

The `showexpl` package*

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1 Introduction

The documentation of a L^AT_EX package is by far more readable if there are examples of the commands' and environments' usage. The best way to do that is to give a comparison of the L^AT_EX code and the formatted output. `showexpl` is a package for doing that comparison, it is based on the package `listings` which provides a good typesetted source code with emphasised keywords and so on.

2 Usage

You can use `showexpl` like every other package by putting the line

```
\usepackage{showexpl}
```

in your source code. `showexpl` doesn't know any options by itself, but all options for the underlying packages (`listings` and `graphicx`) will be passed to the respective packages.

`showexpl` provides one command and one environment:

- `\LTXinputExample` and
- `LTXexample`

`\LTXinputExample` The syntax of `\LTXinputExample` is given by

```
\LTXinputExample[<key val list>]{<file>}
```

`LTXexample` The syntax of the environment `LTXexample` is given by

```
\begin{LTXexample}[<key val list>]... \end{LTXexample}
```

The set of options represented by `<key val list>` is the same for both the command and the environment, the options are described in the following:

attachfile Boolean valued key, default value: false. If set to true the sourcecode will be attached to the `.pdf` file—presumed that the document is processed by `pdflatex`.

codefile Name of the (temporary) file that contains the code which will be formatted as source code. The default value is `\jobname.tmp`.

*This document corresponds to `showexpl` v0.3k, dated 2013/03/21.

explpreset A $\langle key\ val\ list \rangle$ which serves for presetting the properties of the formatting of the source code, for values see the documentation of the `listings` package. The default value is

graphic Name of a (graphic) file. This file—if present—will be included and displayed instead of the formatted code. The default value is empty.

hsep Defines the horizontal distance between the source code and the formatted text.

justification Defines the justification of the formatted text: reasonable values are `\raggedleft`, `\raggedright`, `\centering`. The default value is `\raggedright`.

overhang A *dimen*-value that defines the amount by which the formatted text and the source code can overlap the print space. The default value is `0pt`.

pos: Defines the relative position of the formatted text relating to the source code. Allowed values are `t`, `b`, `l`, `r`, `o`, and `i` for top, bottom, left, right, outer, and inner. The last values give sense only for two-sided printing, where there are outer and inner margins of a page. The default value is `1`.

preset Any `TeX` code executed before the sample code but not visible in the `listings` area.

rangeaccept Boolean valued key, default value is false. If set to true, one can define ranges of lines that will be excerpted from the source code.

rframe Defines the form of the frame around the formatted text. With a non-empty value (e.g. “single”) a simple frame will be drawn. In the future more kinds of frames will be supported. The default value is empty (no frame).

varwidth Boolean valued key, default value is false. If set to true, the formatted text is set with its “natural” width instead of a fixed width as given by the value of the option `width`.

hsep Defines the vertical distance between the source code and the formatted text.

wide Boolean valued key, default value is false. If set to true, the source code and the formatted text overlap the print space and the margin area.

width A $\langle dimen \rangle$ value that defines the width of the formatted text. The default value depends of the relative positions of the source code and the formatted text.

