



INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)
Dundigal, Hyderabad - 500 043

LABORATORY WORK SHEET

Date: 14/07/2022

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Exp No: 05 Experiment Name: STRINGS

DAY TO DAY EVALUATION:

	Preparation	Algorithm	Source Code	Program Execution	Viva	Total
		Performance in the Lab	Calculations and Graphs	Results and Error Analysis		
Max. Marks	4	4	4	4	4	20
Obtained	4	4	4	4	4	20

Signature of Lab I/C

START WRITING FROM HERE:

- a) AIM: Develop an user-defined function `STRCOPY(str1, str2)` to simulate the build-in library function `strcpy(str1, str2)` that copies a string `str2` to another string `str1`. Write a C program that involves this function to perform string copying. Also perform the same operation using built-in function.

PROGRAM:

```
#include <stdio.h>
#include <string.h>
main() {
    char str1[100], str2[100];
    int i;
    void strcpy(char[]);
    printf("Enter any string str1:");
    scanf("%s", str1);
    printf("After copying str1 to str2 using library strcpy() the\nvalue of str2 is: \"%s\", strcpy(str2, str1));
```

```
strcpy(str1);
```

```
}
```

```
void strcpy(char str1[]);
```

```
{
```

```
int i;
```

```
char str2[100];
```

```
for(i=0; str1[i] != 0; i++) {
```

```
str2[i] = str1[i];
```

```
str2[i] = 0;
```

```
}
```

```
printf("After copying str1 to str2, using user defined function  
strcpy() the value of str2 is: %s", str2);
```

```
}
```

INPUT: Enter any string str1: iare

OUTPUT: After copying str1 to str2 using library function
strcpy() the value of str2 is: iare

After copying str1 to str2, using user defined function
strcpy() the value of str2 is: iare

- b) AIM: Develop a user-defined function STRCONCAT(str1, str2) to simulate the built-in library function strcat(str1, str2) that takes two arguments str1 & str2, concatenates str2 and str1 and stores the result in str1. Write a C program that involves this function to perform string concatenation. Also perform the same operation using built-in function.

PROGRAM: /* C program to concatenate two strings without
using standard library function strcat() */

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

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

```
int main() {
```

```
char str1[50], str2[50], i, str3[50], str4[50];
```



```

void strconcat (char[], char[]);
printf("Enter first string:");
scanf("%s", str1);
printf("Enter second string:");
scanf("%s", str2);

/* This loop is to store the length of str1 in i
   It just counts the number of characters in str1
   You can also use strlen instead of this */

strcpy(str3, str1);
strcpy(str4, str2);
strconcat(str1, str2);
printf("Output using library function strcpy(): %s", str1);
}

```

INPUT: Enter first string: IARE
Enter second string: IT

OUTPUT: Output using userdefined function: IAREIT
Output using library function strcpy(): IAREIT

- c) AIM: Develop a c program that returns a pointer to the first occurrence of the string in a given string using build-in library function strstr(). Example: strstr(). function is used to locate first occurrence of the str. text

PROGRAM:

```

#include <stdio.h>
#include <string.h>
int main () {
    const char str[100];
    const char searchstring[100];
    printf("Enter a string:");
    getstr(str);
    printf("Enter substring:");
}

```

```

gets(searchstring);
char* result;
result = strstr(str, searchstring);
printf("The substring starting from the given string: '%s',\n", result);
return 0;
}

```

INPUT: Enter a string: This is a test string for testing

OUTPUT: Enter a substring: test

The substring starting from the given string: test
string for testing.

d)

AIM: Develop a C program using the library function `strcmp(str1, str2)` that compares the string pointed to by `str1` to the string pointed to by `str2` and returns an integer. Display appropriate messages based on the return values of this function as follows -
if return value < 0 then it indicates `str1` is less than `str2`, if return value > 0 then it indicates `str1` is equal to `str2`.

PROGRAM:

```

#include <stdio.h>
#include <string.h>
main() {
    char str1[15];
    char str2[15];
    int ret;
    strcpy(str1, "abcdef");
    strcpy(str2, "ABCDEF");
    ret = strcmp(str1, str2);
    if (ret < 0) {
        printf("str1 is less than str2");
    } else if (ret > 0) {
        printf("str2 is less than str1");
    } else {
        printf("str1 is equal to str2");
    }
    return(0);
}

```

INPUT/OUTPUT:

str2 is less than str1.