Documentation for MarginOutline.sty ver. 1.4.1

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1 Introduction

- This package provides a new means of easily creating indented outlines
- Outside of this package, common methods of creating outlines in LaTeX employ itemize or enumerate-type environments.
  - In fact, other packages for creating outlines use them too (though perhaps behind the scenes).
- Because of this, there are some inherent limitations to what can/cannot and must/must not be done.
  - Such outlines are limited in the depth of nesting, and there are potentially undesirable interactions with other packages (e.g. numbered-example packages such as `linguex` and `expex`)
  - Also, such outlines require constant beginning or ending of itemize/enumerate/outline environments
    - This makes it clunky to skip around in adding/removing levels of indentation
    - It also makes it clunky to employ in `beamer` presentations
- This package defines outlining commands that are not subject to these restrictions.

2 Package Basics

- There are six options for this package:
  - `constantsize`: forces constant font size
  - `constantexindent`: forces all linguex/expex numbered-examples to be uniformly indented
  - `allbullets`: even outline items at a depth of 1 have bullets (by default, only outline items at a depth of 2 or deeper have bullets)

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- `varvertical`: items have a variable vertical spacing (when two items of the same depth occur in a row, the spacing is made smaller)
- `beamerpause`: when in the `beamer` class is loaded and this option is invoked, pauses are inserted before each item, **except** not before the first item on a slide.
- `beamerpauseatstart`: when in the `beamer` class is loaded and this option is invoked, pauses are inserted before each item, **including** before the first item on a slide.

There are several commands provided as well; the most useful are described below

- Outlining basics (section 3):
  - `\startoutline`
    - Sets some spacing variables appropriately. (This is *always optional*, and you do not need it to start an outline)
  - `\stopoutline[<length>]`
    - Sets some spacing variables appropriately. (This is *always optional*, and you do not need it to end an outline)
    - When a length argument is specified by the optional argument, the indentation for numbered examples *after* the outline is set to that length.
    - When unspecified (no optional argument given), the value is `0pt`.
  - `\Outline[<symbol>]{<num>}`
    - For creating outline bullet items, at depth `num`.
    - When the optional symbol argument is present, the symbol used for that bullet item is the one given as the argument
  - `\OutlinePause[<symbol>]{<num>}`
    - Same as `\Outline`, except a pause is added between items in `beamer` documents.
    - (More on pausing in section 6)
  - `\OutlineMaybePause[<symbol>]{<num>}`
    - Same as `\OutlinePause`, except a pause is added between items if and only if (i) the document is a `beamer` presentation and (ii) `MarginOutline` is loaded with the `beamerpause` option.
    - (More on pausing in section 6)
  - `\0[<symbol>]`, `\1[<symbol>]`, `\2[<symbol>]`, `\3[<symbol>]`, `\4[<symbol>]`, `\5[<symbol>]`, `\6[<symbol>]`, `\7[<symbol>]`, `\8[<symbol>]`, `\9[<symbol>]`
    - `\1` is equivalent to `\OutlineMaybePause{1}`, `\2` is equivalent to `\OutlineMaybePause{2}`, etc.
    - These are shortcut commands, which `MarginOutline` attempts to define

- ◇ However, if any of them is already defined when `MarginOutline` is loaded, `MarginOutline` will not override them.

- Adjusting pausing behavior in `beamer` documents (section 6)
  - `\turnOnPauses` and `\turnOffPauses`
    - These commands have local scope and affect whether commands like `\OutlineMaybePause` or `\1` introduce pauses before them
    - (*Also provided as equivalents:* `\turnPausesOn` *and* `\turnPausesOff`)

- Bullet symbols (section 4):
  - `\thefirstbullet`, `\thesecondbullet`, `\thethirdbullet`, `\thefourthbullet`, `\thefifthbullet`, `\thesixthbullet`, `\theseventhbullet`, `\theeighthbullet`
    - These commands define the symbols used for bulleting
  - `\drarrow`, `\pointright`, `\cnbullet{<num>}`, `\cnbullet*{<num>}`
    - These commands provide shortcuts to handy symbols

- Controlling Spacing (section 5):
  - `\bulletspacingfactor{<number>}`
    - Changes the vertical spacing between bullet points. Give it a number value, e.g. `1.5`, to multiply the spacing between lines by 1.5.
  - `\bulletindentfactor{<number>}`
    - Changes the horizontal spacing of bullet point indentation. Give it a number value, e.g. `1.5`, to multiply all the indentations by 1.5.
  - `\exgotodepth{<number>}`
    - When used before an example (either linguex `\ex.` or expex `\ex \xe`), the example's is indented to the same level of indentation as as the number provided.
  - `\exaddedindent{<length>}`
    - Changes how much numbered examples are indented from the (relevant) left margin. Give it a length value, e.g. `12pt`, to make an indent of 12pt.

