C library function - fread()

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.

Live Demo

```
#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
```