

**NAME**

chklat – find nesting and other problems in LaTeX text

**SYNOPSIS**

**chklat** [  $-a[_\#b]$  ] [  $-mN$  ] [  $-u|-A$  ] file ...

**DESCRIPTION**

*Chklat* attempts to find nesting errors and other problems in LaTeX texts, and hopefully give better error messages than latex(1). Its main task is to locate nesting mismatches in LaTeX texts, and give sensible error messages about them. Actually this is Mission Impossible: in ‘{...{...{...}...}...}’ there is no way of telling which of the ‘}’s is unmatched. And \$ being both an opener and a closer is another disaster. Furthermore *chklat* tries to find missing backslashes (as in ‘**emph**{I mean it!}’, which prints ‘emphI mean it!’), and unterminated commands (as in ‘**the** \textdollar symbol’, which prints ‘the \$symbol’). The actions of the program can be fine-tuned by entries in the *.chklat* file.

The program imposes the following restrictions on the LaTeX text.

It recognizes two kinds of parenthesis pairs: ‘{’-‘}’, and ‘\begin{X}’-‘\end{X}’, for any label *X*; it applies serious effort to do a reasonable pairing up. The label *X* has to be present explicitly; the program fails on text in which the label is constructed on the fly (mainly in *\newcommand* text) and there is no reasonable way to correct this.

Short math mode is expected to be delineated explicitly by ‘\$’-‘\$’, ‘\('’-‘\)’’, or ‘\[’-‘\]’; it should nest properly inside ‘{’-‘}’ and ‘\begin{X}’-‘\end{X}’. Short math mode may include at most *N* newlines, to detect run-away segments of math mode; the default is *N*=1, but *N* can be set with the **-mN** option. Long math mode, delineated by ‘\begin{math}’-‘\end{math}’, cannot nest.

Math mode (long or short) is the only place where unescaped ‘\_’ and ‘^’ are allowed, and ‘#’ is allowed only in the combinations ‘##’ and ‘#[1-9]’. The **-aS** option can be used to lift this restriction partially, by specifying one or more of the characters ‘\_’, ‘^’ and ‘#’ in *S*; or completely, by leaving *S* empty.

*Chklat* detects and reports LaTeX command calls terminated by blank space. This space is ignored by LaTeX, possibly causing ungainly output. This test can be suppressed by specifying a ‘b’ in the *S* in the **-aS** option.

*Chklat* expects UTF8 input, and non-UTF8 characters are reported. Restriction to ASCII96 can be obtained with the **-A** option; unrestricted input can be allowed with the **-u** option.

**The .chklat file**

Some commands, built-in or user-defined, have one or more parameters which may contain unescaped ‘\_’ or ‘^’, for example because they contain file names or are passed into a math environment. Some packages define environments in which the normal LaTeX conventions do not hold, for example by allowing the % to be use unescaped. And commands that do not produce visible output need not be terminated by a non-space. These features require the checks done by *chklat* to be restricted; they can be specified in a *.chklat* file, which is to be placed in the directory in which *chklat* is called.

The format of each line in the *.chklat* file is

<key> <command> <optional parameter>

The following keys are defined:

**mathenv**

The <command> starts a math environment.

**mathpar**

The optional parameters of this <command> are not checked and the first *N* parameters are treated in math mode, where *N* is given as the <optional parameter>. Note that *N* can be 0, in which case only the optional ([...]) parameters of the <command> are skipped.

**skipenv**

The contents of the environment started by `<command>` must not be checked.

**skippar**

The optional parameters and the first  $N$  parameters of this `<command>` must not be checked, where  $N$  is given as the `<optional parameter>`.

**blankOK**

The `<command>` may be followed by space, tab, or newline.

The `<command>` must be given in full, including the backslash and possibly a name between ‘{’ and ‘}’. Note that a `<command>` may need more than one entry: a user-defined math environment `mymath` with 1 non-LaTeX parameter is specified by

```
mathenv      \begin{mymath}
skippar      \begin{mymath} 1
```

Empty lines and lines that start with a ‘%’ are ignored.

**EXIT CODE**

Exit code 1 is returned when errors are found that (almost certainly) would prevent LaTeX from succeeding. Exit code 2 is returned when *chklat* gives up due too many warnings and errors.

**FILES**

*.chklat*

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