

C LIBRARY FUNCTION - MALLOC

http://www.tutorialspoint.com/c_standard_library/c_function_malloc.htm

Copyright © tutorialspoint.com

Description

The C library function **void *malloc(size)** allocates the requested memory and returns a pointer to it.

Declaration

Following is the declaration for malloc function.

```
void *malloc(size_t size)
```

Parameters

- **size** -- This is the size of the memory block, in bytes.

Return Value

This function returns a pointer to the allocated memory, or NULL if the request fails.

Example

The following example shows the usage of malloc function.

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

int main()
{
    char *str;

    /* Initial memory allocation */
    str = (char *) malloc(15);
    strcpy(str, "tutorialspoint");
    printf("String = %s, Address = %u\n", str, str);

    /* Reallocating memory */
    str = (char *) realloc(str, 25);
    strcat(str, ".com");
    printf("String = %s, Address = %u\n", str, str);

    free(str);

    return(0);
}
```

Let us compile and run the above program that will produce the following result:

```
String = tutorialspoint, Address = 355090448
String = tutorialspoint.com, Address = 355090448
Loading [MathJax]/jax/output/HTML-CSS/fonts/TeX/fontdata.js
```