The newfile package*

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Abstract

The newfile package provides convenient user level commands for reading and writing new files during a LaTeX run.

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1 Introduction

TeX has a maximum of 16 input and 16 output *streams* for reading and writing files. The newfile package provides means of associating several different files with a particular stream.

The newfile package requires the verbatim package [SRR99], which is one of the required packages in a LaTeX distribution.

This manual is typeset according to the conventions of the LATEX DOC-STRIP utility which enables the automatic extraction of the LATEX macro source files [GMS94].

Section 2 describes the usage of the package. Commented source code for the package is in Section 4.

^{*}This file (newfile.dtx) has version number v1.0b, last revised 2004/05/10.

2 The newfile package

\newoutputstream \newinputstream

The command $\newoutputstream{\langle stream \rangle}$ creates a new stream called $\langle stream \rangle$ for writing out text and commands. The $\langle stream \rangle$ should be just alphabetic characters with no spaces; for example myout. The command $\newinputstream{\langle stream \rangle}$ creates a new stream for reading from a file. The $\langle stream \rangle$ names must be unique—you cannot use the same name for both an input and an output stream.

If you try and create too many streams, TeX will tell you via an error message. These two commands also attempt to create two other new commands, called respectively \atstreamopen<stream> and \atstreamclose<stream>. If these commands already exist then they are left untouched, otherwise they are created (like using \providecommand{\atstreamopen<stream}{}). For example if if you have used mystr as the name of a stream (either input or output), then the macros \atstreamopenmystr and \atstreamclosemystr are defined; by default they do nothing, but you can \renewcommand them to do something.

\openoutputfile

The macro $\operatorname{defilename} \{ \langle filename \rangle \} \{ \langle stream \rangle \}$ opens the file called $\langle filename \rangle$ and the output stream $\langle stream \rangle$. It then attaches the file to the stream for writing and calls the macro $\operatorname{atstreamopen} \langle stream \rangle$. Any pre-existing contents of $\langle filname \rangle$ are deleted.

\closeoutputstream

The macro \closeoutputstream{ $\langle stream \rangle$ } calls the macro \atstreamclose<stream>, closes the output stream $\langle stream \rangle$ and closes whatever file is currently attached to $\langle stream \rangle$. It then detaches the file from the stream.

writeverbatim

The writeverbatim environment takes one argument, the name of an output stream, which must be open. The contents of the environment are written out verbatim to the file currently attached to the stream.

\addtostream

The command $\addtostream\{\langle stream\rangle\}\{\langle text\rangle\}\$ writes $\langle text\rangle$ to the file currently attached to the output stream $\langle stream\rangle$, which must be open. Any commands within $\langle text\rangle$ will be processed before being written. To prevent this, put \protect before any command that you do not want expanding.

\openinputfile

The macro \openinputfile{ $\langle filename \rangle$ }{ $\langle stream \rangle$ } opens the file called $\langle filename \rangle$ and the input stream $\langle stream \rangle$. It then attaches the file to the stream for reading and calls the macro \atstreamopen<stream>. It is an error if $\langle filename \rangle$ can not be found.

\closeinputstream

The macro $\closeinputstream{\langle stream\rangle}$ calls the macro \atstreamclose{stream} , closes the input stream $\langle stream\rangle$ and closes whatever file is currently attached to $\langle stream\rangle$. It then detaches the file from the stream.

\readstream

The macro $\mbox{readstream} \{ \langle stream \rangle \}$ reads the contents of the file that is currently associated with the input stream $\langle stream \rangle$. This provides the same functionality as $\mbox{input} \{ \langle filename \rangle \}$ does.

\readaline

The macro $\readaline{\langle stream \rangle}$ reads what TeX considers to be one line from the file that is currently associated with the input stream $\langle stream \rangle$. Multiple lines can be read by calling \readaline multiple times. A warning is issued if there are no more lines to be read (i.e., the end of the file has been reached).

\readverbatim

The macro $\restain{\langle stream \rangle}$ reads the contents of the file that is currently associated with the input stream $\langle stream \rangle$ as \restain as \restain text. This provides

the same functionality as the verbatim package's \verbatiminput{\(\filename \) \} command does.

\streamvfont

Text read in verbatim is typeset using the font specified by $\mathsf{streamvfont}\{\langle font \rangle\}$. The default is \streamvfont{\normalfont\ttfamily}. To typeset in a smaller font, try for example, \streamvfont{\small\ttfamily}.

