

stmforest package description

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v20241108

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These are the forest definitions for `stm latex` . It is build upon the [forest](#) package.

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1. Usage - in the preamble

1.1. Load the whole `stmforest` package

1.1.1. Description

This is an interface package which loads `forest` and definitions commonly required throughout document creation.

By default the package loads

- `stmforestbase.sty`
- `stmforestlibraries.sty`
- `stmforeststyles.sty`

See subsection 1.1.2 for options to change the default package behavior.

1.1.2. Options

Option *libraries* This is a boolean option. Expected values are either `true` or `false`. It controls whether to load the standard libraries commonly required.

```
\usepackage[libraries=true|false]{stmforest}
```

`libraries=true` is the default. It is used in case `libraries=false` is not set explicitly.

Option *styles* This is a boolean option. Expected values are either `true` or `false`. It controls whether to load the predefined `forest` styles.

```
\usepackage[styles=true|false]{stmforest}
```

`styles=true` is the default. It is used in case `styles=false` is not set explicitly.

1.2. `stmforestlibraries`

This package contains standard libraries commonly required in the creation of `forest` trees.

1.3. `stmforeststyles`

This package contains styles commonly required in the creation of `forest` trees.

2. Examples

2.1. Directory tree

A simple example of how to create a nice directory tree from the styles defined in `stmforeststyles`. The result is shown in Figure 1.

3. Known issues

...

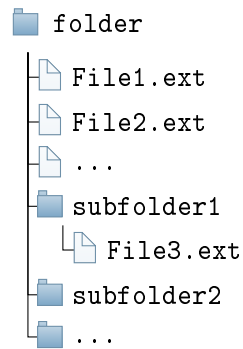


Figure 1: Directory tree example

A. The code

A.1. stmforest.sty

```

1 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2 % Header %
3 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
4 %
5 % This is a interface to all stm forest definitions
6 % Based upon the forest package:
7 %   https://ctan.org/pkg/forest
8 %
9 % Usage
10 % - Preamble:
11 %   - \usepackage{stmforest}
12 %
13 % Revisions: 2024-11-08 Martin Raedel <martin.raedel@dlr.de>
14 %               Initial draft
15 %
16 % Contact:   Martin Raedel, martin.raedel@dlr.de
17 %               DLR Lightweight Systems
18 %
19 %               __/|__
20 %               /_/_/_/
21 %               www.dlr.de/sy/en   | / DLR
22 %
23 % Copyright (C) 2024-... DLR Lightweight Systems
24 %
25 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
26 % Content %

```

```

27 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
28
29 % Declare that this style file requires at least LaTeX version 2e.
30 \NeedsTeXFormat{LaTeX2e}
31
32 % Provide the name of your page, the date it was last updated, and a
    comment about what it's used for
33 \ProvidesPackage{stmforest}[2024/11/08 STMs custom LaTeX forest
    definitions]
34
35 % -----
36 % Options
37 % -----
38
39 % For options
40 \@ifpackageloaded{kvoptions}{\RequirePackage{kvoptions}}%
41
42 % Option group
43 \SetupKeyvalOptions{%
44     family=stmforest,%
45     prefix=stmforest@,%
46     setkeys=\kvsetkeys,%
47 }
48
49 % Libraries
50 \DeclareBoolOption[true]{libraries}
51
52 % Styles
53 \DeclareBoolOption[true]{styles}
54
55 % Process options
56 \ProcessKeyvalOptions{stmforest}
57
58 % -----
59 % Modules
60 % -----
61
62 % Load the base package
63 \@ifpackageloaded{stmforestbase}{\RequirePackage{stmforestbase}}%
64 \RequirePackage{stmforestbase}%
65 }%
66
67 % Libraries
68 \ifstmforest@libraries

```

```

69 \RequirePackage{stmforestlibraries}
70 \fi
71
72 % Styles
73 \ifstmforest@styles
74 \RequirePackage{stmforeststyles}
75 \fi
76
77 %%%%%%%%%%%
78 % That's it %
79 %%%%%%%%%%%
80
81 % Finally, we'll use \endinput to indicate that LaTeX can stop reading
    this file. LaTeX will ignore anything after this line.
82 \endinput

```

A.2. stmforestbase.sty

```

1 %%%%%%%%%%%
2 % Header %
3 %%%%%%%%%%%
4 %
5 % This is a interface to stm base forest package
6 % Based upon the forest package:
7 %   https://ctan.org/pkg/forest
8 %
9 % Usage
10 % - Preamble:
11 %   - \usepackage{stmforestbase}
12 %
13 % Revisions: 2024-11-08 Martin Raedel <martin.raedel@dlr.de>
14 %               Initial draft
15 %
16 % Contact:   Martin Raedel, martin.raedel@dlr.de
17 %           DLR Lightweight Systems
18 %
19 %               __/|__
20 %               /_/_/_/
21 %           www.dlr.de/sy/en | DLR
22 %
23 % Copyright (C) 2024-... DLR Lightweight Systems
24 %
25 %%%%%%%%%%%
26 % Content %

```

```

27 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
28
29 % Declare that this style file requires at least LaTeX version 2e.
30 \NeedsTeXFormat{LaTeX2e}
31
32 % Provide the name of your page, the date it was last updated, and a
    comment about what it's used for
33 \ProvidesPackage{stmforestbase}[2024/11/08 STMs custom LaTeX forest
    definitions]
34
35 % -----
36 % Package
37 % -----
38
39 \@ifpackageloaded{forest}{\RequirePackage{forest}}%
40
41 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
42 % That's it %
43 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
44
45 % Finally, we'll use \endinput to indicate that LaTeX can stop reading
    this file. LaTeX will ignore anything after this line.
46 \endinput

