

## NAME

chkdelim – check delimiter balance

## SYNOPSIS

```
chkdelim [ -? ] [ -author ] [ -BibTeX ] [ -copyright ] [ -error-file filename ] [ -help ]
[ -ignore delimiters ] [ -Lisp ] [ -nested ] [ -no-BibTeX ] [ -no-Lisp ] [ -no-nested ]
[ -no-Nroff ] [ -no-page-reset ] [ -no-paragraph-reset ] [ -no-quote-check ] [ -no-Scribe ]
[ -no-TeX ] [ -no-TeXinfo ] [ -Nroff ] [ -output-file filename ] [ -page-reset ]
[ -paragraph-reset ] [ -quote-check ] [ -Scribe ] [ -TeX ] [ -TeXinfo ] [ -version ]
[ < infile or file1 file2 file3 ... ] > outfile
```

## DESCRIPTION

**chkdelim** is a tool for detecting common delimiter errors in electronic documents and computer programs. It filters a list of files, or its standard input if no filenames are provided, matching group delimiters: angle brackets, curly braces, parentheses, square brackets, forward quotes (apostrophes or acutes), backward quotes (graves), quotation marks, and dollar signs (used in the T<sub>E</sub>X typesetting system).

Warning messages are printed to *stdout* whenever unbalanced delimiters are found, giving the delimiter and its line, column, and file positions. The output format is recognizable by the GNU **emacs** *M-x compile* command, making it easy to parse the warning messages and jump to their locations with the keystrokes *C-x* '(next-error).

Except in **-Scribe** mode, a backslash preceding a delimiter prevents it from being recognized as a delimiter. This is a suitable choice for T<sub>E</sub>X documents, as well as for C-like programming languages and UNIX shells. Use the **-ignore** option to override the special handling of backslash.

If unbalanced delimiters are needed, it is often possible to insert a matching delimiter in a nearby comment so that the delimiter appears to **chkdelim** to be properly balanced. This will reduce the number of messages issued, so that the real problems will be more evident.

**chkdelim** exits with a success code (0 on UNIX) if no warning messages are printed on *stdout*; otherwise, it exits with a failure code (1 on UNIX).

**chkdelim** recognizes, and handles transparently on all systems, the three popular flavors of text file line terminators: CR (Macintosh), CR LF (IBM PC DOS and Microsoft Windows), and LF (UNIX).

## OPTIONS

Command-line options may be abbreviated to a unique leading prefix, and letter case is *not* significant. Options affect only the processing of files that *follow* them on the command line.

Language-specific options (**-BibTeX**, **-Lisp**, **-Nroff**, **-Scribe**, **-TeX**, and **-TeXinfo**), and their negations, should be given before other options, because they reset many internal flags that affect the handling of specific characters.

The leading hyphen that distinguishes an option from a filename may be doubled, for compatibility with GNU and POSIX conventions. Thus, **-author** and **--author** are equivalent.

To avoid confusion with options, if a filename begins with a hyphen, it must be disguised by a leading absolute or relative directory path, e.g., */tmp/-foo* or *./-foo*.

- |                |   |
|----------------|---|
| <b>-?</b>      | Display a brief help message on <i>stderr</i> , and exit immediately with a success return code. Same as <b>-help</b> .   |
| <b>-author</b> | Display author information on <i>stderr</i> , and exit immediately with a success return code.  |
| <b>-BibTeX</b> | Input is in BIB <sub>T</sub> E <sub>X</sub> format.<br>Processing is similar to that for <b>-TeX</b> , with the addition of these features: <ul style="list-style-type: none"> <li>• ‘@’ characters at the start of a line begin a new paragraph, and restart the delimiter checks.</li> <li>• Quotation marks are not significant when they are embedded inside two or more brace levels.</li> </ul> |

<b>-copyright</b>	Display copyright information on <i>stderr</i> , and exit immediately with a success return code.
<b>-error-file</b> <i>filename</i>	Specify an alternate error log file. This is primarily useful on operating systems that fail to provide for redirection of <i>stderr</i> .
<b>-help</b>	Display a brief help message on <i>stderr</i> , and exit immediately with a success return code. Same as <b>-?</b> .
<b>-ignore</b> <i>delimiters</i>	<p>Specify one or more delimiter characters that are to be ignored. In the case of paired delimiters (braces, brackets, parentheses), either, or both, of a pair may be specified.</p> <p>Since most delimiter characters have special significance to command shells, it will usually be necessary to protect them suitably from shell interpretation, such as with backslashes, or inside quoted strings.</p> <p>Angle brackets are more commonly used for less-than and greater-than symbols, rather than &lt;paired&gt;, so <b>-ignore</b> &lt;&gt; will be a likely <b>chkdelim</b> option on UNIX systems.</p> <p>When &lt; and &gt; are required in the <b>-ignore</b> argument, they may be represented by L and G (for less-than and greater-than). This avoids the danger of confusion with UNIX and IBM PC DOS input- and output-file redirection, and gets around the lack of support for protecting special characters on IBM PC DOS command lines.</p>
<b>-Lisp</b>	<p>Input is in Lisp syntax. This should be suitable for most Lisp dialects, including Common Lisp, Emacs Lisp, GNU Guile, Portable Standard Lisp, and Scheme.</p> <p>With this option, single quotes following whitespace or an open parenthesis are ignored, since they are presumably Lisp shorthand for the <i>quote</i> function: <i>(a 'b 'c)</i> is equivalent to <i>(a (quote b) ((quote c)))</i></p> <p>Backslash quotes the next character, preventing it from being considered as a possible delimiter.</p> <p>A single quote between letters is ignored.</p> <p>Angle brackets are ignored, since they are function names in most Lisp dialects.</p> <p>Files in those Lisp dialects that use a single closing bracket to represent multiple closing parenthesis will generate warnings in such cases.</p>
<b>-nested</b>	Check for properly-nested delimiters. This is the default.
<b>-no-BibTeX</b>	Suppress any <b>-BibTeX</b> option specified earlier on the command line.
<b>-no-Lisp</b>	Suppress any <b>-Lisp</b> option specified earlier on the command line.
<b>-no-nested</b>	Suppress any <b>-nested</b> option specified earlier on the command line. This is sometimes useful to reduce the number of warning messages.
<b>-no-Nroff</b>	Suppress any <b>-Nroff</b> option specified earlier on the command line.
<b>-no-page-reset</b>	Suppress any <b>-page-reset</b> option specified earlier on the command line.
<b>-no-paragraph-reset</b>	Suppress any <b>-paragraph-reset</b> option specified earlier on the command line.
<b>-no-quote-check</b>	Suppress any <b>-quote-check</b> option specified earlier on the command line.
<b>-no-Scribe</b>	Suppress any <b>-Scribe</b> option specified earlier on the command line.
<b>-no-TeX</b>	Suppress any <b>-TeX</b> option specified earlier on the command line.
<b>-no-TeXinfo</b>	Suppress any <b>-TeXinfo</b> option specified earlier on the command line.
<b>-Nroff</b>	Input is in nroff/troff format.

