

C library - strtok() function

The **C** Library **strtok()** function is used for tokenizing strings. These strings are a set of tokens using delimiters/separators characters. In general, tokens are usually words, phrases, or individual characters within a string.

Here, `char *strtok(char *str, const char *delim)` breaks string `str` into a series of tokens using the delimiter `delim`.

Syntax

Following is the syntax of the C library **strtok()** function –

```
char *strtok(char *str, const char *delim)
```

Parameters

This function accepts the following parameter –

- **str** – The contents of this string are modified and broken into smaller strings(tokens).
- **delim** – This is the C string containing the delimiters. These may vary from one call to another.

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Return Value

This function returns a pointer to the first token found in the string. A null pointer is returned if there are no tokens left to retrieve.

Example 1

Following is the C program that illustrates the usage of **strtok()** function.



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Open Compiler

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

```

int main () {
    char str[80] = "This is - www.tutorialspoint.com - website";
    const char s[2] = "-";
    char *token;

    /* get the first token */
    token = strtok(str, s);

    /* walk through other tokens */
    while( token != NULL ) {
        printf( " %s\n", token );

        token = strtok(NULL, s);
    }

    return(0);
}

```

Output

On execution of above code, we get the following result –

```

This is
www.tutorialspoint.com
website

```

Example 2

In this example, we demonstrates each substring of the string is represented in a new line using strtok() function.

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Open Compiler

```

#include <stdio.h>
#include <string.h>

int main() {
    char stng[100] = "Welcome to C Programming";
    char *res;

    res = strtok(stng, " ");

```

```
while(res != NULL) {  
    printf("%s \n", res);  
    res = strtok(NULL, " ");  
}  
return 0;  
}
```

Output

After executing the above code, the outcome becomes –

```
Welcome  
to  
C  
Programming
```

Example 3

Following is the C program that demonstrates how to return the null pointer using strtok() function.

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Open Compiler

```
#include <stdio.h>  
#include <string.h>  
int main()  
{  
    //String i.e. break in token  
    char str_1[] = "ttttt";  
  
    //delimiter  
    char *str_2 = "tp";  
  
    // initial call of strtok  
    char *token = strtok(str_1, str_2);  
  
    printf("The resultant token is %s\n", token);  
    return 0;  
}
```

Output

The above code produces the following result –

The resultant token is (null)

