

# The mindflow package

JINWEN XU

2021/03/12

## 1 Introduction

The mindflow package provides you a way to write your ideas, annotations or writing plans. For example (with option `linenumber` and `rightmarker`):

```
1 What to write next:
2     • usage;
3     • some internal macros;
4     • an example maybe;
5     • the complete code.
```

You can also add line numbers to the other part of your document in the usual way. Line numbers within the mindflow environments are independent from those of the main text.

## 2 Usage

Simply load the package with `\usepackage{mindflow}`. By default it has no line numbers or markers. You can use the following options:

<code>linenumber</code>	Enable line numbers
<code>leftmarker</code>	Enable left marker, by default it is a “*”
<code>rightmarker</code>	Enable right marker, by default it is a “*”
<code>incolumn or twocolumn</code>	The separation line would fit in the column ( <i>automatically applied in two-column documents</i> )
<code>off</code>	Hide all the mindflow environments

mindflow Then you can use the mindflow environment as

```
\begin{mindflow}
...
\end{mindflow}
```

## 3 Some technical details

`\mindflowTextFont` The font for texts and line numbers within the mindflow environments can be specified by redefining `\mindflowTextFont` and `\mindflowNumFont`. By default they are defined as:

```
\newcommand{\mindflowTextFont}{\normalfont\footnotesize}
\newcommand{\mindflowNumFont}{\normalfont\scriptsize\ttfamily}
```

`\mindflowLeft` The left and right marker can be changed by redefining `\mindflowLeft` and `\mindflowRight`. Both have the default value as “\*”.

`\mindflowRight`

`\mindflowLineHeight` The height of the separation line is a length macro named `\mindflowLineHeight`, with default value 0.4pt. You can change this with `\setlength`.

And finally, the color for texts and line numbers within the mindflow environments are called `mindflowText` and `mindflowNum`, respectively. By default, they have the same color as the context, with opacity 30% and 8%, respectively.

## 4 An example

With option `linenumber`, `leftmarker`, `rightmarker` and the following settings:

```
\colorlet{mindflowText}{blue!50!cyan!80}  
\colorlet{mindflowNum}{blue!50!cyan!80}  
\renewcommand{\mindflowTextFont}{\normalfont\footnotesize\sffamily\itshape}  
\renewcommand{\mindflowNumFont}{\normalfont\footnotesize\sffamily}  
\renewcommand{\mindflowLeft}{\hspace{1em}\(\succ\)}  
\renewcommand{\mindflowRight}{\(\prec\)}  
\setlength{\mindflowLineHeight}{1pt}
```

One gets:

```
6 > Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam lobortis facilisis sem. Nullam nec mi et neque pharetra  
7 > sollicitudin. Praesent imperdiet mi nec ante. Donec ullamcorper, felis non sodales commodo, lectus velit ultrices augue, a  
8 > dignissim nibh lectus placerat pede. Vivamus nunc nunc, molestie ut, ultricies vel, semper in, velit. Ut porttitor. Praesent  
9 > in sapien. Lorem ipsum dolor sit amet, consectetur adipiscing elit. Duis fringilla tristique neque. Sed interdum libero ut  
10 > metus. Pellentesque placerat. Nam rutrum augue a leo. Morbi sed elit sit amet ante lobortis sollicitudin. Praesent blandit  
11 > blandit mauris. Praesent lectus tellus, aliquet aliquam, luctus a, egestas a, turpis. Mauris lacinia lorem sit amet ipsum.  
12 > Nunc quis urna dictum turpis accumsan semper.
```

## 5 Implementation

Below is the complete source code of this package.

```
1 \RequirePackage{kvoptions}  
2 \SetupKeyvalOptions{%  
3     family = @mindflow,  
4     prefix = @mindflow@  
5 }  
6 \DeclareBoolOption[false]{off}           % Turn off mindflow  
7 \DeclareBoolOption[false]{leftmarker}    % Left marker  
8 \DeclareBoolOption[false]{rightmarker}   % Right marker  
9 \DeclareBoolOption[false]{linenumber}    % Line numbers  
10 \DeclareBoolOption[false]{twocolumn}     % Two column  
11 \DeclareBoolOption[false]{incolumn}      % Separation line fits in the column  
12  
13 \ProcessKeyvalOptions*\relax  
14  
15 \if@mindflow@twocolumn  
16     \@mindflow@incolumntrue  
17 \fi  
18  
19 %=====20 %% Initialization21 %=====22 \RequirePackage{lineno}23 \RequirePackage{xcolor}2425 \colorlet{mfSavedColor}{.}26 \colorlet{mindflowText}{mfSavedColor!30}27 \colorlet{mindflowNum}{mfSavedColor!8}2829 \newcommand{\mindflowTextFont}{\normalfont\footnotesize}30 \newcommand{\mindflowNumFont}{\normalfont\scriptsize\ttfamily}31 \newcommand{\mindflowLeft}{*}32 \newcommand{\mindflowRight}{*}33 \newlength{\mindflowLineHeight}34 \setlength{\mindflowLineHeight}{0.4pt}35
```

```

36 %%=====
37 %% The mindflow environment
38 %%=====
39 \newif\ifLNturnsON
40
41 \newcommand*{\mfSepLine}{%
42   \par\skip=0pt
43   \LNturnsONfalse%
44   \ifLineNumbers\LNturnsONtrue\fi\nolinenumbers%
45   \par\noindent\nopagebreak%
46   \if@mindflow@incolumn%
47     \makebox[\linewidth]{\rule{\linewidth}{\mindflowLineHeight}}%
48   \else%
49     \hspace*{-\paperwidth}\makebox[\linewidth]{\rule{4\paperwidth}{\mindflowLineHeight}}%
50   \fi%
51   \nopagebreak\par%
52   \ifLNturnsON\linenumbers\fi%
53 }
54
55 \newcounter{recordLN}
56 \newcounter{mflN}
57 \setcounter{mflN}{1}
58
59 \if@mindflow@off
60   \RequirePackage{verbatim}
61   \let\mindflow=\comment
62   \let\endmindflow=\endcomment
63 \else
64   \newenvironment{mindflow}
65   {%
66     \setcounter{recordLN}{\value{linenumbers}}%
67     \setcounter{linenumbers}{\value{mflN}}%
68     \LNturnsONfalse%
69     \ifLineNumbers\LNturnsONtrue\fi\nolinenumbers%
70     \mindflowTextFont\color{mindflowText}%
71     \mfSepLine%
72     \linenumbers%
73     \renewcommand\makeLineNumber{%
74       \hss\color{mindflowNum}%
75       \if@mindflow@linenumbers%
76         \mindflowNumFont\LineNumber~%
77       \fi%
78       \if@mindflow@leftmarker%
79         \mindflowLeft\hspace{1em}%
80       \fi%
81       \if@mindflow@rightmarker%
82         \rlap{\hskip\textwidth\hspace{1em}\mindflowRight}%
83       \fi%
84     }%
85   }
86   {%
87     \par%
88     \vspace{-.5\baselineskip}\mfSepLine%
89     \ifLNturnsON\linenumbers\fi%
90     \setcounter{mflN}{\value{linenumbers}}%
91     \setcounter{linenumbers}{\value{recordLN}}%
92   }
93 \fi

```