Backslash quotes the next character, preventing it from being considered as a possible delimiter. `\*(` is recognized so that it does not cause warnings about unbalanced parentheses.

Quote handling is the same as for the `-TeX` option.

**-output-file** *filename* Specify an alternate output file. This is primarily useful on operating systems that fail to provide for redirection of *stdout*.

**-page-reset** At start of page, indicated by a formfeed character, issue any needed warning messages, and then forget any delimiter imbalances.

**-paragraph-reset** At end of paragraph, which is a line that is empty, or contains only whitespace, issue any needed warning messages, and then forget any delimiter imbalances. This option is often useful to limit the number of messages that can appear.

**-quote-check** Override the default handling of forward, or close, quote (apostrophe) selected by `-BibTeX`, `-Nroff`, `-Scribe`, `-TeX`, or `-TeXinfo`, so that open and close quotes will be expected to occur in pairs, instead of close quote receiving special handling for its use in abbreviations, possessives, and contractions.

**-Scribe** Input is in Scribe format.

`'@'` quotes the next character, preventing it from being considered as a possible delimiter.

Backslash is an ordinary character.

Quote handling is the same as for the `-TeX` option. In particular, this means that use of legal Scribe commands of the form `@NAME'arg'` and `@NAME'arg'` will produce warning messages.

**-TeX** Input is in  $\TeX$  or  $\LaTeX$  format.

Backslash quotes the next character, preventing it from being considered as a possible delimiter.

Unbackslashed dollar signs must be paired, either `$ ... $` or `$$ ... $$`, for inline and displayed mathematics, and the contents may not include an empty line. Without this option, dollar characters are always ignored.

Forward and backward quotes are checked to verify that they appear in open/close pairs: `'...'` and `"..."`, instead of in the forms `'...'` and `'...'` used in computer programming languages.

For `-TeX` mode *only*, the special ligatures `?` and `!` for Spanish inverted query and exclamation mark are recognized: they do not cause unbalanced-open-quote warnings.

The following special handling of quotes is in effect unless it has been suppressed by a `-quote-check` command-line option.

Forward quotes between letters or digits are ignored, so that possessives (*Alice's*) and elisions (*O'Neill*) do not raise bogus warnings.

A forward quote between a close brace and an *s* is assumed to be a possessive, as in *{Cook}'s Voyage*.

Forward quotes between a space and a digit, or beginning-of-line and a digit, are also ignored, so that text like "Supercomputing '95" does not raise warnings.

A forward quote preceding a lone *s* or *t* is assumed to reflect Dutch use, as in the personal name *in 't Hout* or the street name *A. v. 's Gravesandestraat*.

- TeXinfo**            Input is in GNU  $\text{\TeX}$ info format.  
                          ‘@’ quotes the next character, preventing it from being considered as a possible  
                          delimiter.  
                          Quote handling is the same as for the **-TeX** option.
- version**            Display version information on *stderr*, and exit immediately with a success return  
                          code.

**BUGS**

In  $\text{\TeX}$  documents, quotation marks `"..."` should be used only inside verbatim environments, but **chkdelim** does not recognize such environments, so it will only warn if quotation marks are unbalanced.  $\text{\LaTeX}$  users are advised to employ the **lacheck**(1) utility to detect incorrect use of quotation marks.

**SEE ALSO**

**lacheck**(1).

**AUTHOR**

Nelson H. F. Beebe, Ph.D.  
 Center for Scientific Computing  
 University of Utah  
 Department of Mathematics, 322 INSCC  
 155 S 1400 E RM 233  
 Salt Lake City, UT 84112-0090  
 USA  
 Tel: +1 801 581 5254  
 FAX: +1 801 585 1640, +1 801 581 4148  
 Email: beebe@math.utah.edu, beebe@acm.org, beebe@ieee.org (Internet)  
 WWW URL: <http://www.math.utah.edu/~beebe>

**AVAILABILITY**

The source code distribution for **chkdelim** is freely available, and may be found on the World-Wide Web at  
<http://www.math.utah.edu/pub/misc/index-table-c.html#chkdelim>  
 or equivalently, via anonymous ftp at  
<ftp://ftp.math.utah.edu/pub/misc/chkdelim-x.y.tar.gz>  
<ftp://ftp.math.utah.edu/pub/misc/chkdelim-x.y.zip>  
<ftp://ftp.math.utah.edu/pub/misc/chkdelim-x.y.zoo>  
 where *x.y* is a version number.