



Programming in C – CS FIRST YEAR

String Handling Functions

By

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Session Objectives

- **Define String**
- **Explain String Handling Functions**
- **Concatenation (joining) of two strings**
- **Copy one string into another**
- **Convert Lowercase string into Upper case string
And Uppercase into Lowercase**
- **Find the length of the string**

String



- ✓ It can be defined as a group characters which is terminated by a NULL
- ✓ Each character of a string occupies one byte and last character of a string is always the character '\0'
- ✓ \0 → Null character and it stands for a character with a value of zero

String Functions

<code>strcpy()</code>	<code>strlwr()</code>
<code>strcat()</code>	<code>strcmp()</code>
<code>strlen()</code>	<code>strcmpi()</code>
<code>Strupr()</code>	<code>strrev()</code>

String.h

Strcpy() function :

It copies the contents of one string into another string.

Syntax : strcpy(string1,string2);

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25],cpy[25];
printf("\n Enter a String");
gets(str);
strcpy(CPY,STR);
printf("\n The source string is %s",str);
printf("\n The copied string is %s",cpy);
}
```

OUTPUT

Enter a String : CSC

The Source string is : CSC

The Copied string is : CSC

Strcat() function :

it concatenates the source string at the end of the target string

Syntax : strcat(string1,string2);

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

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

```
void main()
```

```
{
```

```
char str[25],str1[25];
```

```
printf("\n Enter a String");
```

```
gets(str);
```

```
printf("\n Enter another String");
```

```
gets(str1);
```

```
printf("\n The concatenated string is %s",strcat(str,str1));
```

```
}
```

OUTPUT

Enter a String : CSC

Enter another String : COMPUTER

The Concatenated string is : CSC COMPUTER

Strcmp() function :

It compares two strings to find whether the strings are equal or not.

Syntax : strcmp(string1,string2);



```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25],str1[25];
int x;
printf("\n Enter a String");
gets(str);
printf("\n Enter another String");
gets(str1);
x=strcmp(str,str1);
if(x==0)
printf("\n Strings are equal");
else if(x>0)
printf("\n The string1 %s is greater than string2 %s",str,str1);
else
printf("\n The string2 %s is greater than string1 %s",str1,str);
}
```

Return values

0 → Equal
1 → string1>string2
-1 → string1<string2

OUTPUT

Enter a String : JAIKUMAR

Enter another String : SASIKUMAR

The string2 SASIKUMAR is greater than string1 JAIKUMAR

Strcmpi() function :

It compares two strings without regard to case to find whether the strings are equal or not. (i → ignorecase)

Syntax : strcmpi(string1,string2);

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25],str1[25];
int x;
printf("\n Enter a String");
gets(str);
printf("\n Enter another String");
gets(str1);
X=strcmpi(str,str1);
if(x==0)
printf("\n The two Strings are equal");
else if(x>0)
printf("\n The string1 %s is greater than string2 %s",str,str1);
else
printf("\n The string2 %s is greater than string1 %s",str1,str);
}
```



OUTPUT

Enter a String : JAIKUMAR

Enter another String : jaikumar

The Two strings are equal

strrev() function :

used to reverse a string. It takes only one argument.

Syntax : strrev(string);

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25];
printf("\n Enter a String");
gets(str);
printf("\n The Reversed string is %s",strrev(str));
}
```

OUTPUT

Enter a String : SHIVA

The reversed string is : AVIHS

strupr() function :

used to convert a string to uppercase. It takes only one argument.

Syntax : `strupr(string);`

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25];
printf("\n Enter a String");
gets(str);
printf("\n The case changed string is %s",strupr(str));
}
```

OUTPUT

Enter a String : csc

The case changed string is : CSC

strlwr() function :

used to convert a string to Lowercase. It takes only one argument.

Syntax : `strlwr(string);`

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25];
printf("\n Enter a String");
gets(str);
printf("\n The case changed string is %s",strlwr(str));
}
```

OUTPUT

Enter a String : CSC

The case changed string is : csc

strlen() function :

used to count the number of characters present in a string. It takes only one argument.

Syntax : int variablename=strlen(string);

```
#include<stdio.h>
#include<string.h>
void main()
{
char str[25];
printf("\n Enter a String");
gets(str);
printf("\n The length of the string is %d",strlen(str));
}
```

OUTPUT

Enter a String : CSC

The length of the string is : 3

Session Summary



- ✘ **Strings can be read through scanf() and gets() functions**
- ✘ **Any copy of characters specified within double quotes is a string constant**
- ✘ **Strings can also be read a character by character using the functions scanf() and getchar() etc.,**
- ✘ **The strcat() concatenates the second argument with the content of first argument**
- ✘ **strcmp() compares two strings to find whether the strings are equal or not.**
- ✘ **The strrev() reverses the string passed as arguments**



EXERCISES

1. Explain the process of initializing a string?
2. Explain with examples the different ways of reading strings from the user?
3. Write a program to extract the middle word of any string?
4. Write a program to print the abbreviation of text?
5. Write a program to find various combinations of the characters of a given word?
6. Write a program to check whether the given string is palindrome or not?
7. Write a program to replace a character in a string?