3 Implementation

```
1 \DeclareOption{final}{%
2   \PassOptionsToPackage{\CurrentOption}{graphicx}%
3   \PassOptionsToPackage{\CurrentOption}{listings}%
4 }%
5 \DeclareOption{draft}{%
6   \PassOptionsToPackage{\CurrentOption}{graphicx}%
```

```

7   \PassOptionsToPackage{\CurrentOption}{listings}%
8 }%
9 \DeclareOption{attachfiles}{%
10  \AtBeginDocument{\IfFileExists{attachfile.sty}{%
11    {\RequirePackage{attachfile}}{\def\SX@attachfile{}}}}
12 }%
13 \DeclareOption*{\PassOptionsToPackage{\CurrentOption}{listings}}
14 \ProcessOptions\relax
15 \RequirePackage{listings,calc,ifthen,graphicx,varwidth}

We must activate code from package listings for writing files.
16 \lst@RequireAspects{writefile}

\SX@defaultWD Parameter #2 is a length or a number. Parameter #1 is a macro. After a call of \SX@defaultWD this macro contains the value of the length or the value of the number multiplied by \linewidth.
17 \newcommand*\SX@defaultWD[2]{%
18  \afterassignment\SX@def@WD\dimen@#2\linewidth\relax{#1}}
19 \newcommand*\SX@def@WD{%
20 \def\SX@def@WD#1\relax#2{\edef#2{\the\dimen@}}}

Additional keys.
21 \lst@Key{pos}\relax{\def\SX@pos{#1}}
22 \lst@Key{width}\relax{\def\SX@width{#1}}
23 \lst@Key{hsep}\relax{\tempdima=#1\relax\edef\SX@hsep{\the\tempdima}}
24 \lst@Key{vsep}\relax{\tempdima=#1\relax\edef\SX@vsep{\the\tempdima}}
25 \lst@Key{overhang}\relax{\def\SX@overhang{#1}}
26 \lst@Key{wide}f[t]{\lstKV@SetIf{#1}\if@SX@wide}
27 \lst@Key{rframe}\relax{\def\SX@rframe{#1}}
28 \lst@Key{preset}\relax{\def\SX@preset{#1}}

29 \lst@Key{explpreset}\relax{\def\SX@explpreset{#1}}
30 \lst@Key{codefile}\relax{\def\SX@codefile{#1}}
31 \newif\if@SX@orangeaccept \SX@orangeacceptfalse
32 \newif\if@SX@varwidth \SX@varwidthfalse
33 \newif\if@SX@wide \SX@widefalse
34 \newif\if@SX@attachfile \SX@attachfilefalse

35 \lst@Key{rangeaccept}f[t]{\lstKV@SetIf{#1}\if@SX@rangeaccept}

36 \lst@Key{varwidth}f[t]{\lstKV@SetIf{#1}\if@SX@varwidth}
37 \lst@Key{justification}\relax{\def\SX@justification{#1}}
38 \lst@Key{attachfile}f[t]{\lstKV@SetIf{#1}\if@SX@attachfile}
39 \newcommand*\SX@graphicname{}%
40 \newcommand*\SX@graphicparam{}%
41 \lst@Key{graphic}{}[]{%
42  \lstKV@OptArg[width=\linewidth]{#1}{%
43    \edef\SX@graphicparam{\#\!1}\edef\SX@graphicname{\#\!2}%
44  }%
45 }%
46 \newbox\SX@ResBox
47 \newcommand*\SX@pos{}%
48 \newcommand*\SX@width{}%
49 \newcommand*\SX@hsep{}%
50 \newcommand*\SX@vsep{}%

```

```

51 \newcommand*\SX@overhang{}
52 \newcommand*\SX@rframe{}
53 \newcommand\SX@preset{}
54 \newcommand*\SX@explpreset{}

55 \newcommand*\SX@explpreset{}
56 \newcommand*\SX@codefile{}{\edef\SX@codefile{\jobname.tmp}}
57 \newcommand*\SX@justification{\raggedright}

\SX@preset Contains some redefinitions of LATEX macros and environments to do nothing.
\SX@preset will be called just before typesetting the result of the example code.
More can be added with the user key “preset=...”.
58 \newcommand*\SX@preset{%
59   \renewcommand\documentclass[2][]{\SX@eat@version}%
60   \renewcommand\usepackage[2][]{\SX@eat@version}%
61   \renewenvironment{document}{}{}%
62   \renewenvironment{figure}[1][]{\def\@capttype{figure}}{}%
63   \renewenvironment{table}[1][]{\def\@capttype{table}}{}%
64   \renewcommand\cite[1]{}{}%
65   \let\tableofcontents\relax \let\listoffigures\relax
66   \let\listoftables\relax \let\printindex\relax
67   \let\listfiles\relax \let\nofiles\relax
68   \let\index\@gobble \let\label\@gobble
69   \let\bibliography\@gobble
70   \let\pagestyle\@gobble \let>thispagestyle\@gobble
71   %%\let\immediate\relax \let\write\@gobbletwo
72   %%\let\closeout\@gobble \let\@input\@gobble
73   \renewcommand\marginpar[2]{}%
74   \renewcommand\footnote[2]{}%
75   \let\@footnotetext\@gobble
76   %%\abovedisplayskip=\z@
77   %%\abovedisplayshortskip=\z@
78 }
79 \newcommand*\SX@eat@version[1]{}}

\isSX@odd Parameter #1 is executed on odd pages, parameter #2 on even pages.
80 \newif\ifSX@wasodd
81 \if@twoside
82 \newcommand*\isSX@odd[2]{%
83   \ifthenelse{\isodd{\pageref{\SX@IDENT}}}{%
84     {\SX@wasoddtrue #1}{\SX@wasoddfalse #2}}
85 \else
86   \newcommand*\isSX@odd[2]{#1}\SX@wasoddtrue
87 \fi
The call of \isSX@odd sets also \ifSX@wasodd to true or false. If it's clear that
no page break occurs, \ifSX@wasodd can be used.
88 \newcounter{ltxexample}
89 \newcommand*\SX@IDENT{\number\value{ltxexample} }

\SX@attachfile
90 \newcommand*\SX@attachfile{%
91   \if@SX@attachfile
92     \attachfile[mimetype=text/plain,subject={example \theltxexample}]%

