

The thmstyle package

Maximilian Keßler

Released 2022-01-12

Abstract

Just a convenience package that provides easy-to-use interface for creating `md-framed` and `thmtools` styles. Also provides some defaults.

1 User macros

<code>\DeclareFancyMdfStyle</code>	<code>\DeclareFancyMdfStyle[<i><background color></i>]{<i><left margin color></i>}[<i><name></i>]</code>
------------------------------------	--

Makes *<name>* a `mdframed` style with given background and left margin color.

If *<name>* is not given, it is defaulted to “`md<left margin color>margin`” or “`md<left margin color>and<background color>fill`” corresponding to whether the *<background color>* has been given.

<code>\DeclareFancyThmStyle</code>	<code>\DeclareFancyThmStyle[<i><background color></i>]{<i><left margin color></i>}[<i><name></i>]</code>
------------------------------------	--

Same as `\DeclareFancyMdfStyle`, but directly declares a style for `thmtools`. The naming behaves the same except `md` is replaced with `thm`

2 Default styles

The package has the option to provide some default styles. These can be loaded with the `default styles` (the space is optional) option, when loading the package.

2.1 colors

<code>gold</code>	Golden color.
-------------------	---------------

We use the `xcolor` package.

You can load this package with the `default styles` option. This will make the `thmtools` styles available given in [Table 1](#).

Name	Left margin color	Background color
thmredmarginandfill	red	red!8
thmorangemarginandfill	orange	orange!10
thmbluemarginandfill	blue	blue!7
thmgreenmargin	green!70!black	none
thmgoldmargin	gold	none
thmyellowmargin	yellow!80!orange	none
thmgraymargin	gray	none
thmvioletmarginandfill	violet	violet!7
thmvioletmargin	violet	none
thmredmarginandbuliefill	red	blue!7
thmredmargin	red	none
thmorangemarginbluefill	orange	blue!7
thmblackmarginandfill	black	violet!20!gray!20
thmblackmargin	black	none

Table 1: Default styles provided by thmstyle

3 thmstyle implementation

```

1 <*package>
2 <@@=thmstyle>

```

3.1 Dependencies

```

3 \RequirePackage{amsthm}
4 \RequirePackage{thmtools}
5 \RequirePackage{mdframed}
6 \RequirePackage{xcolor}
7 \RequirePackage{l3keys2e}

```

3.2 Initialization

`\g_thmstyle_default_styles_bool` Indicates whether the package will provide default styles.

```

8 \bool_new:N \g_thmstyle_default_styles_bool

```

(End of definition for \g_thmstyle_default_styles_bool.)

gold New color

```

9 \definecolor{gold}{RGB}{218,165,32}

```

(End of definition for gold. This variable is documented on page 1.)

3.3 Package options

```

10 \keys_define:nn { thmstyle }
11 {
12   default styles .bool_set:N = \g_thmstyle_default_styles_bool,
13   default styles .default:n = { true },
14 }
15 \ProcessKeysOptions { thmstyle }

```

3.4 Private Wrappers

```

\__thmstyle_mdframed_define_style:nn      \__thmstyle_mdframed_define_style:nn{<key=value list>}{<style>}
\__thmstyle_mdframed_define_style:nx
16 \cs_new:Npn \__thmstyle_mdframed_define_style:nn #1 #2
17 {
18     \mdfdefinestyle{#2}{#1}
19 }

(End of definition for \__thmstyle_mdframed_define_style:nn.)

\__thmstyle_thmtools_declare_style:nn      \__thmstyle_thmtools_declare_style:nn{<key=value list>}{<style>}
\__thmstyle_thmtools_declare_style:xx
20 \cs_new:Npn \__thmstyle_thmtools_declare_style:nn #1 #2
21 {
22     \declaretheoremstyle[#1]{#2}
23 }
24 \cs_generate_variant:Nn \__thmstyle_thmtools_declare_style:nn { x x }

(End of definition for \__thmstyle_thmtools_declare_style:nn.)

```

3.5 Generation of styles

```

\thmstyle_declare_mdf_style:nnn      \thmstyle_declare_mdf_style:nnn{<style>}{<margin color>}{<background color>}
25 \cs_new:Npn \thmstyle_declare_mdf_style:nnn #1 #2 #3
26 {
27     \__thmstyle_mdframed_define_style:nn
28     {
29         linecolor      = #2,
30         linewidth      = 2pt,
31         leftmargin     = 0pt,
32         rightmargin    = 0pt,
33         rightline      = false,
34         topline        = false,
35         bottomline     = false,
36         backgroundcolor = #3,
37         skipabove      = 0.7\baselineskip,
38         skipbelow      = 0pt,
39         innerrightmargin = 10pt,
40         innerbottommargin = 5pt
41     }
42     {
43         #1
44     }
45 }
46 \cs_generate_variant:Nn \thmstyle_declare_mdf_style:nnn { x n x }

(End of definition for \thmstyle_declare_mdf_style:nnn. This function is documented on page ??.)

