

NAME

memchr, memrchr, rawmemchr - scan memory for a character

SYNOPSIS

```
#include <string.h>

void *memchr(const void *s, int c, size_t n);

void *memrchr(const void *s, int c, size_t n);

void *rawmemchr(const void *s, int c);
```

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

`memrchr()`, `rawmemchr()`: `_GNU_SOURCE`

DESCRIPTION

The `memchr()` function scans the initial *n* bytes of the memory area pointed to by *s* for the first instance of *c*. Both *c* and the bytes of the memory area pointed to by *s* are interpreted as *unsigned char*.

The `memrchr()` function is like the `memchr()` function, except that it searches backward from the end of the *n* bytes pointed to by *s* instead of forward from the beginning.

The `rawmemchr()` function is similar to `memchr()`: it assumes (i.e., the programmer knows for certain) that an instance of *c* lies somewhere in the memory area starting at the location pointed to by *s*, and so performs an optimized search for *c* (i.e., no use of a count argument to limit the range of the search). If an instance of *c* is not found, the results are unpredictable. The following call is a fast means of locating a string's terminating null byte:

```
char *p = rawmemchr(s, 0);
```

RETURN VALUE

The `memchr()` and `memrchr()` functions return a pointer to the matching byte or NULL if the character does not occur in the given memory area.

The `rawmemchr()` function returns a pointer to the matching byte, if one is found. If no matching byte is found, the result is unspecified.

VERSIONS

`rawmemchr()` first appeared in glibc in version 2.1.

`memrchr()` first appeared in glibc in version 2.2.

ATTRIBUTES

Multithreading (see [pthreads\(7\)](#))

The `memchr()`, `memrchr()`, and `rawmemchr()` functions are thread-safe.

CONFORMING TO

The `memchr()` function conforms to SVr4, 4.3BSD, C89, C99, POSIX.1-2001.

The `memrchr()` function is a GNU extension, available since glibc 2.1.91.

The `rawmemchr()` function is a GNU extension, available since glibc 2.1.

SEE ALSO

[ffs\(3\)](#), [index\(3\)](#), [rindex\(3\)](#), [strchr\(3\)](#), [strpbrk\(3\)](#), [strrchr\(3\)](#), [strsep\(3\)](#), [strspn\(3\)](#), [strstr\(3\)](#), [wmemchr\(3\)](#)

COLOPHON

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