- Finally, the package defines two new environments
  - `\begin{CenterBox}(*)[<color>][<box width>][<outline thickness>]{<header>}`
    `<body>`
    `\end{CenterBox}`
    - Creates a centered, framed box that is centered in the middle of your outline. (See section 8.)

3 Outline Basics

- Unlike environments, where `\begin{}`/`\end{}` commands are required, there is no requirement here.
  - This structuring was motivated for making the creation of `beamer` slides easier
    - In other outline packages, `\begin`/`\end` commands are required in every frame that has an outline; this can be cumbersome.
  - The `\startoutline`/`\stopoutline` commands may be used to begin/end the outline
    - Their use is recommended, to ensure proper spacing adjustments take place.
    - But using them is not required (and so forgetting them will not crash LaTeX).
    - And there is no problem of requiring a `\stopoutline` that is local to each `\startoutline` (unlike `\begin`/`\end` commands).
- Creating outline items is simple; `\Outline{1}` (shortcut: `\1`) creates an outline item that is aligned with the left margin of the document's text area.
  - `\Outline{2}` (`\2`) creates an outline item that is indented one level to the right, `\Outline{3}` (`\3`) indents two levels to the right, etc. etc.
  - There is no theoretical limit on the depth of nesting
  - But beyond `\Outline{9}`, bullets are undefined
    - Thus `\Outline{10}` produces no bullet
      - Call it with a defined bullet (e.g. `\Outline[--]{10}`) or define the bullet (see section 4)
  - (However, as for the shortcut commands, LaTeX does not allow for commands with a numeral in any position but the first. E.g., it would treat `\10` as `\1` followed by `0`)
- Skipping around in indentation can be done mindlessly
  - You can have a `\1` immediately following a `\8`, or a `\4` immediately following a `\2`, and the indentation and bulleting is done as you would expect
- New `section`s, `subsection`s and `subsubsection`s can be introduced in the middle of an outline
  - The section header will be sized according to the document's default (or according to whatever other package is loaded and relevant)
  - The header will also be aligned with the page's left margin. (This is achieved through the `titlesec` package.)

4 Bulleting Symbols

- The symbols used for bulleting can be redefined easily.
  - Currently, the bullet commands are defined as the following:
    ```
    \newcommand{\thefirstbullet}{\ensuremath{\thisblackdiamond}}
    \newcommand{\thesecondbullet}{\ensuremath{\thissmblacktriangleright}}
    \newcommand{\thethirdbullet}{\ensuremath{\thissqbullet}}
    \newcommand{\thefourthbullet}{\ensuremath{\diamond}}
    \newcommand{\thefifthbullet}{\ensuremath{\thissmalltriangleright}}
    \newcommand{\thesixthbullet}{\ensuremath{\thissmsquare}}
    \newcommand{\theseventhbullet}{\ensuremath{\thisvarstar}}
    \newcommand{\theeighthbullet}{\ensuremath{\circ}}
    \newcommand{\theninthbullet}{\ensuremath{\bullet}}
    ```
  - You can redefine these commands using `\renewcommand`, in the preamble, as normal.
- Defining new bullets for deeper levels uses similar logic
  - You'll need to define a symbol and edit the `\@bulletinserter` command.
  - The logic of this ought to be transparent.
- As with `\item` in itemize environments, you can define a different symbol for the bullet by specifying an optional argument in []s after the outline level command; e.g. `\Outline[**]{3}` or `\3[**]`.
  - For convenience, there are some additional symbols provided by this package for this kind of custom bulleting:
    - ↳ `mathabx`'s `\drsh` (↳) is provided as `\drarrow`
    - ☞ `pifont`'s `\ding{43}` (☞) is provided as `\pointright`
    - ③ `pifont`'s circle numbers 1-10 (①-⑩) are provided as `\cnbullet{<1-10>}`, and its filled circle numbers 1-10 (❶-❿) are provided as `\cnbullet*{<1-10>}`

5 Controlling Spacing

- You can control the spacing between items, using `\bulletspacingfactor`.
  - For example, if you would like items to be twice as far apart, invoke the command `\bulletspacingfactor{2}`.
  - This command will only make all items that follow it twice as far apart.
  - It will also only affect local items; i.e. in a context like:
    ```
    \1 { \2 \bulletspacingfactor{2} \3 \3 } \2
    ```
    `\bulletspacingfactor{2}` will *only* be affect the spacing between the first `\2` and the first `\3`, and between the first `\3` and the second `\3` (because of the `{}`s)

