

**NAME**

getline, getdelim - delimited string input

**SYNOPSIS**

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

```
ssize_t getline(char **lineptr, size_t *n, FILE *stream);
```

```
ssize_t getdelim(char **lineptr, size_t *n, int delim, FILE *stream);
```

Feature Test Macro Requirements for glibc (see [feature\\_test\\_macros\(7\)](#)):

**getline()**, **getdelim()**:

Since glibc 2.10:

```
_POSIX_C_SOURCE >= 200809L || _XOPEN_SOURCE >= 700
```

Before glibc 2.10:

```
_GNU_SOURCE
```

**DESCRIPTION**

**getline()** reads an entire line from *stream*, storing the address of the buffer containing the text into *\*lineptr*. The buffer is null-terminated and includes the newline character, if one was found.

If *\*lineptr* is set to NULL and *\*n* is set 0 before the call, then **getline()** will allocate a buffer for storing the line. This buffer should be freed by the user program even if **getline()** failed.

Alternatively, before calling **getline()**, *\*lineptr* can contain a pointer to a [malloc\(3\)](#)-allocated buffer *\*n* bytes in size. If the buffer is not large enough to hold the line, **getline()** resizes it with [realloc\(3\)](#), updating *\*lineptr* and *\*n* as necessary.

In either case, on a successful call, *\*lineptr* and *\*n* will be updated to reflect the buffer address and allocated size respectively.

**getdelim()** works like **getline()**, except that a line delimiter other than newline can be specified as the *delimiter* argument. As with **getline()**, a delimiter *c* character is not added if one was not present in the input before end of file was reached.

**RETURN VALUE**

On success, **getline()** and **getdelim()** return the number of characters read, including the delimiter character, but not including the terminating null byte (0). This value can be used to handle embedded null bytes in the line read.

Both functions return -1 on failure to read a line (including end-of-file condition). In the event of an error, *errno* is set to indicate the cause.

**ERRORS****EINVAL**

Bad arguments (*n* or *lineptr* is NULL, or *stream* is not valid).

**CONFORMING TO**

Both **getline()** and **getdelim()** were originally GNU extensions. They were standardized in POSIX.1-2008.

**EXAMPLE**

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

int
main(void)
{
    FILE *fp;
    char *line = NULL;
    size_t len = 0;
```

```
ssize_t read;

fp = fopen(/etc/motd, r);
if (fp == NULL)
    exit(EXIT_FAILURE);

while ((read = getline(&line, &len, fp)) != -1) {
    printf(Retrieved line of length %zu :n, read);
    printf(%s, line);
}

free(line);
fclose(fp);
exit(EXIT_SUCCESS);
}
```

**SEE ALSO**

[read\(2\)](#), [fgets\(3\)](#), [fopen\(3\)](#), [fread\(3\)](#), [scanf\(3\)](#)

**COLOPHON**

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