# std::memchr

Defined in header <cstring>

```
const void* memchr( const void* ptr, int ch, std::size_t count );
      void* memchr(       void* ptr, int ch, std::size_t count );
```

Converts ch to `unsigned char` and locates the first occurrence of that value in the initial count characters (each interpreted as `unsigned char`) of the object pointed to by ptr.

This function behaves as if it reads the characters sequentially and stops as soon as a matching character is found: if the array pointed to by ptr is smaller than count, but the match is found within the array, the behavior is well-defined (since C++17)

## Parameters

| | | |
|---|---|---|
| **ptr** | – | pointer to the object to be examined |
| **ch** | – | character to search for |
| **count** | – | max number of characters to examine |

## Return value

Pointer to the location of the character, or a null pointer if no such character is found.

## Example

Search an array of characters.

Run this code

```
#include <iostream>
#include <cstring>

int main()
{
    char arr[] = {'a','\0','a','A','a','a','A','a'};
    char *pc = (char*)std::memchr(arr,'A',sizeof arr);
    if (pc != nullptr)
       std::cout << "search character found\n";
    else
       std::cout << "search character not found\n";
}
```

Output:

```
search character found
```

## See also

| | |
|---|---|
| **strchr** | finds the first occurrence of a character (function) |
| **find**<br>**find_if**<br>**find_if_not** (C++11) | finds the first element satisfying specific criteria (function template) |

**C documentation** for **memchr**