\numbervstream \marginnumbervstream \streamvnumfont

The declaration \numbervstream causes \readverbatim to number each line it reads. The declaration \marginnumbervstream is similar to \numbervstream except it puts the numbers in the margin. The streamvline counter is used for the line numbering. Both the numbering declarations (re)set it to zero. The numbers are typeset in the font specified by $\operatorname{streamvnumfont}(\langle font \rangle)$. The default is \streamvnumfont{\footnotesize}.

\plainvstream comment

The declaration \plainvstream stops any numbering. The default is \plainvstream.

The comment environment, which is part of the verbatim package, throws away everything inside the environment.

The verbatim package [SRR99] provides some other facilities, apart from the comment environment, and its documentation explains them.

3 Examples

3.1Output stream

This example is inspired by the endfloat package [MG95] which provides a more sophisticated approach than shown below. The example demonstrates the use of an output stream.

Suppose that in an article class document you want all the figures to be collected at the end, but to specify them at the appropriate places in the body of the text.

```
1 (*ex)
2 \documentclass{article}
3 \usepackage{newfile}
Create a new output stream called figs and open it to write to file figures.tex.
5 \newoutputstream{figs}
6 \openoutputfile{figures.out}{figs}
7 ...
Write out verbatim the first figure environment to the figs stream.
8 \begin{writeverbatim}{figs}
9 \begin{figure}
10 ...
11 \end{figure}
12 \end{writeverbatim}
After the last figure is written to figs, close the figs output stream, which also
```

closes the figures.out file.

14 \begin{writeverbatim}{figs}

```
15 \begin{figure}
16 ...
17 \end{figure}
18 \end{writeverbatim}
19 \closeoutputstream{figs}
20 ...
At the end \input figures.out to typeset the figures.
21 \input{figures.out}
22 \end{document}
```

3.2 An output and input stream

This example is the kind of thing that the answers package [Pif96] does rather better. The example illustrates the use of an output and an input stream.

Suppose you are writing a document that includes questions and answers and you want all the answers at the end. It is most convenient if you can write the answer to each question as it is posed, and then only print them at the end.

```
1 \documentclass{article}
2 \usepackage{newfile}
3
```

Create new output and input streams called ans and ansin. Just to demonstrate the use of the \atstreamopen... command, redefine \atstreamopenansin so that it will start a section called 'Answers to all the questions'. Then open the ans stream to write to a file called answers.all.

```
4 \newoutputstream{ans}
5 \newinputstream{ansin}
6 \renewcommand{\atstreamopenansin}{\section{Answers to all the questions}}
7 \openoutputfile{answers.all}{ans}
8 ...
For each question, write out the answer verbatim to the ans stream.
9 This is a question.
10 \begin{writeverbatim}{ans}
11 This is the answer to a question.
12 \end{writeverbatim}
13 ...
```

At the end, close the ans stream and open the ansin stream to read from the file answers.all. Opening the stream will also start the new 'Answers to all the questions' section (from \atstreamopenansin). Then read from the ansin stream.

```
14 \closeoutputstream{ans}
15 \openinputfile{answers.all}{ansin}
16 \readstream{ansin}
Finally, close the ansin stream, and we are done.
17 \closeinputstream{ansin}
18 \end{document}
```

If desired, instead of inserting the answers at the end of the question document, answers.all could have been \input into a seperate answer document.

Along the same lines as above, perhaps the original document is a book class, with questions (and answers) at the end of each chapter. A seperate answer file could be produced for each chapter, like:

```
1 ...
2 \newoutputstream{ansout}
3 \newinputstream{ansin}
4 ...
5 \chapter{First chapter} % chapter 1
6 \openoutputfile{\jobname\thechapter.ans}{ansout}
```

The \jobname is the name of the main LaTeX document file, without the .tex extension, so if the name of the LaTeX source file is mybook.tex the above line creates a file called mybook1.ans.

```
8 \begin{writeverbatim}{ansout}
9 An answer
10 \end{writeverbatim}
11 ...
12 \closeoutputstream{ansout}
13 \chapter{Another chapter} % chapter N
14 \openoutputfile{\jobname\thechapter.ans}{ansout}
16 \closeoutputstream{ansout}
17
18 \chapter{Answers}
19
20 \section{Chapter 1}
21 \openinputstream{\jobname1.ans}{ansin}
22 \readstream{ansin}
23 \closestream{ansin}
24 ...
25 \section{Chapter N}
26 \openinputstream{\jobnameN.ans}{ansin}
27 \readstream{ansin}
28 \closestream{ansin}
29 . . .
```

The above example shows how you can associate different files with a single stream.

