



Red Hat Enterprise Linux Release 9.2 Manual Pages on 'assert.3' command

\$ man assert.3

ASSERT(3) Linux Programmer's Manual ASSERT(3)

NAME

assert - abort the program if assertion is false

SYNOPSIS

```
#include <assert.h>
```

```
void assert(scalar expression);
```

DESCRIPTION

This macro can help programmers find bugs in their programs, or handle exceptional cases via a crash that will produce limited debugging output.

If `expression` is false (i.e., compares equal to zero), `assert()` prints an error message to standard error and terminates the program by calling `abort(3)`. The error message includes the name of the file and function containing the `assert()` call, the source code line number of the call, and the text of the argument; something like:

```
prog: some_file.c:16: some_func: Assertion `val == 0' failed.
```

If the macro `NDEBUG` is defined at the moment `<assert.h>` was last included, the macro `assert()` generates no code, and hence does nothing at all. It is not recommended to define `NDEBUG` if using `assert()` to detect error conditions since the software may behave non-deterministically.

RETURN VALUE

No value is returned.

ATTRIBUTES

For an explanation of the terms used in this section, see at? tributes(7).

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?Interface ? Attribute ? Value ?

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?assert() ? Thread safety ? MT-Safe ?

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CONFORMING TO

POSIX.1-2001, POSIX.1-2008, C89, C99. In C89, expression is required to be of type int and undefined behavior results if it is not, but in C99 it may have any scalar type.

BUGS

assert() is implemented as a macro; if the expression tested has side-effects, program behavior will be different depending on whether NDEBUG is defined. This may create Heisenbugs which go away when debugging is turned on.

SEE ALSO

abort(3), assert_perror(3), exit(3)

COLOPHON

This page is part of release 5.10 of the Linux man-pages project. A description of the project, information about reporting bugs, and the latest version of this page, can be found at <https://www.kernel.org/doc/man-pages/>.

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