- Similarly, you can control the spacing between the left margin and the bullet, using `\bulletindentfactor`
  - Just the same, invoking the command `\bulletindentfactor{2}` doubles the spacing
  - Like `\bulletspacingfactor`, this only affects items following it locally
- Finally, this package is made to be compatible with either of the following two example-numbering packages: `linguex` and `expex`.
  - By default, numbered examples are indented to be left-aligned with the text of the outline bullet in which it occurs.
    - e.g., an example after `\Outline{2} <text>` will be left-aligned with `<text>`
  - However, for some it may be more aesthetically pleasing if the numbered examples were left-aligned with the page's left margin.
    - To achieve this, load the package with `constantexindent` option.
  - You may want to set the numbered examples to be more/less indented than the default alignment (whether you use `constantexindent` or not)
    - At a *global* level, you can change the indentation with `\exaddedindent{<length>}`.
      - If you loaded the `constantexindent` option, the length you specify will indent examples from the page's left margin.
      - If not, the length you specify will indent examples from the text of the outline bullet containing it.
    - At a *local* level, you can change the indentation with `\exgotodepth{<number>}`.
      - Use this before the example whose indentation you want to change
      - e.g., `\exgotodepth{2}` will make it so that the example is left-aligned with the text of `\Outline{2}` (whether you use `constantexindent` or not)
      - (If `\exaddedindent{<length>}` has been used previously, the `<length>` will still be added)

6 Pausing with `beamer`

- Bullet items introduced with `\OutlinePause` will have a pause inserted before them
  - (*An exception is when* `\turnOffPauses` *is used; see below*)
- `\OutlineMaybePause` and its derivatives (`\0`–`\9`) can ***only*** yield a pause in beamer slides ***if*** the package is loaded with the `beamerpause` or `beamerpauseatstart` option
  - These options provide for document-level control over whether these commands introduce pauses before the bullet item

- When `beamerpauseatstart` is invoked, all bullet points introduced by `\OutlineMaybePause` or `\0`–`\9` will be preceded by a pause
  - (i.e., Slides appear without the first such bullet point visible)
- `beamerpause` is similar, except that a pause is ***not*** introduced by `\OutlineMaybePause` or `\0`–`\9` if it is the first bullet point on a slide
  - (i.e., Slides appear with the first such bullet point visible)

- In addition to these package options, `MarginOutline` also provides commands to manipulate, mid-document, whether pauses are inserted for outline commands: `\turnOnPauses` and `\turnOffPauses`
  - These two commands affect whether pauses are inserted for the following commands: `\OutlinePause`, `\OutlineMaybePause`, `\0`–`\9`
  - `\turnOnPauses` and `\turnOffPauses` have an impact on outline commands that come after it
    - They have no effect on outline commands that precede them
  - Moreover, these commands are locally bounded, meaning they do not extend beyond environments that contain them
    - Consider the following beamer document, which produces 19 frames, as the option `beamerpauseatstart` is invoked and causes a pause before each bullet command:

```
\documentclass{beamer}
\usetheme{Madrid}
\usepackage[beamerpauseatstart,allbullets]{MarginOutline}
\begin{document}
\begin{frame}{Slide 1}
        \1 Bullet 1
                \2 Bullet 2
                \2 Bullet 3
        \1 Bullet 4
                \2 Bullet 5
                        \3 Bullet 6
                        \3 Bullet 7
                \2 Bullet 8
\end{frame}
\begin{frame}{Slide 2}
        \1 Bullet 9
                \2 Bullet 10
                \2 Bullet 11
\end{frame}
\begin{frame}{Slide 3}
        \1 Bullet 12
                \2 Bullet 13
                        \3 Bullet 14
                        \3 Bullet 15
                \2 Bullet 16
\end{frame}
\end{document}
```

- If `\turnOffPauses` were inserted between lines 11 and 12, Bullets 4-8 would all load at once
  - (The pauses inced by Bullets 5-8 would be suppressed)
  - **Note**: Because `\turnOffPauses` is locally bounded, its effects do *not* extend into Slide 2 (its effects are limited to the `frame` environment that contains it)
- On the other hand, if `\turnOffPauses` were inserted on line 17, Slides 2 and 3 would not contain any pauses
  - This example of `\turnOffPauses` is not bounded by any local environment, and therefore its effects are exerted over the remainder of the document
- `\turnOffPauses` and `\turnOnPauses` interact predictably
  - For example, if `\turnOffPauses` were inserted on line 17 and `\turnOffPauses` were on line 23, only Slide 2 would be without pauses
  - Or, if `\turnOffPauses` were inserted on line 17 and `\turnOffPauses` were between lines 26 and 27, outline commands would not insert pauses for Bullets 8–13, but would for bullets 14–16