3.3 Multiple streams

This is a more complex example, again inspired by the endfloat package. In a book class document you want all the figures and tables to be collected at the end, but to specify them at the appropriate places in the body of the text.

```
1 \documentclass{book}
2 \usepackage{newfile}
```

3 . . .

Create and open two new output streams, one for figures (figs) and the other (tabs) for tables. For demonstration purposes, also create a new input stream called figtab.

```
4 \newoutputstream{figs}
5 \openoutputfile{figures.out}{figs}
6 \newoutputstream{tabs}
7 \openoutputfile{tables.out}{tabs}
8 \newinputstream{figtab}
```

There is a slight difficulty with this example, as in the book class, figures and table numbers start anew with each chapter and the chapter number is preprended to the sequence number. We can make a start on solving this by creating a new pseudo chapter number and changing the default definitions of the figure and table numbers (which are \renewcommand{\thefigure}{\thechapter.\arabic{figure}} and similarly for tables).

```
10 \newcounter{pseudochapter}
11 \renewcommand{\thepseudochapter}{\arabic{pseudochapter}}
12 \renewcommand{\thefigure}{\thepseudochapter.\arabic{figure}}
13 \renewcommand{\thetable}{\thepseudochapter.\arabic{table}}
14 ...
Do the usual things at the start of the document.
15 \begin{document}
16 \maketitle
17 \tableofcontents
18 \listoffigures
```

At the start of each chapter we need to set the pseudochapter counter to the chapter number, and write this to the output streams so that there is a record of which chapters the figures and tables came from Normally, each chapter resets the figure and table numbers, but as these will now be at the end, we have to fake the start of chapters in the output files. We can do all of this by the \addtostream macro.

```
The next bit of code will result in \setcounter{pseudochapter}{N} where N is the number of this chapter, appearing in the output files.
21 \addtostream{figs}{\protect\setcounter{pseudochapter}{\thechapter}}
22 \addtostream{tabs}{\protect\setcounter{pseudochapter}{\thechapter}}
The next bit of code results in the following two lines in the output files: \refstepcounter{chapter}
\addtocounter{chapter}{-1}
```

The first of these has the effect of resetting the figure and table counters by increasing the chapter counter by one. The second line resets the chapter counter back to its original value.

```
23 \addtostream{figs}{\protect\refstepcounter{chapter}}
24 \addtostream{figs}{\protect\addtocounter{chapter}{-1}}
25 \addtostream{tabs}{\protect\refstepcounter{chapter}}
26 \addtostream{tabs}{\protect\addtocounter{chapter}{-1}}
Write out verbatim each figure to the figs stream.
27 \begin{writeverbatim}{figs}
28 \begin{figure}
29 ...
30 \end{figure}
31 \end{writeverbatim}
and write each table verbatim to the tabs stream.
33 \begin{writeverbatim}{tabs}
34 \begin{table}
35 ...
36 \end{table}
37 \end{writeverbatim}
When we have done all the chapters, figures and tables, close the two output
streams.
39 \closeoutputstream{figs}
40 \closeoutputstream{tabs}
Then if we want the figures to be typeset before the tables, open the figtab
stream to read from figures.out, read the stream and close it.
41 \openinputfile{figures.out}{figtab}
42 \readstream{figtab}
43 \closestream{figtab}
We can use the same figtab stream for reading the tables.
44 \openinputfile{tables.out}{figtab}
45 \readstream{figtab}
46 \closestream{figtab}
47 \end{document}
48 (/ex)
```

Note that the endfloat package [MG95] will produce the same effect as the previous example, but much simply.

4 The package code

This package can only be used with LaTeX2e, and requires the verbatim package [SRR99], which is one of the required packages for a LaTeX distribution.

```
1 \*outin\>
2 \NeedsTeXFormat{LaTeX2e}[1996/06/01]
3 \ProvidesPackage{newfile}[2009/09/03 v1.0c Output and input files]
4 \RequirePackage{verbatim}
```

To try and avoid name clashes with other packages, each internal macro in this package includes the character string 'stre@m'.

