```
1: // $Id: makeunique.cpp, v 1.11 2019-05-08 11:33:31-07 - - $
2:
 3: //
 4: // Example of using a unique_ptr to point at dynamically
 5: // allocated local data. C++ does not allow local arrays
 6: // to be given a dynamic size, as in "char c[n]".
7: //
8:
9: #include <cstring>
10: #include <iostream>
11: #include <memory>
12: using namespace std;
13:
14: int main() {
       const char* const data = "$RCSfile: makeunique.cpp, v $";
15:
       const size_t datalen = strlen (data) + 1;
17:
       auto buffer = make_unique<char[]> (strlen (data) + 1);
18:
       strncpy (buffer.get(), data, datalen);
       cout << "buffer=\"" << buffer.get() << "\"" << endl;</pre>
19:
20: }
21:
22: //TEST// alias grind='valgrind --leak-check=full --show-reachable=yes'
23: //TEST// grind makeunique >makeunique.out 2>&1
24: //TEST// mkpspdf makeunique.ps makeunique.cpp* makeunique.out
25:
```

```
$cse111-wm/Assignments/asg4-client-server/misc
 11/06/19
                                                                         1/1
 14:09:00
                               makeunique.cpp.log
    1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting makeunique.cpp
    2: checksource makeunique.cpp
    3: ident makeunique.cpp
    4: makeunique.cpp:
            $Id: makeunique.cpp, v 1.11 2019-05-08 11:33:31-07 - - $
    6:
            $RCSfile: makeunique.cpp, v $
    7: cpplint.py.perl makeunique.cpp
    8: Done processing makeunique.cpp
    9: g++ -Wall -Wextra -Wpedantic -Wshadow -fdiagnostics-color=never -std=gnu
++2a -Wold-style-cast -g -00 makeunique.cpp -o makeunique -lm
   10: rm -f makeunique.o
   11: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished makeunique.cpp
```

11/06/19 14:09:01

## \$cse111-wm/Assignments/asg4-client-server/misc makeunique.out

1/1

```
1: ==27118== Memcheck, a memory error detector
    2: ==27118== Copyright (C) 2002-2017, and GNU GPL'd, by Julian Seward et al
    3: ==27118== Using Valgrind-3.14.0 and LibVEX; rerun with -h for copyright
info
    4: ==27118== Command: makeunique
    5: ==27118==
    6: buffer="$RCSfile: makeunique.cpp,v $"
    7: ==27118==
    8: ==27118== HEAP SUMMARY:
    9: ==27118==
                     in use at exit: 0 bytes in 0 blocks
                   total heap usage: 1 allocs, 1 frees, 29 bytes allocated
   10: ==27118==
   11: ==27118==
   12: ==27118== All heap blocks were freed -- no leaks are possible
   13: ==27118==
   14: ==27118== For counts of detected and suppressed errors, rerun with: -v
   15: ==27118== ERROR SUMMARY: 0 errors from 0 contexts (suppressed: 0 from 0)
```