

ASSIGNMENT ON C

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1st BCA

String Handling Functions

Define string.

A string is any series of characters that are interpreted literally by a script. For example, “hello world” and “LKJH019283” are both examples of strings.

The String Handling Functions.

* C programming language provides a set of pre-defined functions called string handling functions to work with string values.

* Packaged in string.h Library.

The String Handling Functions are as follows:

- strcat()

This function is used to concatenate two strings.

Program:

```
main.c  ↺  Files
1  #include <stdio.h>
2  #include <string.h>
3  int main(void)
4  {
5      char str1[]="hello";
6      char str2[]="world";
7      printf("%s\n",strcat(str1,str2));
8      return 0;
```

Output:

```
clang-7 -pthread -lm -o main main.c
./main
helloworld
```

• strlen()

This function is used to find the length of the given string.

Program:

```
main.c  ↺  Files
1  #include <stdio.h>
2  #include <string.h>
3  int main (void)
4  {
5      char str1[]="hello";
6      char str2[]="world";
7      int len=strlen(str1);
8      printf("length of str1 is %d\n",len);
9      return 0;
10 }
```

Output:

```

Cyriac123 / String, C
> clang-7 -pthread -lm -o main main.c
> ./main
length of str1 is 5
> 
```

- **strrev()**

This function is used to get the reverse of the given input.

Program:

```

Cyriac123 / String, C
main.c
1 #include <stdio.h>
2 #include <string.h>
3 int void main()
4 {
5     char s1[]="hello";
6     printf("%s\n",strrev(s1));
7 }
```

Output:

```

Cyriac123 / String. C
> clang-7 -pthread -lm -o main main.c
main.c:3:5: error: cannot combine with
      previous 'int' declaration specifier
int void main()
      ^
main.c:6:17: warning: implicit declaration of
      function 'strrev' is invalid in C99
      [-Wimplicit-function-declaration]
      printf("%s\n",strrev(s1));
                  ^
main.c:6:17: warning: format specifies type
      'char *' but the argument has type
      'int' [-Wformat]
      printf("%s\n",strrev(s1));
                  ^
                  %d
2 warnings and 1 error generated.
exit status 1

```

- strcpy()

This function is used to copy one string to another string.

Program:

```

Cyriac123 / String. C
main.c
1 #include <stdio.h>
2 #include <string.h>
3 int main (void)
4 {
5     char str1[100],str2[100];
6     strcpy(str1,"hello world");
7     strcpy(str2,str1);
8     printf("%s\n",str2);
9     return 0;
10 }

```

Output:

```

Cyriac123 / String. C
> clang-7 -pthread -lm -o main main.c
> ./main
hello world

```

- strcmp()

This function is used to compare two strings.

Program :

```
main.c  ↺  Files
1  #include <stdio.h>
2  #include <string.h>
3  int main (void)
4  {
5      char str1[]="hello";
6      char str2[]="hallo";
7      int len = strcmp(str1,str2);
8      printf("%d\n",len);
9      return 0;
10 }
```

Output:

```
main.c  ↺  Files
> clang-7 -pthread -lm -o main main.c
> ./main
4
>
```

- strlwr()

This function helps to covert the given input into Lower Case.

Program:

```
main.c  ↺  Files
1  #include <stdio.h>
2  #include <string.h>
3  void main()
4  {
5      char s1[]="HELLO";
6      printf("%s\n",strlwr(s1));
7  }
```

Output:

```

❯ clang-7 -pthread -lm -o main main.c
main.c:3:1: warning: return type of 'main'
      not 'int' [-Wmain-return-type]
void main()
^
main.c:3:1: note: change return type to 'int'
void main()
^
int
main.c:6:17: warning: implicit declaration of
      function 'strlwr' is invalid in C99
      [-Wimplicit-function-declaration]
printf("%s\n",strlwr(s1));
               ^
main.c:6:17: warning: format specifies type
      'char *' but the argument has type
      'int' [-Wformat]
printf("%s\n",strlwr(s1));
               ^~~~~~
               %d
3 warnings generated.
/tmp/main-13a66b.o: In function `main':
main.c:(.text+0x25): undefined reference to `
strlwr'
clang-7: error: linker command failed with ex
it code 1 (use -v to see invocation)
exit status 1
❯

```

- strupr()

This function is used to covert the given input into upper case.

