

EXPERIMENT 1

Aim :

Write a program to implement all major functions of **string.h** using switch case to select a specific function by user's choice (like **strlen**, **strcat**, **strcpy**, **strcmp**, **strrev**).

Code :

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

int main()
{
    int ch;
    char s1[50], s2[50], c;

    do
    {
        printf("\n Program to implement all major functions of string.h");
        printf("\n 1. strlen\n 2. strcat\n 3. strcpy\n 4. strcmp\n 5. strrev");
        printf("\n Enter your choice : ");
        scanf("%d", &ch);
        fflush(stdin);

        switch (ch)
        {
            case 1:
                printf(" Enter a string : ");
                gets(s1);
                printf(" Length of string '%s' is %d", s1, strlen(s1));
                break;

            case 2:
                printf(" Enter first string : ");
                gets(s1);
                printf(" Enter second string : ");
                gets(s2);
                printf(" After concatenation, Result = %s", strcat(s1, s2));
                break;

            case 3:
                printf(" Enter first string : ");
                gets(s1);
                printf(" Enter second string : ");
                gets(s2);
```

```
printf(" After copying second string into first :");
strcpy(s1, s2);
printf("\n First string  = %s", s1);
printf("\n Second string  = %s", s2);
break;

case 4:
printf(" Enter first string : ");
gets(s1);
printf(" Enter second string : ");
gets(s2);
if (strcmp(s1, s2) == 0)
    printf(" Strings are equal!");
else
    printf(" Strings are not equal!");
break;

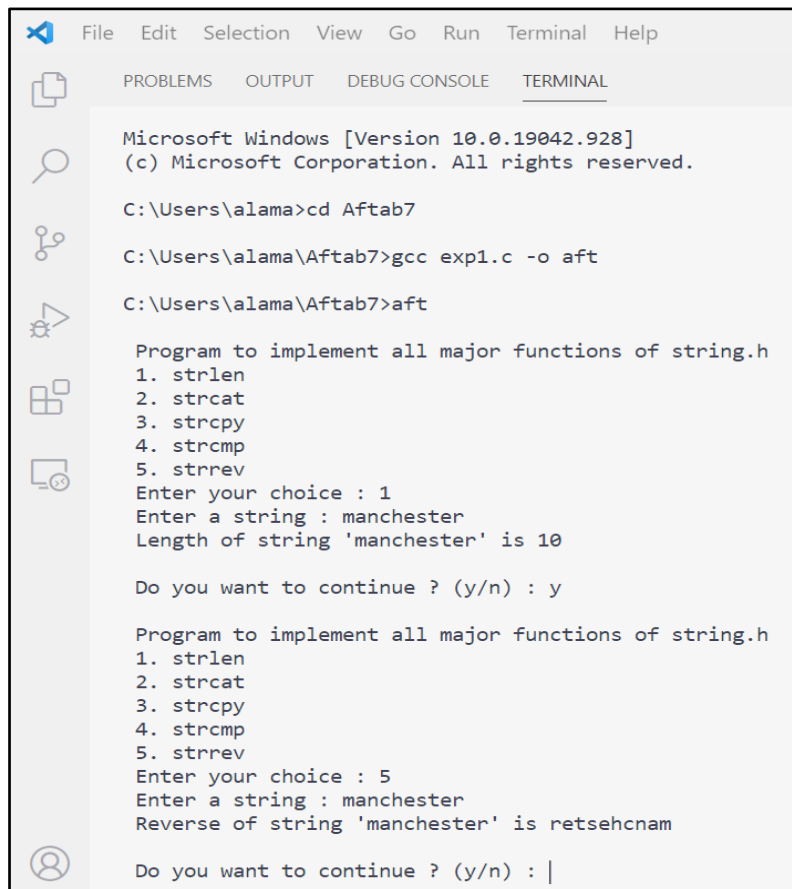
case 5:
printf(" Enter a string : ");
gets(s1);
char s3[50];
strcpy(s3, s1);
printf(" Reverse of string '%s' is %s", s3, strrev(s1));
break;

default:
printf(" Wrong choice!");
break;
}

printf("\n\n Do you want to continue ? (y/n) : ");
scanf("%c", &c);

} while ((c == 'y') || (c == 'Y'));

return 0;
}
```

Output Screenshots :

```
File Edit Selection View Go Run Terminal Help
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Microsoft Windows [Version 10.0.19042.928]
(c) Microsoft Corporation. All rights reserved.

