LECTURE NOTE 23

COMMON FUNCTIONS IN STRING

Type	*Method*	*Description*
char	*strcpy(s1, s2)*	Copy string
char	*strcat(s1, s2)*	Append string
int	*strcmp(s1, s2)*	Compare 2 strings
int	*strlen(s)*	Return string length
char	*strchr(s, int c)*	Find a character in string
char	*strstr(s1, s2)*	Find string s2 in string s1

strcpy():

It is used to copy one string to another string. The content of the second string is copied to the content of the first string.

Syntax:

strcpy (string 1, string 2);

Example:

char mystr[10];

mystr = "Hello"; // Error! Illegal !!! Because we are assigning the value to mystr which is not possible in case of an string. We can only use "=" at declarations of C-String.

strcpy(mystr, "Hello");

It sets value of mystr equal to "Hello".

strcmp():

It is used to compare the contents of the two strings. If any mismatch occurs then it results the difference of ASCII values between the first occurrence of 2 different characters.

Syntax:

int strcmp(string 1, string 2);

Example:

```
char mystr_a[10] = “Hello”;
char mystr_b[10] = “Goodbye”;

– mystr_a == mystr_b;    // NOT allowed!
```

The correct way is

```
if (strcmp(mystr_a, mystr_b ))
printf ("Strings are NOT the same.");
else
 printf( "Strings are the same.");
```

Here it will check the ASCII value of H and G i.e, 72 and 71 and return the diference 1.

strcat():

It is used to concatenate i.e, combine the content of two strings.

Syntax:

```
strcat(string 1, string 2);
```

Example:

```
char fname[30]={“bob”};
 char lname[]={“by”};
 printf(“%s”, strcat(fname,lname));
```

Output:

bobby.

strlen():

It is used to return the length of a string.

Syntax:

```
int strlen(string);
```

Example:
char fname[30]={“bob”};

int length=strlen(fname);

It will return 3

strchr():

It is used to find a character in the string and returns the index of occurrence of the character for the first time in the string.

Syntax:

strchr(cstr);

Example:

char mystr[] = "This is a simple string";

char pch = strchr(mystr,‘s’);

The output of pch is mystr[3]

strstr():

It is used to return the existence of one string inside another string and it results the starting index of the string.

Syntax:

strstr(cstr1, cstr2);

Example:

Char mystr[]="This is a simple string";

char pch = strstr(mystr, “simple”);

here pch will point to mystr[10]

- **String input/output library functions**

Function prototype	Function description
int getchar(void);	Inputs the next character from the standard input and returns it as integer
int putchar(int c);	Prints the character stored in c and returns it as an integer
int puts(char s);	Prints the string s followed by new line character. Returns a non-zero integer if possible or EOF if an error occurs
int sprint(char s, char format,....)	Equivalent to printf,except the output is stored in the array s instead of printed in the screen. Returns the no.of characters written to s, or EOF if an error occurs
int sprint(char s, char format,....)	Equivalent to scanf, except the input is read from the array s rather than from the keyboard. Returns the no.of items successfully read by the function , or EOF if an error occurs

NOTE:

Character arrays are known as strings.

Self-review exercises:

1. Find the error in each of the following program segments and explain how to correct it:
   - *char s[10];*
   - *strcpy(s,"hello",5);*
   - *prinf("%s\n",s);*
   - *printf("%s",'a');*
   - *char s[12]; strcpy(s,"welcome home");*
   - *If (strcmp(string 1, sring 2))*

     { printf("the strings are equal\n");

     }
2. Show 2 different methods of initializing character array vowel with the string of vowels "AEIOU"?
3. Writ a program to convert string to an integer?

4. Write a program to accept a line of text and a word. Display the no. of occurrences of that word in the text?
5. Write a program to read a word and re-write its characters in alphabetical order.
6. Write a program to insert a word before a given word in the text.
7. Write a program to count the number of characters, words and lines in the given text.