Program:

```

Cyriac123 / String, C
main.c
1 #include <stdio.h>
2 #include <string.h>
3 void main()
4 {
5     char s1[]="hello";
6     printf("%s\n",strupr(s1));
7 }

```

Output:

```

Cyriac123 / String, C
> clang-7 -pthread -lm -o main main.c
main.c:3:1: warning: return type of 'main'
      not 'int' [-Wmain-return-type]
void main()
^
main.c:3:1: note: change return type to 'int'
void main()
^
int
main.c:6:17: warning: implicit declaration of
      function 'strupr' is invalid in C99
      [-Wimplicit-function-declaration]
printf("%s\n",strupr(s1));
^
main.c:6:17: warning: format specifies type
      'char *' but the argument has type
      'int' [-Wformat]
printf("%s\n",strupr(s1));
      ^
      %d
3 warnings generated.
/tmp/main-7d462d.o: In function `main':
main.c:(.text+0x25): undefined reference to `
strupr'
clang-7: error: linker command failed with ex
it code 1 (use -v to see invocation)
exit status 1
>

```

- strncat()

This function is used to concatenate n characters of second string to the first string.

Program :

```

Cyriac123 / String, C
main.c
1 #include <stdio.h>
2 #include <string.h>
3 int main()
4 {
5     char s1[50]="Hello world";
6     char s2[50]="Welcome to C
programming";
7     printf("string 1:%s\n", s1);
8     printf("string 2:%s\n", s2);
9     strncat(s1,s2,20);
10    printf("string after
concatenating:%s", s1);
11    return 0;
12 }

```

Output :

```

Cyriac123 / String. C
> clang-7 -pthread -lm -o main main.c
> ./main
string 1:Hello world
string 2:Welcome to C programming
string after concatenating:Hello worldWelcome
to C program>

```

- strncpy()

This function is used to get copies of given number of characters to one string to another.

Program:

```

Cyriac123 / String. C
main.c
1 #include <stdio.h>
2 #include <string.h>
3 int main()
4 {
5     char s1[50];
6     char s2[50];
7     strcpy(s1,"Welcome to C programming");
8     strncpy(s2,s1,13);
9     printf("Final copied string is %s",s2);
10    return 0;
11 }

```

Output:

```

Cyriac123 / String. C
> clang-7 -pthread -lm -o main main.c
> ./main
Final copied string is Welcome to C >

```

- strstr()

The strstr() function returns pointer to the first occurrence of the matched string in the

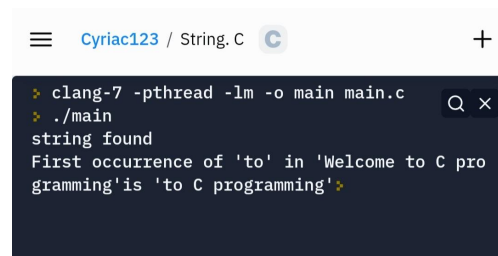
given string. It is used to return substring from first match till the last character.

Program :



```
main.c 1 #include <stdio.h>
2 #include <string.h>
3 int main()
4 {
5     char s1[]="Welcome to C programming";
6     char s2[]="to";
7     char*n;
8     n=strstr(s1,s2);
9     if(n)
10    {
11        printf("string found\n");
12        printf("First occurrence of '%s' in
13        '%s'is '%s'", s2,s1,n);
14    }
15    else
16        printf("String not found\n");
17    return 0;
18 }
```

Output :



```
> clang-7 -pthread -lm -o main main.c
> ./main
string found
First occurrence of 'to' in 'Welcome to C pro
gramming'is 'to C programming'>
```

**Syntax of the
above
mentioned
String Handling
Functions.**

1.Strcpy()

strcpy(string 1,string 2)

2.Strncpy()

strncpy(string 1,string 2,n)

3.Strlen()

strlen(string 1)

4.Strcat()

strcat(string1,string2)

5.Strncat()

strncat(string1,string2,n)

6.Strcmp()

strcmp(string1,string2)

7.Strrev()

strrev(string1)

8.Strupr()

strupr(string1)

9.Strlwr()

strlwr(string1)

10.Strstr()

strstr(string1,string2)