C:\Users\alama>cd Aftab7

C:\Users\alama\Aftab7>gcc exp1.c -o aft

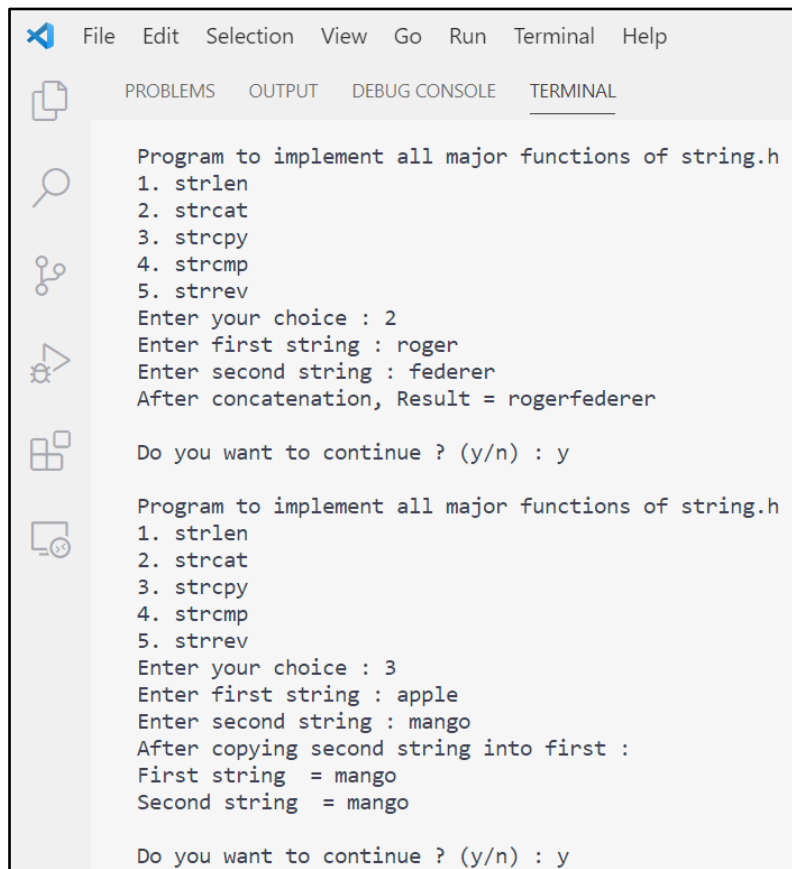
C:\Users\alama\Aftab7>aft

Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 1
Enter a string : manchester
Length of string 'manchester' is 10

Do you want to continue ? (y/n) : y

Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 5
Enter a string : manchester
Reverse of string 'manchester' is retsehcnam

Do you want to continue ? (y/n) : |
```



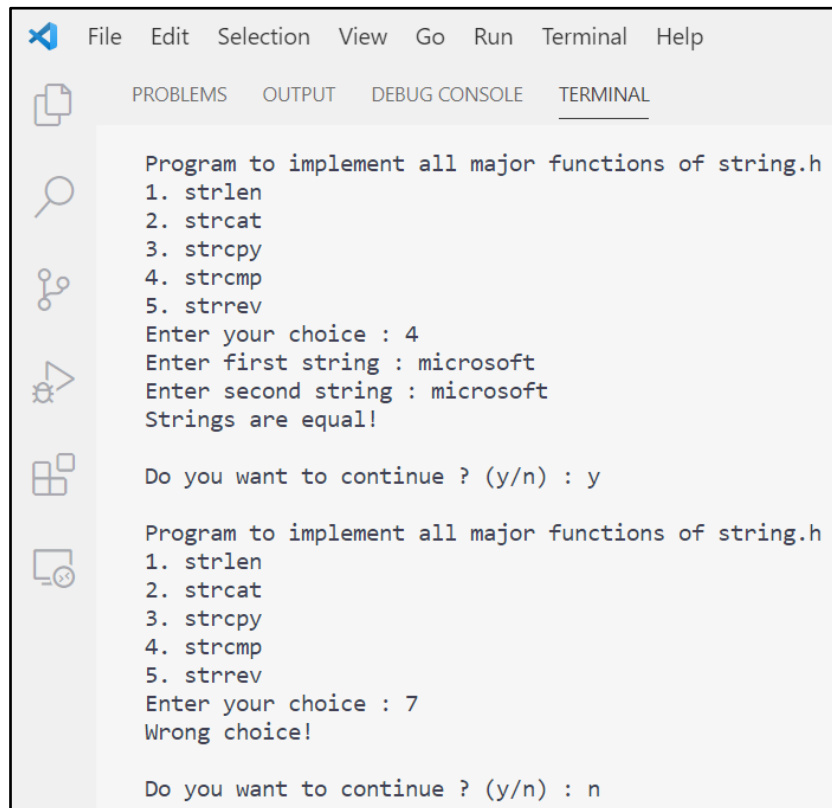
```
File Edit Selection View Go Run Terminal Help
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 2
Enter first string : roger
Enter second string : federer
After concatenation, Result = rogerfederer

Do you want to continue ? (y/n) : y

Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 3
Enter first string : apple
Enter second string : mango
After copying second string into first :
First string = mango
Second string = mango

Do you want to continue ? (y/n) : y
```



The image shows a screenshot of a Visual Studio Code terminal window. The terminal has a menu bar at the top with 'File', 'Edit', 'Selection', 'View', 'Go', 'Run', 'Terminal', and 'Help'. Below the menu bar are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', and 'TERMINAL', with 'TERMINAL' being the active tab. On the left side of the terminal, there is a vertical toolbar with icons for file operations, search, source control, testing, and a window icon. The terminal output shows the execution of a C program titled 'Program to implement all major functions of string.h'. The program lists five functions: 1. strlen, 2. strcat, 3. strcpy, 4. strcmp, and 5. strrev. It prompts the user to 'Enter your choice : 4'. The user then enters 'microsoft' for the first string and 'microsoft' for the second string. The program outputs 'Strings are equal!'. It then asks 'Do you want to continue ? (y/n) : y'. The user enters 'y'. The program then prompts 'Enter your choice : 7'. The user enters '7', and the program outputs 'Wrong choice!'. Finally, it asks 'Do you want to continue ? (y/n) : n'. The user enters 'n'.

```
File Edit Selection View Go Run Terminal Help
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 4
Enter first string : microsoft
Enter second string : microsoft
Strings are equal!
Do you want to continue ? (y/n) : y
Program to implement all major functions of string.h
1. strlen
2. strcat
3. strcpy
4. strcmp
5. strrev
Enter your choice : 7
Wrong choice!
Do you want to continue ? (y/n) : n
```