

C library function - fread()

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Description

The C library function **size_t fread(void *ptr, size_t size, size_t nmemb, FILE *stream)** reads data from the given **stream** into the array pointed to, by **ptr**.

Declaration



Following is the declaration for fread() function.

```
size_t fread(void *ptr, size_t size, size_t nmemb, FILE *stream)
```

Parameters

ptr – This is the pointer to a block of memory with a minimum size of *size*nmemb* bytes.

size – This is the size in bytes of each element to be read.

nmemb – This is the number of elements, each one with a size of **size** bytes.

stream – This is the pointer to a FILE object that specifies an input stream.

Return Value

The total number of elements successfully read are returned as a `size_t` object, which is an integral data type. If this number differs from the `nmemb` parameter, then either an error had occurred or the End Of File was reached.

Example

The following example shows the usage of `fread()` function.

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

int main()
{
    FILE *fp;
    char c[] = "this is tutorialspoint";
    char buffer[100];

    /* Open file for both reading and writing */
    fp = fopen("file.txt", "w+");

    /* Write data to the file */
    fwrite(c, strlen(c) + 1, 1, fp);

    /* Seek to the beginning of the file */
    fseek(fp, 0, SEEK_SET);

    /* Read and display data */
    fread(buffer, strlen(c)+1, 1, fp);
    printf("%s\n", buffer);
    fclose(fp);

    return(0);
}
```

Let us compile and run the above program that will create a file **file.txt** and write a content *this is tutorialspoint*. After that, we use **fseek()** function to reset writing pointer to the beginning of the file and prepare the file content which is as follows –

```
this is tutorialspoint
```



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