The pagenote package*

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Abstract

The pagenote package provides notes similar to footnotes except that they are typeset on a different page. These are often called end notes.

Unless the memoir class is being used, the package requires the ifmtarg package.

Contents

1 Introduction **1**

2 The pagenote package **2**
2.1 Options 2
2.2 Commands 2

3 The package code **4**
3.1 Preliminaries 4
3.2 Options 5
3.3 Main code 5

Index **10**

1 Introduction

End notes are often used instead of footnotes so as not to interrupt the flow of the main text. The pagenote package provides for such notes. Although end notes are normally put at the end of the document, they may instead be put at the end of each chapter (or section if the document class does not support chapters).

The simple use is like this:

*This file (`pagenote.dtx`) has version number v1.1b, last revised 2026/10/12.

```
\documentclass{...}
\usepackage{pagenote}
\makepagenote
...
\begin{document}
...\pagenote{An end note} ...
...\pagenote{Another note} ...
\chapter{Notes}
\printnotes
\end{document}
```

Section 2 describes the usage of the pagenote package and commented source code is in Section 3.

This manual is typeset according to the conventions of the LaTeX docstrip utility which enables the automatic extraction of the LaTeX macro source files [GMS94].

2 The pagenote package

The general principal is that notes are written out to a file which is then input at the place where the notes are to be printed. The note file has an `ent` extension, like the table of contents file has a `toc` extension.

2.1 Options

The package has the following options.

continuous By default, note numbers are reset at each main division in the document. When the continuous option is used, the numbering is continuous throughout the document.

page By default page numbers are not available for reference within the notes. When the page option is used, the page number where a note was inserted is available. If this option is used, there must be a page break between the last note and the printed list of notes.

2.2 Commands

Generally speaking, the following descriptions assume that a class that provides `\chapter`s has been used. If you use a class that only provides `\section`s, the details are in the source code in Section 3 (the memoir class provides `\chapter`s that look like `\section`s from the article class).

`\makepagenote` If you want to have page/end notes, the `\makepagenote` command must be put in the preamble. Among other things, this sets up the note `ent` file.

`\printnotes` `\printnotes*` The `\printnotes` command will cause the `ent` file to be closed for any new notes, and then `\input` in order to print the collected notes. After `\printnotes` no more notes will be collected, so use it after all are done.

Similarly, the starred version of the command causes the `ent` file to be closed and the `\input`, but afterwards a new set of notes may be saved in the `ent` file. For example, you could put `\printnotes*` at the end of each chapter.

Because of how TeX writes information to files, when the `page` option is used there must be no notes on the page where `\printnotes` or `\printnotes*` closes the `ent` file. If necessary, a `\clearpage` or similar must be used before the `\print...`.

`\pagenote` There are two common methods of identifying an end note:

- Like a footnote, put a number in the text at the location of the note and use the same number to identify the note when it finally gets printed.
- Put no mark in the text, but when it is finally printed use a few words from the text to identify the origin of the note. The page number is often used as well with this method.

`\pagenote[`⟨*id*⟩`]{`⟨*text*⟩`}` is used where you want a note to be inserted, although it will not be printed there. The ⟨*text*⟩ argument is the contents of the note. The optional ⟨*id*⟩ argument can be used if you want to use something other than a number to identify the source of the note when it finally gets printed.

`\notenumintext` A counter, `pagenote`, may be used to indicate the location of a note in the text (like the `footnote` counter). The macro `\notenumintext{`⟨*num*⟩`}` is called by `\pagenote` to print the `pagenote` number. By default it is printed as a superscript, but this can be changed, or even eliminated.

In documents with `\chapter`s, the `pagenote` counter is reset for each chapter, otherwise it is reset for each `\section`.

`\noteentry` The `\pagenote[`⟨*id*⟩`]{`⟨*text*⟩`}` macro writes
`\noteentry{`⟨*notenum*⟩`}{`⟨*id*⟩`}{`⟨*text*⟩`}{`⟨*pagenum*⟩`}`
to the `ent` file, where ⟨*notenum*⟩ is the note number (from the `pagenote` counter), ⟨*id*⟩ and ⟨*text*⟩ are as supplied to `\pagenote`, and if the `page` option is used, ⟨*pagenum*⟩ is the page number, otherwise it is empty. The `\noteentry` macro controls the typesetting of the note.