```

```

93      {\$X@codefile}{%}
94  \fi
95 }

\SX@put@t/b/l/r/o/i Six macros for positioning #2 (result) and #3 (code). The result can be above, below, left or right of the code area or on the outer or inner side. Parameter #1 is the width of the result.
96 \newcommand*\SX@put@t[3]{%
97   \SX@ResultArea{\linewidth}{#2}\endgraf\pagebreak[2]%
98   \setlength{\tempdima{\$X@vsep}\vskip\@tempdima
99   \SX@CodeArea{\linewidth}{#3}%
100 }
101 \newcommand*\SX@put@b[3]{%
102   \SX@CodeArea{\linewidth}{#3}\endgraf\pagebreak[2]%
103   \setlength{\tempdima{\$X@vsep}\vskip\@tempdima
104   \SX@ResultArea{\linewidth}{#2}%
105 }
106 \newcommand*\SX@put@l[3]{%
107   \setlength{\tempdimc{\linewidth-\#1-\$X@hsep}%
108   \SX@ResultArea{#1}{#2}\hfill\$X@CodeArea{\tempdimc}{#3}%
109 }
110 \newcommand*\SX@put@r[3]{%
111   \setlength{\tempdimc{\linewidth-\#1-\$X@hsep}%
112   \SX@CodeArea{\tempdimc}{#3}\hfill\$X@ResultArea{#1}{#2}%
113 }
114 \newcommand*\SX@put@o[3]{%
115   \nameuse{\$X@put@}{\if\$X@wasodd r\else l\fi}{#1}{#2}{#3}%
116 }
117 \newcommand*\SX@put@i[3]{%
118   \nameuse{\$X@put@}{\if\$X@wasodd 1\else r\fi}{#1}{#2}{#3}%
119 }
120 \newcommand{\SX@ResultArea[2]{%
121   \SX@justification\setlength{\tempdima{#1}%
122   \%minipage{\tempdima\#2}\endminipage
123   \parbox{\tempdima}{#2}%
124 }
125 \newcommand{\SX@CodeArea[2]{%
126   \setlength{\tempdima{#1}%
127   \sbox{\tempboxa{\parbox{\tempdima}{#2}}}}%
128   \tempdima=\dp{\tempboxa}\usebox{\tempboxa
129   \rlap{\raisebox{-\tempdima}[0pt][0pt]{\$X@attachfile}}%
130 }
131 \newcommand*\SX@KillAboveCaptionskip{%
132   \ifx\lst@caption\empty\else
133     \lst@ifsubstring t\lst@captionpos
134       {\vskip-\abovecaptionskip}{}%
135   \fi
136 }
137 \newcommand*\SX@KillBelowCaptionskip{%
138   \ifx\lst@caption\empty\else
139     \lst@ifsubstring b\lst@captionpos
140       {\vskip-\belowcaptionskip}{}%
141   \fi
142 }