7 A Note on Beamer and Section Slides

- If you use change what happens at the beginning of sections in `beamer`, beware of possible interactions `MarginOutline`
  - `MarginOutline` executes the following:

```
\AtBeginSection{\ZeroOutLeft}
\AtBeginSubsection{\ZeroOutLeft}
\AtBeginSubsubsection{\ZeroOutLeft}
```

  - These `\ZeroOutLeft` commands ensure proper formatting
    - If you make adjustments to what happens at the beginning of sections, you are encouraged to also include `\ZeroOutLeft`

8 An Extra Presentation Tool

- With the `CenterBox` environment, you can make boxes that stand out from the rest of your outline
  - This is environment takes two optional arguments, and one mandatory argument
- To begin a `CenterBox` environment, use the command:
  `\begin{CenterBox}[<color>][<box width>][<outline thickness>]{<header>}`
  - The optional `color` argument specifies a background color. The default is white.
    - (In the case of beamer slides, the default is the background color of your slide.)

- The optional `box width` argument it specifies the width of the box. The default value is 75% of the line's width.
  - (This argument has no effect in beamer, as beamer `\CenterBox`s are formatted according to the beamertheme.)
- The optional `outline thickness` argument it specifies the width of the border around the box. The default value is 1pt.
  - (This argument has no effect in beamer, as beamer `\CenterBox`s are formatted according to the beamertheme.)
- The `header` argument puts a header at the top of the `\CenterBox`.

- No matter how deeply embedded you are into your outline:
  - The CenterBox always appears in the center of the page
    - This is exemplified below:

CenterBox Demo

CenterBox works like this

      - This was produced with the code:

```
\begin{CenterBox}{CenterBox Demo}
CenterBox works like this
\end{CenterBox}
```

  - The `CenterBox` below was created using the optional arguments

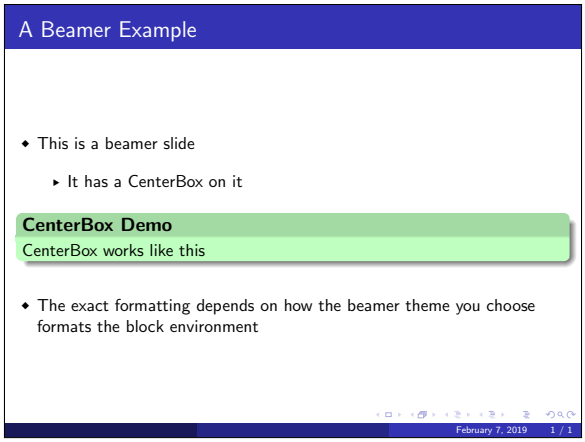
CenterBox Demo

This CenterBox has made use of optional arguments

      - This was produced with the code:

```
\begin{CenterBox}[red!10][.65\linewidth][2pt]{CenterBox Demo}
This CenterBox has made use of optional arguments
\end{CenterBox}
```

  - And here is an example of `\CenterBox` in action on a Beamer slide, produced with the same code for the `CenterBox` environment



- The full .tex for this beamer document above:

```
\documentclass{beamer}
\usetheme{Madrid}
\usepackage[allbullets]{MarginOutline}
\begin{document}
\begin{frame}{A Beamer Example}
        \1 This is a beamer slide
                \2 It has a CenterBox on it

        \begin{CenterBox}[green!25][3pt]{CenterBox Demo}
        CenterBox works like this
        \end{CenterBox}

        \1 The exact formatting depends on how the beamer theme
        ↪  you choose formats the block environment
\end{frame}
\end{document}
```

- In addition, if you add a * after `\begin{CenterBox}`, the header will be suppressed:
  - Here is an example:

    A CenterBox with no header works like this

  - This was produced with the code:
    `\begin{CenterBox}*[yellow][.65\linewidth][.5pt]{CenterBox Demo}`
    `CenterBox works like this`
    `\end{CenterBox}`
    - **NOTE**: Even though the header is suppressed in the output, you *must* include the header argument (if only as curly braces without any content: i.e. {})
      - If you do not, you may get some errors
- Lastly, similar to `CenterBox` environments, there is the nearly identical `BigBox` environment

- It makes use of all the same optional and mandatory arguments
- The only difference is that, by default, the width of the box is almost an entire line's width (90%)