`\prenoteinnotes` The default definition of `\noteentry` is
`\noteidinnotes`
`\pageinnotes`
`\noteinnotes`
`\postnoteinnotes`

```
\newcommand{\notentry}[4]{%
  \prenoteinnotes
  \noteidinnotes{#1}{#2}%
  \pageinnotes{#4}%
  \noteinnotes{#3}%
  \postnoteinnotes}
```

The macros `\prenoteinnotes` and `\postnoteinnotes` are used to start and end the typesetting of the note — effectively typesetting each note as a paragraph; their definitions can be changed if need be.

The macro `\noteidinnotes{`⟨*notenum*⟩`}{`⟨*id*⟩`}` is designed to typeset the note number and/or the note id (from the optional ⟨*id*⟩ argument to `\pagenote`).

The macro `\pageinnotes{`⟨*pagenum*⟩`}` is used for typesetting (or ignoring) the page number where the note was specified, and `\noteinnotes{`⟨*text*⟩`}` sets the actual note ⟨*text*⟩.

Any or all of these may be changed to suit your needs.

`\notedivision` When `\printnotes` (or `\printnotes*`) is called the first thing it does is call the
`\notesname` macro `\notedivision`. By default, for chaptered documents this is defined as:
`\newcommand*{\notedivision}{\chapter{\notesname}}`
with:
`\newcommand*{\notesname}{Notes}`

In other words, it will print out a heading for the notes that will be read from the `ent` file. `\print...` then closes the `ent` file for writing and after this `\input`s it to get and process the notes.

`\addtonotes` The macro `\addtonotes{`⟨*text*⟩`}` inserts ⟨*text*⟩ into the `ent` file. For example, before
`\pagenotesubhead` the first note in a chapter, `\addtonotes` is used to insert `\pagenotesubhead{`⟨*num*⟩`}{`⟨*title*⟩`}` into the file where ⟨*num*⟩ is the new chapter number, and ⟨*title*⟩ is either empty or, if the memoir class is used, is the chapter title as it appears in the table of contents. This macro is used to typeset a heading for each set of notes. By default it will resolve to something like:
`\subsection{Chapter 3 ...}`

Note: As the argument to `\pagenote` and `\addtonotes` is moving you may have to `\protect` any fragile commands. If you get strange error messages, try using `\protect` and see if they go away.

`\chaptername` The command `\chaptername` is supplied by the LaTeX classes that provide `\chapter`
`\sectionname` divisions and is defined to produce 'Chapter'. The macros `\sectionname` and `\pagename`
`\pagename` are provided by this package, producing respectively 'Section' and 'page'.

The package is set up under the assumption that notes will only be printed at the end of the document. If you intend to put them at the end of each chapter, then you will probably want to change the definitions of the `\notedivision` and `\pagenotesubhead` macros. For example:

```
\renewcommand*{\notedivision}{\section*{\notesname}}
\renewcommand*{\pagenotesubhead}[2]{}
```

and remember to use `\printnotes*` at each place you want the current set of notes to be printed.

3 The package code

3.1 Preliminaries

Announce the name and version of the package, which requires LaTeX 2ε.

```
⟨*usc⟩
\NeedsTeXFormat{LaTeX2e}
\ProvidesPackage{pagenote}[2026/10/12 v1.1b page/end notes]
```

The ifmtarg package is required (which is included within the memoir class).

```
\@ifclassloaded{memoir}{}{\RequirePackage{ifmtarg}}

```

The following `\if...` command is for distinguishing between chaptered and simpler documents. Page/end notes are more appropriate when there are chapters.

`\ifpnhaschapter`

```
\newif\ifpnhaschapter
\@ifundefined{chapter}{\pnhaschapterfalse}{\pnhaschaptertrue}

```

(*End of definition for* `\ifpnhaschapter`.)

\f@rtoc In the memoir class this holds the chapter title as it should appear in the ToC. We need to make sure that it is defined.

```
\providecommand{\f@rtoc}{}
```

(*End of definition for* `\f@rtoc`.)

3.2 Options

\ifpnpageopt \ifpncontopt We need two flags for the options.

```
\newif\ifpnpageopt
  \pnpageoptfalse
\newif\ifpncontopt
  \pncontoptfalse
```

(*End of definition for* `\ifpnpageopt` *and* `\ifpncontopt`.)