```

```

LTXexample
143 \lstnewenvironment{LTXexample}[1] []
144 {%
145   \@temptokena{\#1}%
146   \begingroup
For "codefile=..." /"graphic=..." if \theltxexample or \thelstlisting is part of
the filename.
147   \advance\c@ltxexample@ne \advance\c@lstlisting@ne
148   \expandafter\lstset\expandafter{\SX@explpreset,\#1}%
149   \edef\x{\endgroup
150     \def\noexpand\SX@codefile{\SX@codefile}%
151     \def\noexpand\SX@graphicname{\SX@graphicname}%
152     \def\noexpand\SX@graphicparam{\SX@graphicparam}}%
153   \x
154   \xdef\SX@@explpreset{\the\@temptokena,codefile=\SX@codefile,
155     graphic={[\SX@graphicparam]\{\SX@graphicname\}}}%
156   \setbox\@tempboxa=\hbox\bgroup% Warum noetig?
157   \lst@BeginWriteFile{\SX@codefile}%
158 }
159 {%
160   \lst@EndWriteFile\egroup
161   \SX@put@code@result
162 }

\SX@put@code@result
163 \newcommand*\SX@put@code@result{%
164   \begingroup
165   \expandafter\lstset\expandafter{\SX@explpreset}%
166   \let\lst@float=\relax\let\SX@float=\relax
Without the following call \lst@beginfloat is undefined.
167   \expandafter\lstset\expandafter{\SX@@explpreset}%
168   \ifx\lst@float\relax\else
\lst@float must be \relax because the whole "example" should float but not
the listings part in addition.
169   \let\SX@float=\lst@float\let\lst@float=\relax
170   \g@addto@macro\SX@explpreset{,float=false}%
171   \edef\@tempa{\noexpand\lst@beginfloat[\lstlisting][\SX@float]}%
172   \expandafter\@tempa
173   \fi
174   \ifx\lst@caption\empty
175     \lstset{nolol=true}%
176   \fi
177   \if@SX@wide\def\SX@overhang{\marginparwidth+\marginparsep}\fi
178   \trivlist\item\relax
179     \stepcounter{ltxexample}\label{\SX@IDENT}%

Make \SX@width a real dimension if the unit is missing.
180     \SX@defaultWD\SX@width{\SX@width}%
Set the default width if necessary.
181     \ifdim\SX@width<\z@
182       \tempswatru

```

```

183      \def\@tempa{t}%
184      \ifx\@tempa\SX@pos\@tempswafalse\fi
185      \def\@tempa{b}%
186      \ifx\@tempa\SX@pos\@tempswafalse\fi
187      \setlength\@tempdima{\linewidth+\SX@overhang}%
188      \if@tempswa\@tempdima=.5\@tempdima\fi%
189      \edef\SX@width{\the\@tempdima}%
190  \fi

```

Correct \SX@width if a frame is requested.

```

191      \ifx\SX@rframe\@empty
192          \long\def\SX@frame##1##1%
193      \else
194          \let\SX@frame\fbox
195          \setlength\@tempdima{\SX@width-2\fboxsep-2\fboxrule}%
196          \edef\SX@width{\the\@tempdima}%
197      \fi
198      \isSX@odd{\def\@tempa{l}}{\def\@tempa{r}}%
199      \makebox[\linewidth]{\@tempa}%
200          \parbox{\linewidth+\SX@overhang}{%
201
202      \SX@codefile (\jobname.tmp) is not nessessary for the filelist.
203      \let\@addtofilelist\@gobble
204      \let\lst@ifdisplaystyle=\iftrue
205      \SX@KillAboveCaptionskip\lst@MakeCaption{t}%
206      \lst@belowskip=z@

```

Use the “natural” width of the result code if “varwidth” is true. .

```

207      \setbox\SX@ResBox\hbox{%
208          \SX@frame{%
209              \@nameuse{\if@SX@varwidth varwidth\else minipage\fi}%
210                  \SX@width\relax
211                  \begin{group}
212                      \SX@resultInput
213                  \end{group}
214                  \@nameuse{end\if@SX@varwidth varwidth\else minipage\fi}}}}%
215      \edef\SX@width{\the\wd\SX@ResBox}%
216      \ifundefined{SX@put@\SX@pos}%
217          {\@latex@error{Parameter ‘\SX@pos’ undefined}\@ehd}%
218          {\@nameuse{SX@put@\SX@pos}%
219              {\SX@width}{\box\SX@ResBox}{\SX@codeInput}}%
220          \let\lst@MakeCaption\SX@MakeCaption
221          \lst@MakeCaption{b}\SX@KillBelowCaptionskip
222      }%
223  }%
224  \endtrivlist
225  \ifx\SX@float\relax\else\expandafter\lst@endfloat\fi
226  \gdef\SX@explpreset{}%
227  \endgroup
228 }

229 \newcommand\SX@SkipToFirst{%

