fwrite

Defined in header <stdio.h>

size_t fwrite(const void *buffer, size_t size, size_t count, FILE *stream);	(until C99)
size_t fwrite(const void *restrict buffer, size_t size, size_t count, FILE *restrict stream);	(since C99)

Writes count of objects from the given array buffer to the output stream stream. The objects are written as if by reinterpreting each object as an array of `unsigned char` and calling fputc size times for each object to write those `unsigned char`s into stream, in order. The file position indicator for the stream is advanced by the number of characters written.

If an error occurs, the resulting value of the file position indicator for the stream is indeterminate.

Parameters

buffer – pointer to the first object in the array to be written
  size – size of each object
 count – the number of the objects to be written
stream – pointer to the output stream

Return value

The number of objects written successfully, which may be less than count if an error occurs.

If size or count is zero, fwrite returns zero and performs no other action.

Example

Run this code

```c
#include <stdio.h>
#include <stdlib.h>
#include <assert.h>
enum { SIZE = 5 };
int main(void)
{
    double a[SIZE] = {1, 2, 3, 4, 5};
    FILE *f1 = fopen("file.bin", "wb");
    assert(f1);
    size_t r1 = fwrite(a, sizeof a[0], SIZE, f1);
    printf("wrote %zu elements out of %d requested\n", r1,  SIZE);
    fclose(f1);

    double b[SIZE];
    FILE *f2 = fopen("file.bin", "rb");
    size_t r2 = fread(b, sizeof b[0], SIZE, f2);
    fclose(f2);
    printf("read back: ");
    for(size_t i = 0; i < r2; i++)
        printf("%0.2f ", b[i]);
}
```

Output:

```
wrote 5 elements out of 5 requested
read back: 1.00 2.00 3.00 4.00 5.00
```

References

- C11 standard (ISO/IEC 9899:2011):
  - 7.21.8.2 The fwrite function (p: 335-336)

- C99 standard (ISO/IEC 9899:1999):

    - 7.19.8.2 The fwrite function (p: 301-302)

- C89/C90 standard (ISO/IEC 9899:1990):

    - 4.9.8.2 The fwrite function

See also

printf **fprintf** **sprintf** **snprintf** (C99) **printf_s** (C11) **fprintf_s** (C11) **sprintf_s** (C11) **snprintf_s** (C11)		prints formatted output to stdout, a file stream or a buffer (function)
fputs		writes a character string to a file stream (function)
fread		reads from a file (function)

C++ documentation for **fwrite**