Process the options.

```
\DeclareOption{page}{\pnpageopttrue}
\DeclareOption{continuous}{\pncontopttrue}
\ProcessOptions
```

3.3 Main code

\c@pagenote \thepagenote We need a counter for the notes. Just how it is defined depends on the continuous option or the class.

```
\ifpncontopt
  \newcounter{pagenote}
\else
  \ifpnhaschapter
    \newcounter{pagenote}[chapter]
  \else
    \newcounter{pagenote}[section]
  \fi
\fi
\renewcommand{\thepagenote}{\arabic{pagenote}}
\setcounter{pagenote}{0}
```

(*End of definition for* `\c@pagenote` *and* `\thepagenote`.)

\c@pnotesavechap We also need a counter for document divisions to check if we are in a new one. Initialise it to an 'impossible' value.

```
\newcounter{pnotesavechap}
  \setcounter{pnotesavechap}{-1000}
```

(*End of definition for* `\c@pnotesavechap`.)

\ifmakingpagenotes Need to check if notes are required.

```
\newif\ifmakingpagenotes
  \makingpagenotesfalse
```

(*End of definition for* `\ifmakingpagenotes`.)

`\makepagenote` This sets up the note file. At the end it emasculates itself so it can only be used once.

```
\newcommand*{\makepagenote}{%
  \newwrite\@notefile
  \immediate\openout\@notefile=\jobname.ent
  \makingpagenotestrue
```

Make sure that this has a useful definition.

`\pagenote`

```
  \def\pagenote{\@bsphack\begingroup
    \@sanitize
    \@wrpnote}%
  \typeout{Writing note file \jobname.ent}%
  \let\makepagenote\@empty}

```

(*End of definition for* `\makepagenote` *and* `\pagenote`. *These functions are documented on page 2.*)

`\immediate@protected@write` We might have to do some immediate writes. This is an immediate version of the kernel `\protected@write`.

```
\newcommand{\immediate@protected@write}[3]{%
  \begingroup
  #2%
  \let\protect\@unexpandable@protect
  \edef\reserved@a{\immediate\write#1{#3}}%
  \reserved@a
  \endgroup
  \if@nobreak\ifvmode\nobreak\fi\fi}

```

(*End of definition for* `\immediate@protected@write`.)

`\@pnwrite` If the page option is used we cannot use an immediate write because the page number is only known in the output routine.

```
\ifpnpageopt
  \let\@pnwrite\protected@write
\else
  \let\@pnwrite\immediate@protected@write
\fi

```

(*End of definition for* `\@pnwrite`.)

`\@wrpnote` This writes the note information to the note file. It first increments the note counter and calls `\notenumintext` to handle its appearance in the body text.

```
\newcommand{\@wrpnote}[2][]{%
  \refstepcounter{pagenote}%
  \notenumintext{\thepagenote}%
```

Check if this is the first note in a division, and if so indicate this in the file.

```
  \ifpnhaschapter
    \ifnum\value{pnotesavechap}=\value{chapter}\else
      \setcounter{pnotesavechap}{\value{chapter}}%
      \addtonotes{\pagenotesubhead{\thechapter}{\f@rtoc}}%
```

```
    \fi
  \else
    \ifnum\value{pnotesavechap}=\value{section}\else
      \setcounter{pnotesavechap}{\value{section}}%
      \addtonotes{\pagenotesubhead{\thesection}{}}%
    \fi
  \fi
```

Finally, write the entry.

```
  \@pnwrite\@notefile{}
    {\string\noteentry{\thepagenote}{#1}{#2}{\thepage}}%
  \endgroup
  \@esphack}

```

(*End of definition for* `\@wrpnote`.)

`\pagenote` The user command to generate a note.

```
\def\pagenote{\@bsphack\begingroup \@sanitize\@pagenote}

```

(*End of definition for* `\pagenote`. *This function is documented on page 3.*)

`\@pagenote`

```
\newcommand{\@pagenote}[2][]{\endgroup\@esphack}

```

(*End of definition for* `\@pagenote`.)