```

```

230  \ifeof@\inputcheck\else
231   \ifnum \lst@lineno=\lst@firstline\else
232     \readline@\inputcheck to\SX@tempa
233     \typeout{IGNORE (\the\lst@lineno)}%
234     \global\advance\lst@lineno@ne
235     \SX@SkipToFirst
236   \fi
237 \fi
238 }
239 \newcommand\SX@ProcessResult{%
240   \ifeof@\inputcheck
241     \let\SX@tempb\relax
242   \else
243     \let\SX@tempb\SX@ProcessResult
244     \ifnum \lst@lineno>\lst@lastline\relax
245       \ifx\lst@linerange\empty
246         \let\SX@tempb\relax
247       \else
248         \lst@GetLineInterval
249         \SX@SkipToFirst
250       \fi
251     \else
252       \readline@\inputcheck to\SX@tempa
253       \typeout{READ (\the\lst@lineno)}%
254       \expandafter\g@addto@macro
255         \expandafter\SX@lines\expandafter{\SX@tempa^J}%
256       \global\advance\lst@lineno@ne
257     \fi
258   \fi
259 \SX@tempb
260 }

\SX@input
261 \newcommand\SX@input[1]{%
262   \begingroup
263   \IfFileExists{#1}{}{%
264   \%
265     \filename@parse{#1}%
266     \ifx\filename@ext\relax \def\filename@ext{tex}\fi
267     \@latexerr{File
268       '\filename@area\filename@base.\filename@ext' not found.^J^J}\@ehd%
269     }%
270   \openin\@inputcheck#1
271   \lsthk@PreSet\let\lst@linerange\empty\global\lst@lineno@ne
272   \expandafter\lstset\expandafter{\SX@explpreset}%
273   \ifx\lst@linerange\empty
274     \edef\lst@linerange{\lst@firstline}-{\lst@lastline},}%
275   \fi
276   \lst@GetLineInterval
277   \SX@Info
278   \newlinechar='^J\relax
279   \SX@SkipToFirst\let\SX@lines\empty
280   \SX@ProcessResult
281   \closein\inputcheck

```

```

282     \scantokens\expandafter{\SX@lines}%
283 \endgroup
284 }

285 \newcommand*\SX@Info{%
286   \typeout{-----}%
287   \typeout{pos=\SX@pos}%
288   \typeout{width=\SX@width}%
289   \typeout{hsep=\SX@hsep}%
290   \typeout{vsep=\SX@vsep}%
291   \typeout{overhang=\SX@overhang}%
292   \typeout{rframe=\SX@rframe}%
293   \typeout{codefile=\SX@codefile}%
294   \@ifundefined{lst@firstline}{}{%
295     \typeout{\string\lst@firstline=\lst@firstline}}%
296   \@ifundefined{lst@lastline}{}{%
297     \typeout{\string\lst@lastline=\lst@lastline}}%
298   \@ifundefined{lst@linerange}{}{%
299     \typeout{\string\lst@linerange=\lst@linerange}}%
300   \typeout{\string\if@SX@wide=\if@SX@wide TRUE\else FALSE\fi}%
301   \typeout{\string\if@SX@rangeaccept=\if@SX@rangeaccept TRUE\else FALSE\fi}%
302   \typeout{\string\if@SX@varwidth=\if@SX@varwidth TRUE\else FALSE\fi}%
303   \typeout{graphicfile=\SX@graphicname, graphicparameter=[\SX@graphicparam]}%
304   \typeout{-----}%
305 }
306 \providecommand*\MakePercentIgnore{\catcode`\%9\relax}
307 \providecommand*\MakePercentComment{\catcode`\%14\relax}

\SX@resultInput
308 \newcommand*\SX@resultInput{%
309   \ifx\SX@graphicname\empty
310     \begingroup
311       \MakePercentComment\makeatother\catcode`^^M=5\relax
312       \SX@@preset\SX@preset
313       \if@SX@rangeaccept
314         \let\SX@tempa=\SX@input
315       \else
316         \let\SX@tempa=\input
317       \fi
318       \SX@tempa{\SX@codefile}\par%
319     \endgroup
320   \else
321     \expandafter\includegraphics\expandafter[\SX@graphicparam]%
322     {\SX@graphicname}%
323   \fi
324 }

\SX@codeInput
325 \newcommand*\SX@codeInput{%
Without a caption entry the command \lstinputlisting adds the filename to
the “list of listings” (lol). This should be avoided.
326 \begingroup
The default parameters for all examples.
327 \expandafter\lstset\expandafter{\SX@explpreset}%

