

**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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