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# **Public functions** Clean DHWB

clean-dhbw()

#### clean-dhbw

This function does provide a template in (unofficial) accordance to the DHBW Stuttgart guideline for a Thesis.

```
clean-dhbw(
 title: str,
 authors: dictionary,
 language: str,
 at-university: bool,
 confidentiality-marker: dictionary,
 type-of-thesis: str,
 show-confidentiality-statement: bool,
 show-declaration-of-authorship: bool,
 show-table-of-contents: bool,
 show-table-of-images: bool,
 show-table-of-tables: bool,
 show-table-of-code: bool,
 show-table-of-equations: bool,
 show-acronyms: bool,
 show-abstract: bool,
 glossary-spacing: length,
 outline-number-title-spacing: length,
 outline-new-chapter-spacing: length,
 abstract: content,
 abstract-second-language: content,
 second-language-for-abstract: str,
 appendix: content,
 acronyms: dictionary,
 glossary,
 confidentiality-statement-content: content,
 declaration-of-authorship-content: content,
 titlepage-content: content,
 university: str,
 university-location: str,
 university-short: str,
 city: str,
 supervisor: str,
 date: datetime,
 date-format: str,
 bibliography,
 bib-style: str,
 logo-left: content,
 logo-right: content,
 body: content
```

### title str

The title of your document.

Default: str

#### authors dictionary

A list of dictionaries with the authors. Each Auther should have following elements:

- name: Name of the author -> str
- student-id: Student-ID of the author -> str
- course: Course of the author -> str
- course-of-studies: Course of studies of the author -> str
- company: dictionary containing:
  - ► name -> str
  - ▶ post-code -> str
  - ► city -> str
  - ▶ country -> str

Default: (:)

# language str

The language in which this document is written. Currently supported are "de" and "en".

Default: "en"

### at-university bool

Define if the document is written for the university. Setting this true will hide the company and confidentiality statement.

Default: true

# confidentiality-marker dictionary

Show a red dot on the upper right corner of the title page.

Default: (display: false)

### type-of-thesis str

The type of the thesis, e.g. Bachelor Thesis or Paper.

Default: none

## show-confidentiality-statement bool

Display the confidentiality statement. This will be ignored if at-university is set to true.

Default: true

show-declaration-of-authorship bool

Display declaration-of-authorship.

Default: true

show-table-of-contents bool

Display table of contents.

Default: true

show-table-of-images bool

Display table of figures (images).

Default: true

show-table-of-tables bool

Display table of tables.

Default: true

show-table-of-code bool

Display table of code.

Default: true

show-table-of-equations bool

Display table of equations.

Default: true

show-acronyms bool

Display all used acronyms.

Default: true

show-abstract bool

Display the abstract.

Default: true

# glossary-spacing length

Spacing between the glossary term and its definition.

Default: 1.5em

# outline-number-title-spacing length

The spacing between the chapter number the the heading in an outline entry.

Default: 1em

# outline-new-chapter-spacing length

The space above a new level 1 chapter in outlines, should be equa to page-grid.

Default: 16pt

#### abstract content

The abstract in the main language.

Default: none

# abstract-second-language content

The abstarct in the second language, second-language-for-abstract must be set.

Default: none

# second-language-for-abstract str

The language for a second abstarct. See language for options.

Default: none

# appendix content

The appendix.

Default: none

# acronyms dictionary

Dictionary containing all acronyms.

Default: none

### glossary

The glossary dictionary, containing words and their description.

Default: none

# confidentiality-statement-content content

Overwrite the default content of the confidentiality statement.

Default: none

# declaration-of-authorship-content content

Overwrite the default content of the declaration of authorship.

Default: none

# titlepage-content content

Overwrite the default content of the titlepage.

Default: none

# university str

Name the of the university.

Default: none

# university-location str

Location of the university.

Default: none

### university-short str

Shorthand for the university (eg. KIT), displayed for the university supervisor.

Default: none

### city str

City of the author (only needed when at-university is true).

Default: none

### supervisor str

Dictionary containing the name of the supervisor with the "university" or "company". One of the two should be provided.

Default: (:)

#### date datetime

Datetime object to be displayed in the document.

Default: datetime.today()

#### date-format str

Date format to the be displayed. See Typst docs for mor information.

Default: "[day].[month].[year]"

# bibliography

Bibliography object to be displayed.

Default: none

### bib-style str

Display Style of the bibliography, see Typst docs for mor information.

Default: "ieee"

#### logo-left content

Logo on the right side in the header. Should be the company logo. If only one logo is specified it will be centered on the titlepage.

Default: image("img/general/firmenlogo.png")

### logo-right content

Logo on the left side in the header. Should be the University logo. If only one logo is specified it will be centered on the titlepage.

Default: image("img/general/dhbw.svg")

### **body** content

The main Body, the actually written document.

# Acronyms

- acf()
- acfpl()
- acl()
- aclpl()
- acpl()
- acs()
- acspl()
- init-acronyms()
- print-acronyms()

#### acf

Display an acronym as if it is shown for the first time.

```
As shown for the first time: \
#acf("SPS")

AS
```

As shown for the first time: Speicherprogrammierbare Steuerung (SPS)

#### **Parameters**

```
acf(
  acr: str,
  plural: bool
) -> str
```

```
acr str
```

Acronym key

### plural bool

Display the plural form

Default: false

### acfpl

Display an acronym in the long plural form as if it is shown for the first time.