\newoutputstream

\newoutputstream{ $\langle stream \rangle$ } creates a new output stream called $\langle stream \rangle$. Different files may be associated with the $\langle stream \rangle$. Note that TeX permits no more than 16 output streams.

```
5 \newcommand{\newoutputstream}[1]{%
    \@ifundefined{#1outstre@m}%
      {\expandafter\newwrite\csname #1outstre@m\endcsname
8
       \csname newif\expandafter\endcsname
         \csname ifstre@m#1open\endcsname
10
       \global\csname stre@m#1openfalse\endcsname
11
       \expandafter\ifx\csname atstreamopen#1\endcsname\relax
12
         \global\@namedef{atstreamopen#1}{}%
13
       \expandafter\ifx\csname atstreamclose#1\endcsname\relax
14
         \global\@namedef{atstreamclose#1}{}%
15
       \fi
16
17
      }%
      {\PackageError{newfile}{Output stream #1 is already defined}{\Oehc}}}
18
```

\newinputstream

\newinputstream{ $\langle stream \rangle$ } creates a new input stream called $\langle stream \rangle$. Different files may be associated with the $\langle stream \rangle$. Note that TeX permits no more than 16 input streams.

```
20 \newcommand{\newinputstream}[1]{%
    \@ifundefined{#1instre@m}%
22
      {\expandafter\newread\csname #1instre@m\endcsname
       \csname newif\expandafter\endcsname
23
24
         \csname ifstre@m#1open\endcsname
       \global\csname stre@m#1openfalse\endcsname
25
       \expandafter\ifx\csname atstreamopen#1\endcsname\relax
26
27
         \global\@namedef{atstreamopen#1}{}%
28
       \expandafter\ifx\csname atstreamclose#1\endcsname\relax
         \global\@namedef{atstreamclose#1}{}%
30
       \fi
31
32
      }%
33
      {\PackageError{newfile}{Input stream #1 is already defined}{\Oehc}}}
34
```

Some checking macros will be useful as some of the checks occur in multiple places.

\@ifstre@mopen

 $\label{eq:code} $$ \operatorname{\mathbb{C}}(stream) = (\langle stream \rangle) {\ \ \ \ } (FALSE\ code) $$ is currently open.$

```
35 \newcommand{\@ifstre@mopen}[3]{%
```

36 \csname ifstre@m#1open\endcsname#2\else#3\fi}

```
\instre@mandopen\{\langle stream \rangle\} \{\langle TRUE\ code \rangle\}\ checks if \langle stream \rangle is an input
     \instre@mandopen
                                           stream and is open. If so, it executes \langle TRUE \ code \rangle.
                                           37 \newcommand{\instre@mandopen}[2]{%
                                                    \@ifundefined{#1instre@m}{%
                                                        \PackageError{newfile}{#1\space is not an input stream}{\Qehc}}%
                                                    {\@ifstre@mopen{#1}{#2}{%
                                                        \PackageError{newfile}{Input stream #1\space is not open}{\@ehc}}}
                                          \instre@mandclosed
                                           stream and is closed (not open). If so, it executes \langle TRUE \ code \rangle.
                                           43 \newcommand{\instre@mandclosed}[2]{%
                                                    \@ifundefined{#1instre@m}{%
                                                        \PackageError{newfile}{#1\space is not an input stream}{\Qehc}}%
                                           45
                                           46
                                                    {\@ifstre@mopen{#1}{%
                                           47
                                                        \PackageError{newfile}{Input stream #1\space is open}{\@ehc}}{#2}}}
                                          \odotstre@mandopen{\langle stream\rangle}{\langle TRUE\ code\rangle}\ checks\ if\ \langle stream\rangle\ is\ an\ output
   \outstre@mandopen
                                           stream and is open. If so, it executes \langle TRUE \ code \rangle.
                                           49 \newcommand{\outstre@mandopen} [2] {%
                                                    \@ifundefined{#1outstre@m}{%
                                                        \PackageError{newfile}{#1\space is not an output stream}{\Qehc}}%
                                                    {\@ifstre@mopen{#1}{#2}{%
                                           52
                                                        \PackageError{newfile}{Output stream #1\space is not open}{\@ehc}}}
                                           53
                                           \colon 
\outstre@mandclosed
                                           stream and is closed (not open). If so, it executes \langle TRUE \ code \rangle.
                                           55 \newcommand{\outstre@mandclosed}[2]{%
                                                    \@ifundefined{#1outstre@m}{%
                                                         \PackageError{newfile}{#1\space is not an output stream}{\Qehc}}%
                                           57
                                                    {\@ifstre@mopen{#1}{%
                                                        \PackageError{newfile}{Output stream #1\space is open}{\Qehc}}{#2}}}
                                           59
        \openoutputfile
                                           \operatorname{openoutputfile} \{\langle filename \rangle\} \{\langle stream \rangle\}  opens the file called \langle filename \rangle and at-
                                           taches it to the stream \langle stream \rangle for writing. However, if the \nofiles command
                                           has been given the file is not attached to the stream. No more than one file can
                                           be attached to a stream at any given time.
                                           61 \newcommand{\openoutputfile}[2]{%
                                                    \outstre@mandclosed{#2}{%
                                           62
                                                        \global\@namedef{#1@filename}{#1}%
                                           63
                                                        \if@filesw
                                           64
                                                            \immediate\openout\@nameuse{#2outstre@m}=\@nameuse{#1@filename}%
                                           65
                                           66
                                                        \global\csname stre@m#2opentrue\endcsname%
                                           67
```

