NAME

test, **[** – condition evaluation utility

SYNOPSIS

test *expression*
[*expression*]

DESCRIPTION

The **test** utility evaluates the expression and, if it evaluates to true, returns a zero (true) exit status; otherwise it returns 1 (false). If there is no expression, test also returns 1 (false).

All operators and flags are separate arguments to the **test** utility.

The following primaries are used to construct expression:

-b *file* True if *file* exists and is a block special file.

-c *file* True if *file* exists and is a character special file.

-d *file* True if *file* exists and is a directory.

-e *file* True if *file* exists (regardless of type).

-f *file* True if *file* exists and is a regular file.

-g *file* True if *file* exists and its set group ID flag is set.

-h *file* True if *file* exists and is a symbolic link.

-k *file* True if *file* exists and its sticky bit is set.

-n *string* True if the length of *string* is nonzero.

-p *file* True if *file* is a named pipe (FIFO).

-r *file* True if *file* exists and is readable.

-s *file* True if *file* exists and has a size greater than zero.

-t *file_descriptor*
True if the file whose file descriptor number is *file_descriptor* is open and is associated with a terminal.

-u *file* True if *file* exists and its set user ID flag is set.

-w *file* True if *file* exists and is writable. True indicates only that the write flag is on. The file is not writable on a read-only file system even if this test indicates true.

-x *file* True if *file* exists and is executable. True indicates only that the execute flag is on. If *file* is a directory, true indicates that *file* can be searched.

-z *string* True if the length of *string* is zero.

-L *file* True if *file* exists and is a symbolic link. This operator is retained for compatibility with previous versions of this program. Do not rely on its existence; use **-h** instead.

-O *file* True if *file* exists and its owner matches the effective user id of this process.

-G *file* True if *file* exists and its group matches the effective group id of this process.

-S *file* True if *file* exists and is a socket.

file1 **-nt** *file2*
True if *file1* exists and is newer than *file2*.

file1 **-ot** *file2*
True if *file1* exists and is older than *file2*.

file1 **-ef** *file2*
True if *file1* and *file2* exist and refer to the same file.

string True if *string* is not the null string.

s1 **=** *s2* True if the strings *s1* and *s2* are identical.

s1 **!=** *s2* True if the strings *s1* and *s2* are not identical.

s1 **<** *s2* True if string *s1* comes before *s2* based on the ASCII value of their characters.

s1 **>** *s2* True if string *s1* comes after *s2* based on the ASCII value of their characters.

n1 **-eq** *n2* True if the integers *n1* and *n2* are algebraically equal.

n1 **-ne** *n2* True if the integers *n1* and *n2* are not algebraically equal.

n1 **-gt** *n2* True if the integer *n1* is algebraically greater than the integer *n2*.

n1 **-ge** *n2* True if the integer *n1* is algebraically greater than or equal to the integer *n2*.

n1 **-lt** *n2* True if the integer *n1* is algebraically less than the integer *n2*.

n1 **-le** *n2* True if the integer *n1* is algebraically less than or equal to the integer *n2*.

These primaries can be combined with the following operators:

! *expression*
True if *expression* is false.

expression1 **-a** *expression2*
True if both *expression1* and *expression2* are true.

expression1 **-o** *expression2*
True if either *expression1* or *expression2* are true.

(*expression***)**
True if expression is true.

The **-a** operator has higher precedence than the **-o** operator.

GRAMMAR AMBIGUITY

The **test** grammar is inherently ambiguous. In order to assure a degree of consistency, the cases described in IEEE Std 1003.2 (“POSIX.2”) section 4.62.4, are evaluated consistently according to the rules specified in the standards document. All other cases are subject to the ambiguity in the command semantics.

EXIT STATUS

The **test** utility exits with one of the following values:

0 expression evaluated to true.

1 expression evaluated to false or expression was missing.

>1 An error occurred.

STANDARDS

The **test** utility implements a superset of the IEEE Std 1003.2 (“POSIX.2”) specification.