Long plural, as shown for the first time: Speicherprogrammierbare Steuerungen (SPSs)

```
acfpl(acr: str) -> str
```

```
acr str
Acronym key
```

#### acl

Display an acronym in the long form.

```
Long form: \
                                          Long form:
#acl("SPS")
                                          Speicherprogrammierbare Steuerung
```

```
Parameters
  acl(
    acr: str,
    plural: bool
  ) -> str
  acr
        str
  Acronym key
  plural
           bool
  Display the plural form
  Default: false
```

# aclpl

Display an acronym in the long plural form.

```
Long plural form: \
                                           Long plural form:
#aclpl("SPS")
                                           Speicherprogrammierbare Steuerungen
```

#### **Parameters**

```
aclpl(acr: str) -> str
acr
     str
Acronym key
```

# acpl

Display an acronym in the plural form.

```
Plural form: #acpl("SPS")
                                        Plural form: SPSen
```

```
acpl(acronym) -> str
```

Display an acronym in the short form

```
Short form: #acs("SPS")

Parameters

acs(
    acr: str,
    plural: bool
) -> str

Acronym key

Plural bool
Display the plural form
```

# acspl

Default: false

Display an acronym in the short-plural form

```
Short plural form: #acspl("SPS")

Parameters
acspl(acr: str) -> str

acr str
Acronym key
```

### init-acronyms

Initialize the acronym.

This will set the dictionary containing all acronyms and define, if they should be linked to the print-acronyms().

```
init-acronyms(
  acronyms: dictionary,
  link-acros-to-toc
)
```

```
acronyms dictionary
```

Dicttionary containing all acronyms. See Define Aconyms for more information.

#### link-acros-to-toc

Creates links the output of print-acronyms().

# print-acronyms

Print all used acronyms in a outline.

Using this with link-to-toc true, will couse all acronyms to be linked to here.

#### **Parameters**

```
print-acronyms(
   language: str,
   font: str
) -> content
```

```
language str
```

Language to be used

#### font str

Font to be used

# **Define Acronyms**

#### Variables:

• acronyms

#### acronyms

Dictionary containing all acronym with their short and long form.

Optional provide the plural form of the short and long versions.

If no plural is provided, s will be appended.

Exmaple:

```
#let acronyms = (
    // Only singular provided, for plural "s" will be appended.
    API: "Application Programming Interface",

    // Singular and plural are provided, with each short and long form.
    SPS: (("SPS", "Speicherprogrammierbare Steuerung"), ("SPSen",
"Speicherprogrammierbare Steuerungen")
)
```

# **Custom equations**

• equation()

#### Variables:

• outlined-equations

### equation

Custom wrapper for equations to store them in outlined-equations and display them in an custom outline.

```
#equation(
  caption: "Quadratic formula",
  label: <eq:QuadraticFormula>,
  $ (-b plus.minus sqrt(b^2 - 4 dot a dot
  c)) / (2 dot a) $,
)
```

```
\frac{-b \pm \sqrt{b^2 - 4 \cdot a \cdot c}}{2 \cdot a} \quad (2.1)
```

#### **Parameters**

```
equation(
  body,
  caption: str content,
  label: dictionary label location ref-label str
) -> content
```

```
caption str or content
```

Caption of the equation. Proving a caption will display the equation in the outline with it's caption. The Caption is not shown below the equation.

Default: none

```
label dictionary or label or location or ref-label or str

Label of the equation. Must be provided.

Default: none
```

### outlined-equations dictionary

Dictionary to store a equations label and caption in order to display them in a custom outline.

#### **ToDo**

todo()

# todo

Small function to mark text italic red and add the prefix "ToDo: ".

```
#todo("Add a pagebreak")

Parameters
todo(task: str content) -> content

task str or content
Content of the task.
```

# **Internal functions**

# **Custom outline Entry**

custom-outline-entry-formatting()

# custom-outline-entry-formatting

This function create one line seperated into front, mid, and back. It is intended to be used as a custom ouline entry.

```
Parameters
  custom-outline-entry-formatting(
    location: dictionary label location ref-label str,
    front: content,
    mid: content,
    back: content,
    front-max-width: length fraction,
    spacing-after-front: length
  )
  location
              dictionary or label or location or ref-label or str
  The location of the content, none will create no link.
  Default: none
  front
          content
  Content of the front part, eg. "Figure 2.4".
  Default: none
  mid
         content
  Content of the middle part eg. "This image shows a Cat".
```

Default: none

# back content

Content of the end, will be most to the right. Eg. the page number "4".

Default: none

```
front-max-width length or fraction
```

Maximum width of all front entries, this is used so all front parts have the same width and the mid parts are aligned.

Default: 1fr

# spacing-after-front length

The space inserted after front-max-width. If front-max-width is a fraction, this has no effect.

Default: 3em

# abc

. .