```cpp
 1: // $Id: uninit.cpp,v 1.1 2012-04-10 19:08:04-07 - - $
 2:
 3: #include <cstdlib>
 4: #include <iostream>
 5: #include <string>
 6: #include <vector>
 7:
 8: using namespace std;
 9:
10: void foo (int an_int) {
11:    cout << "foo: " << an_int << endl;
12:    an_int = 12345;
13:    int before = 6666;
14:    int array[5];
15:    int after = 8888;
16:    cout << "before = " << before << endl;
17:    cout << "array[-1] = " << array[-1] << endl;
18:    cout << "array[6] = " << array[6] << endl;
19:    cout << "after = " << after << endl;
20: }
21:
22: int main (int argc, char **argv) {
23:    int an_int;
24:    cout << an_int << endl;
25:    foo (an_int);
26:    foo (an_int);
27:    if (an_int > 0) cout << "greater" << endl;
28:    return EXIT_SUCCESS;
29: }
30:
31: /*
32: //TEST// valgrind --leak-check=full --show-reachable=yes \
33: //TEST//       --log-file=uninit.out.grind \
34: //TEST//       uninit foo bar baz qux >uninit.out 2>&1
35: //TEST// mkpspdf uninit.ps uninit.cpp* uninit.out*
36: */
37:
```

```
 1: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: starting uninit.cpp
 2: * uninit.cpp: $Id: uninit.cpp,v 1.1 2012-04-10 19:08:04-07 - - $
 3: * g++ -g -O0 -Wall -Wextra -std=gnu++11 uninit.cpp -o uninit -lm
 4: * uninit.cpp:22:5: warning: unused parameter 'argc'
 5: [-Wunused-parameter]
 6: *   int main (int argc, char **argv) {
 7: *         ^
 8: * uninit.cpp:22:5: warning: unused parameter 'argv'
 9: [-Wunused-parameter]
10: * uninit.cpp: In function 'int main(int, char**)':
11: * uninit.cpp:24:12: warning: 'an_int' is used uninitialized in this
12: function [-Wuninitialized]
13: *       cout << an_int << endl;
14: *                ^
15: * rm -f uninit.o
16: * @@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@ mkc: finished uninit.cpp
```

```
 1: 0
 2: foo: 0
 3: before = 6666
 4: array[-1] = 12345
 5: array[6] = 8888
 6: after = 8888
 7: foo: 0
 8: before = 6666
 9: array[-1] = 12345
10: array[6] = 8888
11: after = 8888
```

```
    1: ==26165== Memcheck, a memory error detector
    2: ==26165== Copyright (C) 2002-2012, and GNU GPL'd, by Julian Seward et al
.
    3: ==26165== Using Valgrind-3.8.1 and LibVEX; rerun with -h for copyright i
nfo
    4: ==26165== Command: uninit foo bar baz qux
    5: ==26165== Parent PID: 26164
    6: ==26165==
    7: ==26165== Conditional jump or move depends on uninitialised value(s)
    8: ==26165==    at 0x38C1281B96: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
    9: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
   10: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
   11: ==26165==    by 0x400A0C: main (uninit.cpp:24)
   12: ==26165==
   13: ==26165== Use of uninitialised value of size 8
   14: ==26165==    at 0x38C127D6B3: ??? (in /usr/lib64/libstdc++.so.6.0.13)
   15: ==26165==    by 0x38C1281BC2: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
   16: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
   17: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
   18: ==26165==    by 0x400A0C: main (uninit.cpp:24)
   19: ==26165==
   20: ==26165== Conditional jump or move depends on uninitialised value(s)
   21: ==26165==    at 0x38C127D6BE: ??? (in /usr/lib64/libstdc++.so.6.0.13)
   22: ==26165==    by 0x38C1281BC2: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
   23: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
   24: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
   25: ==26165==    by 0x400A0C: main (uninit.cpp:24)
   26: ==26165==
   27: ==26165== Conditional jump or move depends on uninitialised value(s)
   28: ==26165==    at 0x38C1281BF8: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
```

```
  29: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
  30: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
  31: ==26165==    by 0x400A0C: main (uninit.cpp:24)
  32: ==26165==
  33: ==26165== Conditional jump or move depends on uninitialised value(s)
  34: ==26165==    at 0x38C1281B96: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
  35: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
  36: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
  37: ==26165==    by 0x400917: foo(int) (uninit.cpp:11)
  38: ==26165==    by 0x400A23: main (uninit.cpp:25)
  39: ==26165==
  40: ==26165== Conditional jump or move depends on uninitialised value(s)
  41: ==26165==    at 0x38C1281BF8: std::ostreambuf_iterator<char, std::char_t
raits<char> > std::num_put<char, std::ostreambuf_iterator<char, std::char_trait
s<char> > >::_M_insert_int<long>(std::ostreambuf_iterator<char, std::char_trait
s<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++.so.6.0.13
)
  42: ==26165==    by 0x38C1281E25: std::num_put<char, std::ostreambuf_iterato
r<char, std::char_traits<char> > >::do_put(std::ostreambuf_iterator<char, std::
char_traits<char> >, std::ios_base&, char, long) const (in /usr/lib64/libstdc++
.so.6.0.13)
  43: ==26165==    by 0x38C129543D: std::ostream& std::ostream::_M_insert<long
>(long) (in /usr/lib64/libstdc++.so.6.0.13)
  44: ==26165==    by 0x400917: foo(int) (uninit.cpp:11)
  45: ==26165==    by 0x400A23: main (uninit.cpp:25)
  46: ==26165==
  47: ==26165== Conditional jump or move depends on uninitialised value(s)
  48: ==26165==    at 0x400A32: main (uninit.cpp:27)
  49: ==26165==
  50: ==26165==
  51: ==26165== HEAP SUMMARY:
  52: ==26165==     in use at exit: 0 bytes in 0 blocks
  53: ==26165==   total heap usage: 0 allocs, 0 frees, 0 bytes allocated
  54: ==26165==
  55: ==26165== All heap blocks were freed -- no leaks are possible
  56: ==26165==
  57: ==26165== For counts of detected and suppressed errors, rerun with: -v
  58: ==26165== Use --track-origins=yes to see where uninitialised values come
 from
  59: ==26165== ERROR SUMMARY: 13 errors from 7 contexts (suppressed: 6 from 6
)
```