\@nameuse{atstreamopen#2}%

```
69
                                                           }%
                                                  70 }
                                                 \color= \col
\closeoutputstream
                                                  72 \newcommand{\closeoutputstream}[1]{%
                                                             \outstre@mandopen{#1}{%
                                                  73
                                                                  \@nameuse{atstreamclose#1}%
                                                  74
                                                                  \immediate\closeout\@nameuse{#1outstre@m}%
                                                  75
                                                                  \global\csname stre@m#1openfalse\endcsname}%
                                                  76
                                                  77 }
                                                  78
                                                  \operatorname{openinputfile}(filename) {\operatorname{stream}} opens the file called \operatorname{filename} and at-
         \openinputfile
                                                   taches it to the stream \langle stream \rangle for reading. The file is added to the list of files.
                                                  No more than one file can be attached to a stream at any given time.
                                                  79 \newcommand{\openinputfile}[2]{%
                                                             \IfFileExists{#1}{%
                                                                                                                                                             file exists
                                                  80
                                                                  \instre@mandclosed{#2}{%
                                                  81
                                                                        \@addtofilelist{#1}%
                                                  82
                                                                        \global\@namedef{#1@filename}{#1}%
                                                  83
                                                                        \immediate\openin\@nameuse{#2instre@m}=\@nameuse{#1@filename}%
                                                  84
                                                  85
                                                                        \global\csname stre@m#2opentrue\endcsname%
                                                                        \@nameuse{atstreamopen#2}}}%
                                                  86
                                                  87
                                                                                                                                                             file not found
                                                  88
                                                                   \PackageError{newfile}{Can't find file #1}{\@ehc}%
                                                  89
                                                            }%
                                                  90 }
  \closeinputstream
                                                 \cline{closeinputstream} \{\langle stream \rangle\}\ closes the stream \langle stream \rangle.
                                                  92 \newcommand{\closeinputstream}[1]{%
                                                             \instre@mandopen{#1}{%
                                                  94
                                                                     \@nameuse{atstreamclose#1}%
                                                  95
                                                                     \immediate\closein\@nameuse{#1instre@m}%
                                                  96
                                                                     \global\csname stre@m#1openfalse\endcsname}%
                                                  97 }
            writeverbatim \begin{writeverbatim} \{\langle stream \rangle\} writes the contents of the environment as ver-
                                                  batim text to the given \langle stream \rangle.
                                                  99 \def\writeverbatim#1{%
                                                100
                                                             \@bsphack
                                                             \let\do\@makeother\dospecials
                                                101
                                                102
                                                             \catcode'\^^M\active
                                                103
                                                             \verbatim@startline
                                                104
                                                             \verbatim@addtoline
                                                105
                                                             \verbatim@finish
```

 $\verb|\def| verbatim@processline{%|}$

106

```
\immediate\write\@nameuse{#1outstre@m}{\the\verbatim@line}}%
                        \verbatim@start}
                   109 \def\endwriteverbatim{\@esphack}
                   110
                    \addtostream{\langle stream \rangle}{\langle text \rangle} writes \langle text \rangle to the given \langle stream \rangle.
       \addtostream
                   111 \newcommand{\addtostream}[2]{%
                   112
                        \@bsphack
                        \outstre@mandopen{#1}{%
                   113
                          {\let\protect\string
                   114
                           \immediate\write\@nameuse{#1outstre@m}{#2}%
                   115
                   116
                        \@esphack
                   117
                   118 }
                   119
                   \checkstre@mnoteof{\langle stream \rangle} sets \ifstre@mnoteof to TRUE if \langle stream \rangle is
     \ifstre@mnoteof
  \checkstre@moteof not at the end of the file (i.e., it is the opposite of \ifeof).
                   120 \newif\ifstre@mnoteof
                   121 \newcommand{\checkstre@meof}[1]{%
                        122
                   123
                   \readstream
                   124 \def\readstream#1{
                   125
                        \instre@mandopen{#1}{%
                          \loop \checkstre@meof{#1} \ifstre@mnoteof
                   126
                            \read\@nameuse{#1instre@m} to\temptokstre@m
                           \temptokstre@m
                   128
                   129
                          \repeat
                   130
                          }%
                   131 }
                   132
                    \readaline
                    \langle stream \rangle as \input text.
                   133 \def\readaline#1{
                        \instre@mandopen{#1}{%
                          \ifeof\@nameuse{#1instre@m}
                   135
                   136
                            \PackageWarning{newfile}{No more to read from stream #1}
                   137
                            \read\@nameuse{#1instre@m} to\temptokstre@m
                   138
                            \temptokstre@m
                   139
                   140
                          \fi
                   141
                          }%
                   142 }
                   143
                    \readverbatim
\stre@mverbatim@input
                    text.
\verbatim@readstre@m
```