```

If "numbers=none" then margin dimensions should be zero.

```

328   \expandafter\lstset\expandafter{\SX@@explpreset}%
329   \ifx\lst@PlaceNumber\empty
330     \g@addto@macro\SX@@explpreset{,xleftmargin=0pt,xrightmargin=0pt}%
331   \fi
332   \SX@Info
333   \expandafter\lstinputlisting\expandafter%
334     [\SX@@explpreset,nolol=true,caption={}] {\SX@codefile}%
335   \endgroup
336 }%
337 \newcommand*\LTXinputExample[2] []{%
338   \g@addto@macro\SX@@explpreset{\#1,codefile=\#2}%
339   \SX@put@code@result}%
340 \lstset{explpreset={numbers=left,numberstyle=\tiny, numbersep=.3em,
341   Negative width means defaults.
342   xleftmargin=1em,columns=flexible,language=[LaTeX]TEX, pos=l, width=-99pt,
343   overhang=0pt,hsep=\columnsep,vsep=\bigskipamount,rframe=single}%
344 \AtBeginDocument{%
345   \def\theHlistnumber{\theHlistlisting.\arabic{lstnumber}. \lst@neglisting}%
346 }%
347 Changing the defaults possible in showexpl.cfg.
348 \InputIfFileExists{showexpl.cfg}{}{}%

```

Change History

v0.1a		New macro \LTXinputExample (RN).	10
General: "hpos" and "vpos" added, "pos" removed (RN).	3	LTXexample: Renamed from "example" to "LTXexample" (RN). . .	6
Initial version	1		
v0.1b		v0.1i	
\SX@put@t/b/l/r/o/i: Positioning the captions more independend of the result and code area (RN).	5	General: Better caption positioning and correct distance between the parts (RN).	6
v0.1c		v0.1j	
\SX@put@t/b/l/r/o/i: Commands \SX@KillAboveCaptionskip and \SX@KillBelowCaptionskip added (RN).	5	General: "rangeaccept" added (RN).	3
v0.1f		\SX@input: For ranges of lines (RN).	8
General: "lstpreset" added. (RN). .	3	v0.1k	
v0.1h		General: Some bug corrections (RN).	3
General: "codefile" added. (RN). .	3	\SX@put@t/b/l/r/o/i: Change [a]bove to [t]op (RN).	5
"lstpreset" renamed to "explpre- set" (RN).	3	v0.1l	
		General: "graphic" added (RN). .	3

v0.1m		v0.3e	
General: Problem related to \label/\ref solved (RN).	6	\SX@@preset: More redefinitions added (RN).	4
v0.2a		v0.3g	
General: “varwidth” and “justification” added (RN).	3	General: \SX@ProcessResult is now working correctly using \readline and \scantokens. Thanks to Ulrich Diez for help (RN).	7
“varwidth” package used (RN). . .	6	Missing \newcommand for \SX@explpreset added (RN). . .	4
v0.2b		v0.3h	
General: Check if \SX@put@? is defined (RN).	6	General: New Option ‘attachfiles’ (RN).	3
v0.3a		v0.3j	
General: “attachfile” added (RN).	3	\SX@put@code@result: Setting \lst@MakeCaption to was a bad idea for hyperlinks. Group added to varwidth environment. (Suggestions by Ulrike Fischer.).	7
\SX@attachfile: Attach file functionality (with pdftEX) added (RN).	4	v0.3k	
v0.3b		General: Definition for “hyperref” (suggested by Heiko Oberdiek)	10
\SX@resultInput: Input of result code now inside a group; \makeatother added (RN).	9	\SX@put@code@result: Setting \lst@MakeCaption to \gobble again (prevent multiply defined labels; label key)	7
v0.3c			
\SX@resultInput: Wrong catcode for newline char corrected (RN).	9		
v0.3d			
\SX@resultInput: Missing \par added (RN).	9		

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Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

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\@SX@widefalse	33	\abovedisplayskip	76
\@addtofilelist	201	\arabic	344
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\@ehd	217, 268		
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