mantodea

/mɑntɔdɛɑ/

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A template & package for documents targeting the typst devloper community.

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https://github.com/typst-community/mantodea

MANTODEA provides a template and tools for writing documents targeted at Typst developers, such as convenient bindings to Typst documentation pages, example rendering or source forge links. It is primarily used as a package and template for technical documents such as guidelines, documentation or specifcations.

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Part I.
Manifest

MANTODEA aims to be the following:

- simple to use
  - ‣ the default template should provide an good user experience
- unsurprising
  - ‣ parameters should have sensible names and behave as one would expect
- general
  - ‣ provided features are not for specific use cases, but rather baseline utilities for more specific use cases

If you think its behvior is surprising, you believe you found a bug or you think its defaults or parameters are not sufficient for your use case, please open an issue at GitHub:typst-community/mantodea. Contributions are also welcome!

MANTODEA is a fork of MANTYS[1], a package for creating package documentation.

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[1] https://github.com/jneug/typst-mantys

Part II.
Reference

II.1. Stability

This package tries to adhere to semantic versioning[2], please report unintended API breakage at GitHub:typst-community/mantodea.

II.2. Custom types

II.2.1. theme

Most functions take a `theme` argument, this type is a dictionary containign various style information to override, mainly colors and font configuration. The default can be found at `mantodea.theme.default` and serves as the defacto schema.

II.3. Modules

II.3.1. mantodea

The package entry point, containing the top level sub modules and the template main function.

```
#mantodea()
```

```
#mantodea(
  ⟨title⟩: "[Title]",
  ⟨subtitle⟩: none,
  ⟨authors⟩: "John Doe <john@doe.com>",
  ⟨urls⟩: none,
  ⟨date⟩: "datetime(year: 1970, month: 1, day: 1)",
  ⟨version⟩: "version(0, 1, 0)",
  ⟨abstract⟩: "lorem(100)",
  ⟨license⟩: "MIT",
  ⟨theme⟩: "theme.default"
) → function
```

The main template function, this returns a function which is used in a `show`-all rule.

> **Argument**
>
> ⟨title⟩: "[Title]"   `str` `content`
>
> The title for of this document.

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[2]https://semver.org

---- Argument ----
⟨subtitle⟩: none   `str` | `content` | `none`

A subtitle shown below the title.

---- Argument ----
⟨authors⟩: "John Doe <john@doe.com>"   `str` | `content` | `array`

The authors of the document.

---- Argument ----
⟨urls⟩: none   `str` | `array` | `none`

One or more URLs relevant to this document.

---- Argument ----
⟨date⟩: "datetime(year: 1970, month: 1, day: 1)"   `datetime`

The date at which this document was created.

---- Argument ----
⟨version⟩: "version(0, 1, 0)"   `str` | `version`

The version of this document. A string can be passed explicitly to avoid the automatic
v prefix.

---- Argument ----
⟨abstract⟩: "lorem(100)"   `str` | `content` | `none`

An abstract outlining the purpose and contents of this document.

---- Argument ----
⟨license⟩: "MIT"   `str` | `content` | `none`

The license of this document or a related piece of intellectual property.

---- Argument ----
⟨theme⟩: "theme.default"   `theme`

The theme to use for this document.

II.3.2. **author**

Utlities for handling author rendering.

> #author()   #email()   #name()

#**name**(..⟨**first**⟩, ⟨**last**⟩, ⟨**short**⟩: **1**) → `content`
  Display a person with the given options.

> ┌─ Argument ──
> ..⟨**first**⟩   `str`
>
>   The first and middle names.

> ┌─ Argument ──
> ⟨**last**⟩   `str` │ `array`
>
>   The last names.

> ┌─ Argument ──
> ⟨**short**⟩: **1**   `int`
>
>   The shortness level.
>   - `0`: do not shorten any names
>   - `1`: shorten middle names
>   - `2`: shorten middle and first names

#**author**(
  ..⟨**first**⟩,
  ⟨**last**⟩,
  ⟨**short**⟩: **1**,
  ⟨**label**⟩: **none**,
  ⟨**email**⟩: **none**
) → `content`
  Show full author information, see also `name`.

> ┌─ Argument ──
> ..⟨**first**⟩   `str` │ `none`
>
>   The first and middle names.

> ┌─ Argument ──
> ⟨**last**⟩   `str` │ `array`
>
>   The last names.

> ┌─ Argument ──
> ⟨**short**⟩: **1**   `int`
>
>   The shortness level.
>   - `0`: do not shorten any names

- `1`: shorten middle names
- `2`: shorten middle and first names

Argument

⟨`label`⟩: `none`   `label` | `none`

The label to use for email attribution, see `email`.

Argument

⟨`email`⟩: `none`   `str` | `content` | `none`

The email to attribute the user to.

#`email`(⟨`mark`⟩: `auto`, ⟨`label`⟩, ⟨`body`⟩) ⟶ `content`

Display an email attribution, i.e. a mark that can be linked to from `author`.

Argument

⟨`mark`⟩: `auto`   `content` | `auto`

A symbol used for attribution, the linked authors will have this displayed as a super script. Uses `*` numbering if `auto`.

