**C – String**

* C Strings are nothing but array of characters ended with null character (‘\0’).
* This null character indicates the end of the string.
* Strings are always enclosed by double quotes. Whereas, character is enclosed by single quotes in C.

**EXAMPLE FOR C STRING:**

* char string[20] = {‘f’, ’r’, ‘e’, ‘s’, ‘h’, ‘2’, ‘r’, ‘e’, ‘f’, ’r’, ‘e’, ‘s’, ‘h’, ‘\0’};  
  (or)
* char string[20] = “fresh2refresh”;  
  (or)
* char string []    = “fresh2refresh”;
* Difference between above declarations are, when we declare char as “string[20]”, 20 bytes of memory space is allocated for holding the string value.
* When we declare char as “string[]”, memory space will be allocated as per the requirement during execution of the program.

**EXAMPLE PROGRAM FOR C STRING:**

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | #include <stdio.h>    int main ()  {     char string[20] = "fresh2refresh.com";       printf("The string is : %s \n", string );     return 0;  } |

**OUTPUT:**

|  |
| --- |
| The string is : fresh2refresh.com |

**C STRING FUNCTIONS:**

* String.h header file supports all the string functions in C language. All the string functions are given below.
* Click on each string function name below for detail description and example programs.

|  |  |
| --- | --- |
| **String functions** | **Description** |
| [***strcat ( )***](http://fresh2refresh.com/c/c-strings/c-strcat-function/) | Concatenates str2 at the end of str1 |
| [strncat ( )](http://fresh2refresh.com/c/c-strings/c-strncat-function/) | Appends a portion of string to another |
| [***strcpy ( )***](http://fresh2refresh.com/c/c-strings/c-strcpy-function/) | Copies str2 into str1 |
| [strncpy ( )](http://fresh2refresh.com/c/c-strings/c-strncpy-function/) | Copies given number of characters of one string to another |
| [***strlen ( )***](http://fresh2refresh.com/c/c-strings/c-strlen-function/) | Gives the length of str1 |
| [***strcmp ( )***](http://fresh2refresh.com/c/c-strings/c-strcmp-function/) | Returns 0 if str1 is same as str2. Returns <0 if strl < str2. Returns >0 if str1 > str2 |
| [***strcmpi ( )***](http://fresh2refresh.com/c/c-strings/c-strcmpi-function/) | Same as strcmp() function. But, this function negotiates case.  “A” and “a” are treated as same. |
| [***strchr ( )***](http://fresh2refresh.com/c/c-strings/c-strchr-function/) | Returns pointer to first occurrence of char in str1 |
| [***strrchr ( )***](http://fresh2refresh.com/c/c-strings/c-strrchr/) | last occurrence of given character in a string is found |
| [***strstr ( )***](http://fresh2refresh.com/c/c-strings/c-strstr-function/) | Returns pointer to first occurrence of str2 in str1 |
| [strrstr ( )](http://fresh2refresh.com/c/c-strings/c-strrstr-function/) | Returns pointer to last occurrence of str2 in str1 |
| [strdup ( )](http://fresh2refresh.com/c/c-strings/c-strdup-function/) | Duplicates the string |
| [***strlwr ( )***](http://fresh2refresh.com/c/c-strings/c-strlwr-function/) | Converts string to lowercase |
| [***strupr ( )***](http://fresh2refresh.com/c/c-strings/c-strupr-function/) | Converts string to uppercase |
| [***strrev ( )***](http://fresh2refresh.com/c/c-strings/c-strrev-function/) | Reverses the given string |
| [strset ( )](http://fresh2refresh.com/c/c-strings/c-strset-function/) | Sets all character in a string to given character |
| [strnset ( )](http://fresh2refresh.com/c/c-strings/c-strnset-function/) | It sets the portion of characters in a string to given character |
| [strtok ( )](http://fresh2refresh.com/c/c-strings/c-strtok-function/) | Tokenizing given string using delimiter |

[**PREV**](http://fresh2refresh.com/c/c-array/)[**NEXT**](http://fresh2refresh.com/c/c-strings/c-strcat-function/)

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[**[](http://fresh2refresh.com/discussion-forums/) ONLINE DISCUSSION FORUMS BY FRESH2REFRESH.COM**](http://fresh2refresh.com/discussion-forums/)

### strlen function: size\_t strlen(const char \*str)

**size\_t** represents unsigned short  
It returns the length of the string without including end character**(terminating char ‘\0’)**.

### strnlen function: size\_t strnlen(const char \*str, size\_t maxlen)

size\_t represents unsigned short  
It returns length of the string if it is less than the value specified for maxlen (maximum length) otherwise it returns maxlen value.

### strcmp function: int strcmp(const char \*str1, const char \*str2)

It compares the two strings and returns an integer value. If both the strings are same (equal) then this function would return 0 otherwise it may return a negative or positive value based on the comparison.

**If string1 < string2 OR string1 is a substring of string2** then it would result in a negative value. If string1 > string2 then it would return positive value.  
**If string1 == string2** then you would get 0(zero) when you use this function for compare strings.

### strcat function: char \*strcat(char \*str1, char \*str2)

It concatenates two strings and returns the combined one string.

### strcpy function: char \*strcpy( char \*str1, char \*str2)

It copies the string str2 into string str1, including the end character (terminator char ‘\0’).

### strchr function: char \*strchr(char \*str, int ch)

It searches string str for character ch (you may be wondering that in above definition I have given data type of ch as int, don’t worry I didn’t make any mistake it should be int only. The thing is when we give any character while using strchr then it internally gets converted into integer for better searching.

### strstr function: char \*strstr(char \*str, char \*srch\_term)

It is similar to strchr, except that it searches for string srch\_term instead of a single char.

**C – strrev() function**

[**PREV**](http://fresh2refresh.com/c/c-strings/c-strupr-function/)[**NEXT**](http://fresh2refresh.com/c/c-strings/c-strset-function/)

* strrev( ) function reverses a given string in C language. Syntax for strrev( ) function is given below.  
  char \*strrev(char \*string);
* strrev( ) function is non standard function which may not available in standard library in C.

**EXAMPLE PROGRAM FOR STRREV() FUNCTION IN C:**

In below program, string “Hello” is reversed using strrev( ) function and output is displayed as “olleH”.