

# The `alltt` environment\*

Johannes Braams

2021/01/29

This file is maintained by the L<sup>A</sup>T<sub>E</sub>X Project team.  
Bug reports can be opened (category `latex`) at  
<https://latex-project.org/bugs.html>.

## Abstract

This package defines the `alltt` environment, which is like the `verbatim` environment except that `\`, `{`, and `}` have their usual meanings.

Thus, other commands and environments can appear within an `alltt` environment.

## 1 Introduction

`alltt` (*env.*) Here are some things you may want to do in an `alltt` environment:

- Change fonts—e.g., by typing `{\em emphasized text\}`
- Insert text from a file `foo.tex` by typing `\input{foo}`. Beware that each `<return>` starts a new line, so if `foo.tex` ends with a `<return>` you can wind up with an extra blank line if you're not careful.
- Insert a math formula. Note that `$` just produces a dollar sign, so you'll have to type `\(...\)` or `\[...\]`. Also, `^` and `_` just produce their characters; use `\sp` or `\sb` for super- and subscripts, as in `\(x\sp{2}\)`.

**NB** When you are using OT1 encoded fonts you might be surprised when you switch to italics, because those fonts have a different set of glyphs:

```
% The glyph at the position of the $ in a slanted font: $.
% The glyph at the position of the $ in an italic font: ℓ.
%
```

## 2 The Implementation

```
1 (*package)
```

`alltt` (*env.*) The `alltt` environment is similar to the `verbatim` environment, except that `\`, `{` and `}` have their usual behaviour.

---

\*This file has version number v2.0g, last revised 2021/01/29.

```

2 \begingroup
3 \lccode'\~='\'
4 \lowercase{\endgroup}
5 \newenvironment{alltt}{%
6   \trivlist
7   \item\relax
8   \if@minipage
9   \else
10    \vskip\parskip
11    \fi
12    \leftskip\@totalleftmargin
13    \rightskip\z@skip
14    \parindent\z@
15    \parfillskip\@flushglue
16    \parskip\z@skip
17    \@par
18    \@tempwafalse
19    \def\par{%
20      \if@tempwa
21        \leavevmode\null\@par\penalty\interlinepenalty
22      \else
23        \@tempwatrue
24        \ifhmode\@par\penalty\interlinepenalty\fi
25      \fi}
26    \obeylines
27    \verbatimfont
28    \let\org@prime~%
29    \@noligs

30    \everymath\expandafter{\the\everymath
31      \catcode'\ '=12 \let~\org@prime}
32    \everydisplay\expandafter{\the\everydisplay
33      \catcode'\ '=12 \let~\org@prime}
34    \let\org@dosppecials\dosppecials
35    \g@remfrom@specials{\\}
36    \g@remfrom@specials{\{ }
37    \g@remfrom@specials{\}}
38    \let\do\@makeother
39    \dosppecials
40    \let\dosppecials\org@dosppecials
41    \frenchspacing\@vobeyspaces
42    \everypar \expandafter{\the\everypar \unpenalty}}
43 {\endtrivlist}}

```

`\g@remfrom@specials` In the old implementation of the `alltt` package a fixed `\dosppecials` was used. However nowadays the `\dosppecials` command might contain more special characters at run-time than as was defined in the format. Therefore we remove the necessary special character from `\dosppecials` at the start of the `alltt` environment. For this we need a macro. Remember that the list of special characters in `\dosppecials` contains the control sequence `\do` between the characters. We use that to check whether a character has to be removed.

The macro `\g@remfrom@specials` takes one argument, the character to be removed from the list.

```
44 \def\g@remfrom@specials#1{%
```

We build up a new list in `\@new@speicals`.

```
45 \def\@new@specials{}
```

The command `\@remove` compares its argument with the argument of `\g@remfrom@specials`.

```
46 \def\@remove##1{%
```

```
47 \ifx##1#1\else
```

When they are not the same the argument of `\@remove` is added (together with `\do`) to the new list.

```
48 \g@addto@macro\@new@specials{\do ##1}\fi}
```

Now we `\let \do` be equal to `\@remove` and execute `\dospecials`.

```
49 \let\do\@remove\dospecials
```

All that's left is to make `\dospecials` point to the new list.

```
50 \let\dospecials\@new@specials
```

```
51 }
```

```
52 </package>
```