`\addtonotes` `\addtonotes{`⟨*text*⟩`}` puts ⟨*text*⟩ into the notes file.

```
\newcommand{\addtonotes}[1]{%
  \ifmakingpagenotes
 \IfFileExists{\jobname.ent}{\@pnwrite\@notefile{}{#1}}{\pnofilewarn}%
\fi}

```

(*End of definition for* `\addtonotes`. *This function is documented on page 4.*)

`\notenumintext` `\notenumintext{`⟨*notenum*⟩`}` typesets ⟨*notenum*⟩ (in the body text).

`\notenuminnotes`

```
\newcommand{\notenumintext}[1]{%
  \textsuperscript{#1}}
```

`\notenuminnotes{`⟨*notenum*⟩`}` typesets ⟨*notenum*⟩ (as part of the note).

```
\newcommand{\notenuminnotes}[1]{%
  {\normalfont #1.} }
```

(*End of definition for* `\notenumintext` *and* `\notenuminnotes`. *These functions are documented on page 3.*)

`\noteentry` `\noteentry{`⟨*notenum*⟩`}{`⟨*id*⟩`}{`⟨*pagenum*⟩`}{`⟨*text*⟩`}` typesets a note.

```
\newcommand{\noteentry}[4]{%
  \prenoteinnotes
  \noteidinnotes{#1}{#2}\pageinnotes{#4}\noteinnotes{#3}%
  \postnoteinnotes}

```

(*End of definition for* `\noteentry`. *This function is documented on page 3.*)

`\textinnotes` `\textinnotes{`⟨*id text*⟩`}` typesets the note's ⟨*id text*⟩.

```
\newcommand{\textinnotes}[1]{%
  [#1] }
```

(*End of definition for* `\textinnotes`.)

`\noteidinnotes` `\noteidinnotes{`⟨*notenum*⟩`}{`⟨*id*⟩`}` is used to typeset the note identification (in the note listing). It is set so that it typesets the ⟨*id*⟩ if it is not empty, otherwise it sets the ⟨*notenum*⟩.

```
\newcommand{\noteidinnotes}[2]{%
  \@ifmtarg{#2}{%
    \notenuminnotes{#1}}{\textinnotes{#2}}}
```

(*End of definition for* `\noteidinnotes`. *This function is documented on page 3.*)

`\pagename` `\pageinnotes` `\pageinnotes`⟨*pagenum*⟩ is used to typeset the originating page number (in the note), but the page number is not trustworthy unless the `page` option is used.

```
\providecommand*{\pagename}{page}
\newcommand{\pageinnotes}[1]{%
  \ifpnpageopt (\pagename\ #1) \fi}
```

(*End of definition for* `\pagename` *and* `\pageinnotes`. *These functions are documented on page 4.*)

`\noteinnotes` `\noteinnotes{`⟨*text*⟩`}` is used to typeset the note's text (in the note list).

```
\newcommand{\noteinnotes}[1]{#1}

```

(*End of definition for* `\noteinnotes`. *This function is documented on page 3.*)

`\prenoteinnotes` `\postnoteinnotes` These are called immediately before and after the note information is typeset.

```
\newcommand{\prenoteinnotes}{\par\noindent}
\newcommand{\postnoteinnotes}{\par}

```

(*End of definition for* `\prenoteinnotes` *and* `\postnoteinnotes`. *These functions are documented on page 3.*)

`\notesname` `\notedivision` Heading for note list.

```
\providecommand*{\notesname}{Notes}
\ifpnhaschapter
  \newcommand*{\notedivision}{\chapter{\notesname}}
\else
  \newcommand*{\notedivision}{\section{\notesname}}
\fi

```

(*End of definition for* `\notesname` *and* `\notedivision`. *These functions are documented on page 3.*)

`\printnotes` `\printnotes*` User commands to print the note file.

```
\newcommand*{\printnotes}{\@ifstar{\@sprintnotes}{\@printnotes}}
```

(*End of definition for* `\printnotes` *and* `\printnotes*`. *These functions are documented on page 2.*)

\pnofilewarn Warning when the notes file does not exist.

```
\newcommand*{\pnofilewarn}{%
  \PackageWarning{pagenote}{There is no .ent file}}
%
% \begin{macro}[int]{\@sprintnotes}
% Macro implementing |\printnotes*|.
%    \begin{macrocode}
\newcommand*{\@sprintnotes}{%
  \ifmakingpagenotes
  \notedivision
\IfFileExists{\jobname.ent}{%
  \immediate\closeout\@notefile
  \input{\jobname.ent}%
  \immediate\openout\@notefile=\jobname.ent%
  }{%
  \pnofilewarn
}%
\fi}

```

(*End of definition for* `\pnofilewarn`.)