Argument

⟨`label`⟩   `label`

The label to use in `author` for automatic attribution.

Argument

⟨`body`⟩   `str` | `content`

The body to attribute the authors to, this is often a generic email pattern such as `"<name>@university.com"`, but doesn't have to be.

#`marks`

The marks used in `author` for automatic mark numbering.

Can be used to add new or alter existing marks, marks come in the form of arbitrary content which is placed as a superscript.

II.3.3. component

Parts of the template's components, while usable independently, they assume certain styles found in the `style` module.

```
#make-table-of-contents()
```

#**make-table-of-contents**(⟨**title**⟩: **"heading(outlined: false, numbering: none)[Table of Contents]"**, ⟨**target**⟩: **"heading.where(outlined: true)"**, ⟨**columns**⟩: **1**, ⟨**theme**⟩: **"_theme.default"**) ⟶ `content`

   Generate the default table of contents.

Argument ───

⟨title⟩: `"heading(outlined: false, numbering: none)[Table of Contents]"`   `str` `content` `none`

   The title to use, if this is a `heading` itself it will not be passed to `outline`.

Argument ───

⟨target⟩: `"heading.where(outlined: true)"`   `selector` `function`

   The target to show, this is primarily used to restrict the search space of the default selector. If something other than a heading selector is passed, then this may not work.

Argument ───

⟨columns⟩: `1`   `int`

   The amount of columns to use for the outline.

Argument ───

⟨theme⟩: `"_theme.default"`   `theme`

   The theme to use for this table of contents.

II.3.4. exmaple

Utlities for rendering examples with and without evaluation of Typst code.

```
  #code-result()              #frame()
```

#**frame**(⟨**theme**⟩: **"_theme.default"**, ..⟨**args**⟩) ⟶ `content`
Show a source code frame.

> — Argument —
> ⟨theme⟩: "_theme.default"   `theme`
>
> The theme to use for this code frame.

> — Argument —
> ..⟨args⟩   `any`
>
> The args to pass to showybox.

#**code-result(**
  ⟨**side-by-side**⟩: **false,**
  ⟨**scope**⟩: **"(:)",**
  ⟨**breakable**⟩: **false,**
  ⟨**theme**⟩: **"_theme.default",**
  ⟨**result**⟩: **auto**
)[⟨**source**⟩**]** ⟶ `content`
Shows example code and its corresponding output in a frame.

> — Argument —
> ⟨side-by-side⟩: false   `bool`
>
> Whether or not the example source and output should be shown side by side.

> — Argument —
> ⟨scope⟩: "(:)"   `dictionary`
>
> The scope to pass to eval.

> — Argument —
> ⟨breakable⟩: false   `bool`
>
> If the frame can brake over multiple pages.

> — Argument —
> ⟨theme⟩: "_theme.default"   `theme`
>
> The theme to use for this code example.

> — Argument —
> ⟨result⟩: auto   `content`
>
> The content to render as the example result. Evaluated eval.

---- Argument ---

⟨source⟩ `content`

A raw element containing the source code to evaluate.

II.3.5. component/table-of-contents

Contains an outline implementation with improved alignment.

```
#make-table-of-contents()
```

#**make-table-of-contents**(⟨**title**⟩: **"heading(outlined: false, numbering: none)[Table of Contents]"**, ⟨**target**⟩: **"heading.where(outlined: true)"**, ⟨**columns**⟩: **1**, ⟨**theme**⟩: **"_theme.default"**) ⟶ `content`

Generate the default table of contents.

Argument

⟨title⟩: "heading(outlined: false, numbering: none)[Table of Contents]"   `str` `content` `none`

The title to use, if this is a `heading` itself it will not be passed to `outline`.

Argument

⟨target⟩: "heading.where(outlined: true)"   `selector` `function`

The target to show, this is primarily used to restrict the search space of the default selector. If something other than a heading selector is passed, then this may not work.

Argument

⟨columns⟩: 1   `int`

The amount of columns to use for the outline.

Argument

⟨theme⟩: "_theme.default"   `theme`

The theme to use for this table of contents.

II.3.6. component/title-page

Contains the title page component.

```
#make-table-of-contents()
```

#**make-table-of-contents**(⟨**title**⟩: **"heading(outlined: false, numbering: none)[Table of Contents]"**, ⟨**target**⟩: **"heading.where(outlined: true)"**, ⟨**columns**⟩: **1**, ⟨**theme**⟩: **"_theme.default"**) ⟶ `content`

Generate the default table of contents.

Argument

⟨title⟩: "heading(outlined: false, numbering: none)[Table of Contents]" `str` `content` `none`

The title to use, if this is a `heading` itself it will not be passed to `outline`.

Argument

⟨target⟩: "heading.where(outlined: true)" `selector` `function`

The target to show, this is primarily used to restrict the search space of the default selector. If something other than a heading selector is passed, then this may not work.

Argument

⟨columns⟩: 1 `int`

The amount of columns to use for the outline.

Argument

⟨theme⟩: "_theme.default" `theme`

The theme to use for this table of contents.

