODE 1 :- (Concatenation)

```c
// Program in C to demonstrate string manipulation (Concatenation)
// Using strcat, a built-in function in C to concatenate (join) a string A with another string B
#include <stdio.h>
#include <string.h>
int main()
{
    char A[100], B[100];
    printf("Enter String A: ");
    scanf("%s", A);
    printf("Enter String B: ");
    scanf("%s", B);
    // Concatenating String A with B (it will be stored in the variable passed first in the paranthesis)
    strcat(A, B); // Understand it as A= A + B
    printf("Concatenated String is:- %s", A);
    return 0;
}
```

OUTPUT SCREEN 1 :-



CODE 2 :- (Copying)

```c
// Program in C to demonstrate string manipulation (Copying)
// Using strcpy, a built-in function in C to copy a string from one variable to another
#include <stdio.h>
#include <string.h>
int main()
{
    char A[100], B[100];
    printf("Enter string to be stored in A which will be copied in B as well:- \n");
    gets(A);
    // Copying string from variable A to B
    strcpy(B, A); // Syntax:- strcpy(destination, source)
    printf("String A:- %s", A);
    printf("\nString B:- %s", B);
    return 0;
}
```

OUTPUT SCREEN 2:-

```
Output

/tmp/yHd1njvxdq.o
Enter string to be stored in A which will be copied in B as well:-
Sarthak Sanay
String A:- Sarthak Sanay
String B:- Sarthak Sanay
```

(5) AIM:-

To write a program in C to count the number of vowels and consonants in a given string by the user.

CODE:-

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char str[100];
    int vowCount=0, consCount=0;
    printf("Enter string: ");
    scanf("%s", str);
    int len= strlen(str);
    for(int i=0; i<len; i++)
    {
        if(str[i]=='a' || str[i]=='A' || str[i]=='e' || str[i]=='E'
        || str[i]=='i' || str[i]=='I' || str[i]=='o' || str[i]=='O'
        || str[i]=='u' || str[i]=='U')
            vowCount++;
        else
            consCount++;
    }
    printf("Number of Vowels: %d\n",vowCount);
    printf("Number of Consonants: %d",consCount);
    return 0;
}
```

OUTPUT SCREEN:-

```
Enter string: Apple
Number of Vowels: 2
Number of Consonants: 3
```

(6) AIM:-

To write a program in C to reverse a string given by the user.

CODE:-

```c
#include <stdio.h>
#include <string.h>
int main()
{
    char str[100];
    printf("Enter string: ");
    gets(str);
    int len= strlen(str);
    char rev[len];
    int i, j=0;
    for(int i=len-1; i>=0; i--)
    {
        rev[j]= str[i];
        j++;
    }
    printf("Reverse of %s is:  %s", str, rev);
    return 0;
}
```

OUTPUT SCREEN:-