```
1: // $Id: ordering.cpp,v 1.7 2020-03-03 15:52:07-08 - - $
2:
3: //
 4: // Order of construction and destruction.
 6:
7: #include <iostream>
 8: #include <string>
9: using namespace std;
10:
11: struct name {
12:
       string value;
13:
       name (const string& v): value(v) {
          cout << __PRETTY_FUNCTION__ << ": " << value << endl;</pre>
14:
15:
16:
       ~name() {
17:
          cout << __PRETTY_FUNCTION__ << ": " << value << endl;</pre>
18:
       }
19: };
20:
21: struct base {
22:
       name first {"first"};
23:
       name second {"second"};
24:
       base() {
25:
          cout << __PRETTY_FUNCTION__ << endl;</pre>
26:
27:
       virtual ~base() {
28:
          cout << __PRETTY_FUNCTION__ << endl;</pre>
29:
       }
30: };
31:
32: struct derived: public base {
33:
       name third {"third"};
34:
       name fourth {"fourth"};
35:
       derived() {
36:
          cout << __PRETTY_FUNCTION__ << endl;</pre>
37:
38:
       virtual ~derived() {
39:
          cout << __PRETTY_FUNCTION__ << endl;</pre>
40:
       }
41: };
42:
43: int main() {
44:
       cout << __PRETTY_FUNCTION__ << ": start" << endl;</pre>
45:
46:
       cout << __PRETTY_FUNCTION__ << ": finish" << endl;</pre>
47:
       return 0;
48: }
49:
50: //TEST// ordering >ordering.out 2>&1
51: //TEST// mkpspdf ordering.ps ordering.cpp* ordering.out
52:
```

```
$cse111-wm/Examples/wk06c-inheritance
 03/03/20
                                                                         1/1
 15:52:07
                                ordering.cpp.log
    1: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting ordering.cpp
    2: checksource ordering.cpp
    3: ident ordering.cpp
    4: ordering.cpp:
            $Id: ordering.cpp,v 1.7 2020-03-03 15:52:07-08 - - $
    6: cpplint.py.perl ordering.cpp
    7: Done processing ordering.cpp
    8: q++ -Wall -Wextra -Wpedantic -Wshadow -fdiagnostics-color=never -std=gnu
++2a -Wold-style-cast -g -O0 ordering.cpp -o ordering -lm
    9: rm -f ordering.o
   10: @@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished ordering.cpp
```

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\$cse111-wm/Examples/wk06c-inheritance ordering.out

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```
1: int main(): start
2: name::name(const string&): first
3: name::name(const string&): second
4: base::base()
5: name::name(const string&): third
6: name::name(const string&): fourth
7: derived::derived()
8: int main(): finish
9: virtual derived:~derived()
10: name::~name(): fourth
11: name::~name(): third
12: virtual base::~base()
13: name::~name(): second
14: name::~name(): first
```