II.3.7. link

Utlities for linking to Typst resources or source forges.

```
#codeberg()            #github()              #package-repo()
#footlink()            #gitlab()              #type()
#forge()               #package()
```

#**footlink**(⟨**url**⟩, ⟨**label**⟩) ⟶ `content`
    Creates a link with a footnote.

> **Argument**
>
> ⟨url⟩   `str`
>
>   The url for the link and the footnote.

> **Argument**
>
> ⟨label⟩   `str`
>
>   The label for the link.

#**forge**(⟨**base**⟩, ..⟨**relative**⟩, ⟨**label**⟩: **auto**) ⟶ `content`
    Creates a link with footnote to a source forge and optional repo.

> **Argument**
>
> ⟨base⟩   `str`
>
>   The forge base url.

> **Argument**
>
> ..⟨relative⟩   `str`
>
>   An optional author or repository path.

> **Argument**
>
> ⟨label⟩: auto   `str` | `auto`
>
>   The label to use for the forge, uses `forges` if `auto`.

#**github**(⟨**repo**⟩) ⟶ `content`
    Creates a link with a footnote to a GitHub repository.

> **Argument**
>
> ⟨repo⟩   `str`
>
>   The repository path.

#**gitlab**(⟨**repo**⟩) ⟶ `content`
    Creates a link with a footnote to a GitLab repository.

> **Argument**
>
> ⟨repo⟩   `str`
>
>   The repository path.

#**codeberg**(⟨**repo**⟩) ⟶ `content`

Creates a link with a footnote to a Codeberg repository.

┌─ Argument ───┐
│ ⟨repo⟩   `str` │
│   │
│   The repository path.   │
└──┘

#**package**(⟨**name**⟩, ⟨**version**⟩: **none**) ⟶ `content`

Creates a link with a footnote to the Typst Universe page of a package.

┌─ Argument ───┐
│ ⟨name⟩   `str` │
│   │
│   The name of the package.   │
└──┘

┌─ Argument ───┐
│ ⟨version⟩: none   `version` │ `none` │
│   │
│   The version of the package, this has no effect on the link itself. │
└──┘

#**package-repo**(⟨**name**⟩, ⟨**version**⟩, ⟨**namespace**⟩: **"preview"**) ⟶ `content`

Creates a link with a footnote to the Typst package repository.

┌─ Argument ───┐
│ ⟨name⟩   `str` │
│   │
│   Name of the package.   │
└──┘

┌─ Argument ───┐
│ ⟨version⟩   `version` │
│   │
│   The version of the package.   │
└──┘

┌─ Argument ───┐
│ ⟨namespace⟩: "preview"   `str` │
│   │
│   The package namespace to use.   │
└──┘

#**type**(⟨**value**⟩, ⟨**with-footnote**⟩: **false**, ⟨**theme**⟩: **"_theme.default"**) ⟶ `content`

Creates a link with a footnote to the documentation of a built-in Typst type.

┌─ Argument ───┐
│ ⟨value⟩   `str` │ `any` │
│   │
│   The type or value to which to link to: │
│   • if this is a `str`, it is inferred to be the type representation │
│   • if this is a type, it is inferred to be the expected type │
│   • if this is a value, it is inferred to be a value of the expected type │
└──┘

┌─ Argument ───┐
│ ⟨theme⟩: "_theme.default"   `theme` │
│   │
│   The theme to use for this type.   │
└──┘

#**typst**

The type links supported by `type`.

Can be used to add new or alter exisiting type links.

The default contains the typst built in types, including the special types which contain no page like `any`, linking to the types page instead.

#**forges**

The forges supported by `forge`.

Can be used to add new, or alter existing matchers, matchers come in the form of a function which takes a url and either returns a `str` or `none` directly, or a boolean. `false` or `none` means the matcher did not match, `true` means use the matcher key, a `str` means use this string directly.

The default matchers include GitHub, GitLab and Codeberg as well as a crude git-subdomain matcher which returns the top and second level domain.

II.3.8. **theme**

Theming related values, namely the default style dictionary used when not style is given.

II.3.9. util

General utlities.

```
#alert()
```

#**alert**(⟨**color**⟩: **"purple"**, ⟨**size**⟩: **0.8em**, ..⟨**args**⟩)[⟨**body**⟩] ⟶ `content`
   Draw an alert box.

---- Argument ----
⟨color⟩: "purple"   `color`

   The color to use for the box and text color.

---- Argument ----
⟨size⟩: 0.8em   `size`

   The text size to use.

---- Argument ----
..⟨args⟩   `any`

   Additional arguments to pass to showybox.

---- Argument ----
⟨body⟩   `content`

   The box body.

#**hint**

   Draw a blue alert box. See alert.

#**info**

   Draw a green alert box. See alert.

#**warn**

   Draw a yellow alert box. See alert.

#**error**

   Draw a red alert box. See alert.

II.3.10. **style**

Styles for the template, namely the default style in use for the template body.

```
#default()
```

#**default**(⟨theme⟩: **"_theme.default"**) ⟶ `function`
   The default style applied over the whole document.

─ Argument ──
   ⟨theme⟩: **"_theme.default"**   `theme`

   The theme to use for the document styling.

Part III.
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