The **outlines** package

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**Abstract**

The **outlines** package defines the **outline** environment, that allows outline-style indented lists with freely mixed levels up to four levels deep. It replaces the nested **begin/end** pairs by different item tags \1 to \4 for each nesting level. This is very convenient in cases where nested lists are used a lot, such as for to-do lists or presentation slides.

1 Examples

1.1 Basics

\begin{outline}
\1 This is a first item.
\1[!!!] This is a second, with a custom label.
\2 A level-2 item.
\3 A level 3.
\4 Deepest is level 4.
\2 Back to level 2.
\0 A normal paragraph in the middle.
\1 A couple more
\2 items.
\end{outline}

Produces:

- This is a first item.

!!! This is a second, with a custom label.

- A level-2 item.
  - A level 3.
  - Deepest is level 4.
1.2 Changing List Styles at Each Level

\begin{outline}
\1 This is a first item.
\2 A level-2 item in enumerate style.
\2 And another.
\0 A normal paragraph in the middle.
\renewcommand{\outlineii}{description}
\1 More level-1.
\2[Descr] Level-2 in description style.
\end{outline}

Produces:

- This is a first item.
  1. A level-2 item in enumerate style.
  2. And another.

A normal paragraph in the middle.

- More level-1.

  **Descr** Level-2 in description style.

1.3 Changing List Styles for the Whole Outline

\begin{outline}[enumerate]
\0 All in enumerate style.
\1 A level-1 enum.
\2 A level-2 enum.
\3 A level-3 enum.
\4 A level-4 enum.
\end{outline}

Produces:

All in enumerate style.

1. A level-1 enum.

- Back to level 2.

A normal paragraph in the middle.

- A couple more
  - items.
1.4 With Custom List Styles

For example, the following list environment provides a variant of \texttt{enumerate} that keeps increasing item numbers across different enumerations:

\begin{verbatim}
\newcounter{cenum}
\newcounter{cenumsaved}
\setcounter{cenumsaved}{0}
\newcommand{\labelcenum}{\arabic{cenum}.}
\newenvironment{cenumerate}{}
\begin{list}{\labelcenum}{\usecounter{cenum}}
\setcounter{cenum}{\value{cenumsaved}}
\setcounter{cenumsaved}{\value{cenum}}
\end{list}
\end{verbatim}

This can be used as a list style in an outline as follows:

\begin{verbatim}
\renewcommand{\outlineii}{cenumerate}
\begin{outline}
  \1 This is a first item.
  \2 A level-2 item in cenumerate style.
  \2 And another.
\0 A normal paragraph in the middle.
  \1 More level-1.
  \2 Level-2 with continued numbering.
\end{outline}
\end{verbatim}

Which produces:

- This is a first item.
  1. A level-2 item in cenumerate style.
  2. And another.

A normal paragraph in the middle.

- More level-1.
  3. Level-2 with continued numbering.
2 Usage

In the preamble:

- \usepackage{outlines}

  loads this package (no options supported).

In the document:

- \begin{outline}[style] body \end{outline}

  produces an outline region, with a hierarchy of items up to four levels deep. The outline is formatted according to style, which must be the name of a \LaTeX list environment. The default is \texttt{itemize}. All levels use the same style.

- \renewcommand{\outlinei}{style}
  \renewcommand{\outlinetwo}{style}
  \renewcommand{\outlinethree}{style}
  \renewcommand{\outlinefour}{style}

  change the list style to \texttt{style} for levels 1, 2, 3 and 4.

Inside \texttt{body}:

- \1[lbl], \2[lbl], \3[lbl], \4[lbl]

  introduce outline items at the four nesting levels. They are used the same way as \texttt{item[lbl]} in list environments, where \texttt{lbl} is an optional custom item label.

- \0

  introduces a normal, non-itemized paragraph.

3 Remarks

\LaTeX list environments cannot begin with a nested list. In outlines, that means that a level-$n$ item may only follow an item of level $n - 1$ or higher.

For example, the following produces two “missing \texttt{item}” errors:

\begin{outline}
  \2 Missing level 1,
  \4 missing level 3.
\end{outline}
Do not use outlines inside other outlines or other list environments. Nested lists in outlines should work and be consistent with the current level of the outline (e.g. a nested list following a level-2 outline item will look as a level-3 list). The four-level limit applies overall.

Outside an outline, re-defining outline styles (by changing \outlinei etc.) will apply to all posterior outlines; inside an outline, it will apply only according to usual \LaTeX list scoping rules: for example, re-defining \outlineii at level 1 will apply to posterior level-2 sub-lists within this level-1 sublist only; re-defining \outlineii inside a level-2 sub-list will have no effect. Note that the style parameter of the outline environment applies to non-redefined styles only.

4 Implementation Notes

The package is implemented in \LaTeX (no plain \TeX); it should be easy to understand and customize even to a non-\TeXpert. The main programming trick is a set of commands \ol@toz, ..., \ol@toiiii which are dynamically modified to contain the necessary list openings or closings to reach outline levels 0 to 4 from the current level.

Outlines expand to the corresponding hierarchy of nested lists of the selected style. All custom list formatting and user-provided list styles should be compatible with outline environments, as long as they keep the \item syntax.

History

v 1.1 (Jan 2012) Added re-definition of individual list styles.

(no version) (Mar 2005) Initial release.

5 Credits

This package was developed by Charles Pecheur at Université catholique de Louvain, Belgium. It may be distributed and/or modified under the conditions of the LaTeX Project Public License, either version 1.3 of this license or (at your option) any later version (http://www.latex-project.org/lppl.txt). Charles Pecheur can be contacted at charles.pecheur@uclouvain.be.

This package is independent from similar packages outline.sty and outliner.sty, available on the CTAN archive.