```

A.3. stmforestlibraries.sty

```

1 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
2 % Header %
3 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
4 %
5 % This file includes unit definitions.
6 % Based upon the forest package:
7 %   https://ctan.org/pkg/forest
8 %
9 % Usage
10 % - Preamble:
11 %   - \usepackage{stmforestlibraries}
12 %
13 % Revisions: 2024-11-08 Martin Raedel <martin.raedel@dlr.de>
14 %               Initial draft
15 %
16 % Contact:   Martin Raedel, martin.raedel@dlr.de
17 %           DLR Lightweight Systems
18 %

```

```

19 %          _ _/ | _ _
20 %          / _/ _/ _/
21 %          www.dlr.de/sy/en      | / DLR
22 %
23 % Copyright (C) 2024-... DLR Lightweight Systems
24 %
25 %%%%%%%%%%%
26 % Content %
27 %%%%%%%%%%%
28
29 % Declare that this style file requires at least LaTeX version 2e.
30 \NeedsTeXFormat{LaTeX2e}
31
32 % Provide the name of your page, the date it was last updated, and a
   comment about what it's used for
33 \ProvidesPackage{stmforestlibraries}[2024/11/08 STMs custom LaTeX forest
   library definitions]
34
35 % -----
36 % Package
37 % -----
38
39 \@ifpackageloaded{forest}{\RequirePackage{forest}}%
40
41 % -----
42 % Libraries
43 % -----
44
45 \useforestlibrary{edges}
46
47 %%%%%%%%%%%
48 % That's it %
49 %%%%%%%%%%%
50
51 % Finally, we'll use \endinput to indicate that LaTeX can stop reading
   this file. LaTeX will ignore anything after this line.
52 \endinput

```

A.4. stmforeststyles.sty

```

1 %%%%%%%%%%%
2 % Header %
3 %%%%%%%%%%%
4 %

```

```

5 % This is a interface to all stm forest definitions
6 % Based upon the forest package:
7 %   https://ctan.org/pkg/forest
8 %
9 % Usage
10 % - Preamble:
11 %   - \usepackage{stmforeststyles}
12 %
13 % Revisions: 2024-11-08 Martin Raedel <martin.raedel@dlr.de>
14 %               Initial draft
15 %
16 % Contact:   Martin Raedel, martin.raedel@dlr.de
17 %               DLR Lightweight Systems
18 %
19 %               __/|__
20 %               /_/_/_/
21 %               www.dlr.de/sy/en   | / DLR
22 %
23 % Copyright (C) 2024-... DLR Lightweight Systems
24 %
25 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
26 % Content %
27 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
28 %
29 % Declare that this style file requires at least LaTeX version 2e.
30 \NeedsTeXFormat{LaTeX2e}
31
32 % Provide the name of your page, the date it was last updated, and a
33 %   comment about what it's used for
34 \ProvidesPackage{stmforeststyles}[2024/11/08 STMs custom LaTeX forest
35 %   style definitions]
36
37 % -----
38 % Package
39 % -----
40
41 \@ifpackageloaded{forest}{}{\RequirePackage{forest}}%
42 \@ifpackageloaded{stmcolors}{}{\RequirePackage{stmcolors}}%
43
44 % -----
45 % Styles
46 % -----
47
48 \definecolor{folderbg}{RGB}{124,166,198}

```



```

47 \definecolor{folderborder}{RGB}{110,144,169}
48
49
50 \newlength\ZZZTempSize
51 \setlength\ZZZTempSize{4pt}
52 \tikzset{%
53   folder/.pic={%
54     \filldraw [draw=folderborder, top color=folderbg!50, bottom color=
      folderbg] (-1.05*\ZZZTempSize,0.2\ZZZTempSize+5pt) rectangle ++(.75*\
      ZZZTempSize,-0.2\ZZZTempSize-5pt);
55     \filldraw [draw=folderborder, top color=folderbg!50, bottom color=
      folderbg] (-1.15*\ZZZTempSize,-\ZZZTempSize) rectangle (1.15*\
      ZZZTempSize,\ZZZTempSize);
56   },
57   file/.pic={%
58     \filldraw [draw=folderborder, top color=folderbg!5, bottom color=
      folderbg!10] (-\ZZZTempSize,.4*\ZZZTempSize+5pt) coordinate (a) |- (\
      ZZZTempSize,-1.2*\ZZZTempSize) coordinate (b) -- ++(0,1.6*\ZZZTempSize
      ) coordinate (c) -- ++(-5pt,5pt) coordinate (d) -- cycle (d) |- (c) ;
59   },
60 }
61 \forestset{%
62   declare autowrapped toks={pic me}{},
63   declare boolean register={pic root},
64   pic root=0,
65   pic dir tree/.style={%
66     for tree={%
67       folder,
68       font=\ttfamily,
69       grow'=0,
70     },
71     before typesetting nodes={%
72       for tree={%
73         edge label+/.option={pic me},
74       },
75       if pic root={
76         tikz+={
77           \pic at ([xshift=\ZZZTempSize].west) {folder};
78         },
79         align={l}
80       }{},
81     },
82   },
83   pic me set/.code n args=2{%

```

```

84 \forestset{%
85   #1/.style={%
86     inner xsep=2\ZZZTempSize,
87     pic me={pic {#2}},
88   }
89 }
90 },
91 pic me set={directory}{folder},
92 pic me set={file}{file},
93 }
94
95 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
96 % That's it %
97 %%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%%
98
99 % Finally, we'll use \endinput to indicate that LaTeX can stop reading
   this file. LaTeX will ignore anything after this line.
100 \endinput

```