C Functions

C Language: strcmp function (String Compare)

In the C Programming Language, the **strcmp function** returns a negative, zero, or positive integer depending on whether the object pointed to by *s1* is less than, equal to, or greater than the object pointed to by *s2*.

Syntax

The syntax for the strcmp function in the C Language is:

```
int strcmp(const char *s1, const char *s2);
```

Parameters or Arguments

s1
   An array to compare.

s2
   An array to compare.

Returns

The strcmp function returns an integer. The return values are as follows:

Return Value	Explanation
0	*s1* and *s2* are equal
Negative integer	The stopping character in *s1* was less than the stopping character in *s2*
Positive integer	The stopping character in *s1* was greater than the stopping character in *s2*

Required Header

In the C Language, the required header for the strcmp function is:

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

Applies To

In the C Language, the strcmp function can be used in the following versions:

- ANSI/ISO 9899-1990

strcmp Example

Let's look at an example to see how you would use the strcmp function in a C program:

```c
/* Example using strcmp by TechOnTheNet.com */

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

int main(int argc, const char * argv[])
{
    /* Create a place to store our results */
    int result;

    /* Create two arrays to hold our data */
    char example1[50];
    char example2[50];

    /* Copy two strings into our data arrays */
    strcpy(example1, "C programming at TechOnTheNet.com");
    strcpy(example2, "C programming is fun");

    /* Compare the two strings provided */
    result = strcmp(example1, example2);

    /* If the two strings are the same say so */
    if (result == 0) printf("Strings are the same\n");

    /* If the first string is less than the second say so
     (This is because the 'a' in the word 'at' is less than
     the 'i' in the word 'is' */
    if (result < 0) printf("Second string is less than the first\n");

    return 0;
}
```

When compiled and run, this application will output:

```
Second string is less than the first
```

Similar Functions

Other C functions that are similar to the strcmp function:

- memcmp function <string.h>
- strcoll function <string.h>
- strncmp function <string.h>