

scanf(3)

Library Functions Manual

scanf(3)

NAME

scanf, fscanf, vscanf, vscanf - input FILE format conversion

LIBRARY

Standard C library (libc, -lc)

SYNOPSIS

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

```
int scanf(const char *restrict format, ...);
```

```
int fscanf(FILE *restrict stream,  
           const char *restrict format, ...);
```

```
#include <stdarg.h>
```

```
int vscanf(const char *restrict format, va_list ap);
```

```
int vscanf(FILE *restrict stream,  
           const char *restrict format, va_list ap);
```

Feature Test Macro Requirements for glibc (see [feature_test_macros\(7\)](#)):

vscanf(), vscanf():

DESCRIPTION

The `scanf()` family of functions scans formatted input like `sscanf(3)`, but read from a `FILE`. It is very difficult to use these functions correctly, and it is preferable to read entire lines with `fgets(3)` or `getline(3)` and parse them later with `sscanf(3)` or more specialized functions such as `strtol(3)`.

The `scanf()` function reads input from the standard input stream `stdin` and `fscanf()` reads input from the stream pointer `stream`.

The `vfscanf()` function is analogous to `vfprintf(3)` and reads input from the stream pointer `stream` using a variable argument list of pointers (see `stdarg(3)`). The `vscanf()` function is analogous to `vprintf(3)` and reads from the standard input.

RETURN VALUE

On success, these functions return the number of input items successfully matched and assigned; this can be fewer than provided for, or even zero, in the event of an early matching failure.

The value `EOF` is returned if the end of input is reached before either the first successful conversion or a matching failure occurs. `EOF` is also returned if a read error occurs, in which case the error indicator

of successful conversions. For example, if the input is "123\n a", `scanf("%d %d", &a, &b)` will consume the digits, the newline, and the space, but not the letter a. This makes it difficult to recover from invalid input.

SEE ALSO

`fgets(3)`, `getline(3)`, `sscanf(3)`