```

```

\DeclareFancyMdfStyle      \DeclareFancyMdfStyle[<background color>]{<line color>}{<style>}
47 \NewDocumentCommand { \DeclareFancyMdfStyle } { o m o }
48 {
49     \thmstyle_declare_mdf_style:xnx
50     {
51         \IfValueTF { #3 }

```

```

52     {
53       #3
54     }
55     {
56       md #2 margin
57       \IfValueT { #1 }
58       {
59         and #1 fill
60       }
61     }
62   }
63   {
64     #2
65   }
66   {
67     \IfValueTF { #1 }
68     {
69       #1
70     }
71     {
72       white
73     }
74   }
75 }

```

(End of definition for \DeclareFancyMdfStyle. This function is documented on page 1.)

```

\DeclareFancyThmStyle \DeclareFancyThmStyle[⟨background color⟩][⟨line color⟩][⟨style⟩]
76 \NewDocumentCommand { \DeclareFancyThmStyle } { o m o }
77 {
78   \DeclareFancyMdfStyle [ #1 ] { #2 }
79   \_thmstyle_thmtools_declare_style:xx
80   {
81     mdframed =
82     {
83       style = md #2 margin \IfValueT { #1 } { and #1 fill }
84     },
85     postheadspace = { 0.3em },
86     notefont = \noexpand\mdseries,
87   }
88   {
89     \IfValueTF { #3 }
90     { #3 }
91     {
92       thm #2 margin
93       \IfBooleanT { #1 }
94       {
95         and #1 fill
96       }
97     }
98   }
99 }

```

(End of definition for \DeclareFancyThmStyle. This function is documented on page 1.)

3.6 Default styles

Here, we provide the default styles:

```
100 \bool_if:NT \g__thmstyle_default_styles_bool
101   {
102     \DeclareFancyThmStyle[red!8]{red}[thmredmarginandfill]
103     \DeclareFancyThmStyle[orange!10]{orange}[thmorangemarginandfill]
104     \DeclareFancyThmStyle[blue!7]{blue}[thmbluemarginandfill]
105     \DeclareFancyThmStyle{green!70!black}[thmgreenmargin]
106     \DeclareFancyThmStyle[green!10]{green!70!black}[thmgreenmarginandfill]
107     \DeclareFancyThmStyle{gold}[thmgoldmargin]
108     \DeclareFancyThmStyle{yellow!80!orange}[thmyellowmargin]
109     \DeclareFancyThmStyle{gray}[thmgraymargin]
110     \DeclareFancyThmStyle[violet!7]{violet}[thmvioletmarginandfill]
111     \DeclareFancyThmStyle{violet}[thmvioletmargin]
112     \DeclareFancyThmStyle[blue!7]{red}[thmredmarginbluefill]
113     \DeclareFancyThmStyle{red}[thmredmargin]
114     \DeclareFancyThmStyle[blue!7]{orange}[thmorangemarginbluefill]
115     \DeclareFancyThmStyle[violet!20!gray!20]{black}[thmblackmarginandfill]
116     \DeclareFancyThmStyle{black}[thmblackmargin]
117   }
118 \end{package}
```

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.

B		M	
<code>\baselineskip</code>	37	<code>\mddefinestyle</code>	18
bool commands:		<code>\mdseries</code>	86
<code>\bool_if:NTF</code>	100		
<code>\bool_new:N</code>	8		
C		N	
cs commands:		<code>\NewDocumentCommand</code>	47, 76
<code>\cs_generate_variant:Nn</code>	24, 46	<code>\noexpand</code>	86
<code>\cs_new:Npn</code>	16, 20, 25		
D		P	
<code>\DeclareFancyMdfStyle</code>	1, 3, <u>47</u> , 78	<code>\ProcessKeysOptions</code>	15
<code>\DeclareFancyThmStyle</code>	1, 4, <u>76</u> , 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116		
<code>\declaretheoremstyle</code>	22		
<code>\definecolor</code>	9		
G		R	
gold	1, <u>9</u>	<code>\RequirePackage</code>	3, 4, 5, 6, 7
I		T	
<code>\IfBooleanT</code>	93	thmstyle commands:	
<code>\IfValueT</code>	57, 83	<code>\thmstyle_declare_mdf_style:nnn</code>	3, <u>25</u> , 25, 46, 49
<code>\IfValueTF</code>	51, 67, 89	thmstyle internal commands:	
K		<code>\g__thmstyle_default_styles_bool</code>	8, 12, 100
keys commands:		<code>__thmstyle_mdframed_define_- style:nn</code>	3, <u>16</u> , 16, 27
<code>\keys_define:nn</code>	10	<code>__thmstyle_thmtools_declare_- style:nn</code>	3, <u>20</u> , 20, 24, 79