The read verbatim code is a slight variation on code from the verbatim package. Most of the setup is done by the macros $\mathsf{stre@mverbatim@input}(\langle setup \rangle)$ and $\mathsf{verbatim@readstre@m}(\langle stream \rangle)$. Finally, $\mathsf{verbatim@read@file}$ is a verbatim package macro.

```
144 \def\readverbatim{\begingroup
                       \@ifstar{\stre@mverbatim@input\relax}%
                                {\tt \{\stre@mverbatim@input{\frenchspacing\\@vobeyspaces}\}}\}
                  146
                 147
                  148 \def\stre@mverbatim@input#1#2{%
                       \@ifstre@mopen{#2}%
                  149
                          {\@verbatim #1\relax
                 150
                           \def\verbatim@in@stream{\@nameuse{#2instre@m}}
                  151
                  152
                           \verbatim@readstre@m{#2}\endtrivlist\endgroup\@doendpe}%
                  153
                          {\PackageError{newfile}{Stream #2 is not open}{\Qehc}\endgroup}%
                  154 }
                 155
                  156 \def\verbatim@readstre@m#1{%
                       \verbatim@startline
                 157
                       \expandafter\endlinechar\expandafter\m@ne
                 158
                       \expandafter\verbatim@read@file
                  159
                       \expandafter\endlinechar\the\endlinechar\relax
                  160
                       \verbatim@finish
                  161
                 162 }
                  163
  \plainvstream A macro that sets \verbatim@processline to its default definition.
                  164 \newcommand{\plainvstream}{%
                       \def\verbatim@processline{\the\verbatim@line\par}%
                 166 }
                 167
                  We need a counter for numbering lines read in verbatim.
\streamvnumfont
  \stre@mvnfont
                      \streamvnumfont{\langle font \rangle} defines \stre@mvnfont to be \langle font \rangle.
                  168 \newcounter{streamvline}
                  169 \verb|\newcommand{\streamvnumfont}[1]{\def\stre@mvnfont{\#1}}|
                  170 \streamvnumfont{\footnotesize}
                  \streamvfont{\langle font \rangle} defines \verbatim@font to use \langle font \rangle.
 \label{lem:command} $$\operatorname{Inewcommand}(\operatorname{Inewcommand}) = 13.4\%
                       \def\verbatim@font{#1%
                 173
                          \hyphenchar\font\m@ne
                  174
                 175
                          \let\do\do@noligs
                  176
                          \verbatim@nolig@list}}
                 177 \verbatimfont{\operatorname{normalfont}}
```

\numbervstream \numbervstream puts numbers at the start of each line read verbatim.

```
179 \newcommand{\numbervstream}{%
180 \setcounter{streamvline}{0}%
181 \def\verbatim@processline{%
182 \addtocounter{streamvline}{1}%
183 \leavevmode
184 {\stre@mvnfont \thestreamvline}\space
185 \the\verbatim@line\par}%
186}
```

\marginnumbervstream

\marginnumbervstream puts numbers in the margin at the start of each line read verbatim.

```
188 \newcommand{\marginnumbervstream}{%
189  \setcounter{streamvline}{0}%
190  \def\verbatim@processline{%
191  \addtocounter{streamvline}{1}%
192  \leavevmode
193  \llap{{\stre@mvnfont \thestreamvline} \hskip\@totalleftmargin}
194  \the\verbatim@line\par}%
195 }
196
```

The end of the newfile package.

197 $\langle / \text{outin} \rangle$

References

- [GMS94] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. Addison-Wesley Publishing Company, 1994.
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