\@printnotes Macro implementing \printnotes.

```
\newcommand*{\@printnotes}{%
  \ifmakingpagenotes
  \notedivision
\IfFileExists{\jobname.ent}{%
  \immediate\closeout\@notefile
  \input{\jobname.ent}%
  }{%
  \pnofilewarn
}
\fi}

```

(*End of definition for* `\@printnotes`.)

\chaptername
\sectionname
\pagenotesubhead The section heading before each set of notes.

```
\providecommand*{\chaptername}{Chapter}
\providecommand*{\sectionname}{Section}
\ifpnhaschapter
  \DeclareRobustCommand{\pagenotesubhead}[2]{%
    \subsection*{\chaptername\ #1 #2}}
\else
  \DeclareRobustCommand{\pagenotesubhead}[2]{%
    \subsection*{\sectionname\ #1}}
\fi

```

(*End of definition for* `\chaptername`, `\sectionname`, *and* `\pagenotesubhead`. *These functions are documented on page* 4.)

The end of this package.

```
⟨/usc⟩
```

References

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

Index

The italic numbers denote the pages where the corresponding entry is described, numbers underlined point to the definition, all others indicate the places where it is used.

A

\addtonotes *4*
\addtonotes 68, 73, 85

C

\chapter 114
\chaptername *4*
\chaptername 149
\closeout 130, 142

D

\DeclareRobustCommand 152, 155

E

\edef 51

I

\IfFileExists 87, 129, 141
\ifmakingpagenotes 34, 86, 127, 139
\ifpncontopt 11, 20
\ifpnhaschapter 6, 23, 65, 113, 151
\ifpnpageopt 11, 56, 106
\immediate 39, 51, 130, 132, 142

M

\makepagenote *2*
\makepagenote 37
\makingpagenotesfalse 35
\makingpagenotestrue 40

N

\newif 6, 11, 13, 34
\newwrite 38
\normalfont 93
\notedivision *3*
\notedivision 112, 128, 140
\noteentry *3*
\noteentry 77, 94
\noteidinnotes *3*
\noteidinnotes 96, 101
\noteinnotes *3*
\noteinnotes 96, 107
\notenuminnotes 90, 103
\notenumintext *3*
\notenumintext 64, 90
\notesname *3*
\notesname 112

O

\openout 39, 132

P

\PackageWarning 121
\pageinnotes *3*
\pageinnotes 96, 104
\pagename *4*
\pagename 104
\pagenote *3*
\pagenote 41, 81
\pagenotesubhead *4*
\pagenotesubhead 68, 73, 149
\pncontoptfalse 14
\pncontopttrue 17
\pnhaschapterfalse 7
\pnhaschaptertrue 7
\pnofilewarn 87, 120, 145
\pnpageoptfalse 12
\pnpageopttrue 16
\postnoteinnotes *3*
\postnoteinnotes 97, 109
\prenoteinnotes *3*
\prenoteinnotes 95, 109
\printnotes *2*
\printnotes 119, 124
\printnotes* *2*
\printnotes* 119
\providecommand 9, 104, 112, 149, 150
\ProvidesPackage 3

R

\RequirePackage 4

S

\section 116

\sectionname *4*
\sectionname 149
\string 77
\subsection 153, 156

T

TEX and LATEX 2ε commands:
\@bsphack 41, 81
\@esphack 79, 83
\@ifclassloaded 4
\@ifmtarg 102
\@ifstar 119
\@ifundefined 7
\@notefile 38, 39, 76, 87, 130, 132, 142
\@pagenote 81, 83
\@pnwrite 56, 76, 87
\@printnotes 119, 138
\@sanitize 42, 81
\@sprintnotes 119, 123, 126
\@unexpandable@protect 50
\@wrpnote 43, 62
\c@pagenote 20
\c@pnotesavechap 31
\f@rtoc 9, 68
\if@nobreak 54
\immediate@protected@write . . 47, 59
\protected@write 57
\reserved@a 51, 52
\textinnotes 99, 103
\textsuperscript 91
\thechapter 68
\thepage 77
\thepagenote 20, 64, 77
\thesection 73

V

\value 66, 67, 71, 72

W

\write 51