Transmogrify User Manual

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Hello and welcome to the Transmogrify user manual. Transmogrify is a tool to convert markdown sprinkled with some lisp to LaTeX. This user manual has also been generated using Transmogrify, so feel free to refer to its source for reference

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Configuration

Each document must start with a configuration code block:

```
```config
; Set the title of the document
(set-title "Transmogrify User Manual")

; Set the author of the document
(set-author "Abhirag <hey@abhirag.com>")

; Set the date of the document
(set-date "17 February 2022")

; Set the width of Pikchr figures
(set-pwidth 1000)

; Set the height of Pikchr figures
(set-pheight 500)
```
```

Lisp Extensions

We use an embedded lisp called *fe* to extend the markdown syntax when necessary. You write your document in plain markdown and use *fe* code blocks for extra features not supported by markdown such as:

Abstract

```
```fe
(abstract "text")
```
```

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```
```fe
(toc "Configuration" "Lisp Extensions")
```
```

Sidenote

You can use inline *fe* code to create a sidenote [1]:

[1] This is a sidenote

```
create a sidenote ``fe (sidenote "text" offset_in_mm)``
```

Sometimes a sidenote may run over the top of other text or graphics in the margin space. If this happens, you can adjust the vertical position of the sidenote by providing a numerical offset argument.

Marginnote

If you'd like to place ancillary information in the margin without the sidenote mark (the superscript number), you can use a marginnote :

This is a margin note. Notice that there isn't a number preceding the note, and there is no number in the main text where this note was written

```
create a marginnote ``fe (marginnote "text" offset_in_mm)``
```

Text formatting in Lisp

You can format text written in lisp using three functions *italic*, *bold* and *concat*. Here is a formatted marginnote as an example:

This text is italic. **This text is bold**

```
``fe (marginnote
       (concat
         (italic "This text is italic.")
         (bold "This text is bold")) 0)``
```

Pikchr

Embedded *Pikchr* code will be rendered to a diagram:

```
```pikchr
define ndblock {
  box wid boxwid/2 ht boxht/2
  down;  box same with .t at bottom of last box;   box same
}
boxht = .2; boxwid = .3; circlerad = .3; dx = 0.05
down; box; box; box; box ht 3*boxht "." "." "."
L: box; box; box invis wid 2*boxwid "hashtab:" with .e at 1st box .w
right
Start: box wid .5 with .sw at 1st box.ne + (.4,.2) "..."
N1: box wid .2 "n1";  D1: box wid .3 "d1"
N3: box wid .4 "n3";  D3: box wid .3 "d3"
box wid .4 "..."
N2: box wid .5 "n2";  D2: box wid .2 "d2"
arrow right from 2nd box
ndblock
spline -> right .2 from 3rd last box then to N1.sw + (dx,0)
spline -> right .3 from 2nd last box then to D1.sw + (dx,0)
arrow right from last box
ndblock
spline -> right .2 from 3rd last box to N2.sw-(dx,.2) to N2.sw+(dx,0)
spline -> right .3 from 2nd last box to D2.sw-(dx,.2) to D2.sw+(dx,0)
arrow right 2*linewid from L
ndblock
spline -> right .2 from 3rd last box to N3.sw + (dx,0)
```
```

```
spline -> right .3 from 2nd last box to D3.sw + (dx,0)
circlerad = .3
circle invis "ndblock"  at last box.e + (1.2,.2)
arrow dashed from last circle.w to 5/8<last circle.w,2nd last box> chop
box invis wid 2*boxwid "ndtable:" with .e at Start.w
```