

HsH-Classes — A set of \LaTeX classes for use in Hochschule Hannover *

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Abstract

The following documents a set of \LaTeX classes created for the Hochschule Hannover. They are intended to ease the workflow when writing documents by providing a common forming basis that should work for pretty much everything a student will be expected to write. This can be simple one-paged documents, excercises, lab-reports, papers or bachelors and masters thesises.

The classes provide interfaces to modify commend requiriements, provide commands to get specifics like the logo and provide and pre-configure comonly needed packages. This should get you going imidealty and reduce the setuptime significantly.

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1 The different classes

The project classes provided by the Project all carry the HsH- prefix. Here is a list of the available classes and some explanation on when to use which class.

HsH-article	A article-class based on KOMA-Scripts scrartcl. It is designed for quick and compact documents and is useful for writing lab-protocols and alike. It does not have chapters and therefore never breaks to a new page on its own.
HsH-report	A report-class based on KOMA-Scripts scrreprt. This is probably the most useful class, as it can be used for a wide variety of documents (beginning with lab-reports and ending at complete thesis). The line between article and report is somewhat blurry, so use as you see fit.
HsH-standalone	A helper class based based on the standalone class. It is designed only for creating images as separate documents to keep things organized and compiler times low. It is useful for creating graphs, circuit diagrams or other kind of complex sub documents.

2 Document options

To configure the behavior and style of documents using this class, options can be passed via the `\documentclass[options]{document-class}` command.

It should be noted that all unknown keys will be passed to the parent class and a log-message issued.

2.1 Generic options share by all classes

These Options are available regardless of documentclass and modify common things.

fontfamily The `fontfamily=opt` option configures which font-style is used. For convenience there are also short-forms provided. The available options are:

`sans`
`roman`

`sans` | `sans-serif` A sans-serif font is used (similar to Arial)

`roman` | `serif` A serif font is used (similar to Times-new-Roman)

language The `language=opt` option set the main language you write in. It ensures texts like auto-generated headings are localised properly. You can pass in any language-name understood by the babel package. German is the default. For convenience there are also short-forms provided.

`english`
`german`

todos The todos option is a simple switch that activates support for the todonotes package. It enables/disables the package as well as increasing the pagewidth to make space for the notes. You can use the commands from the package to make notes and other annotations (similar to how MS-Words comments work). When you pass `off` | `false` all the annotation will disappear from the PDF while still being in the source.

Note: setting `todos=off` after having used the option will most likely produce compilation errors. These will go away after you remove the temporary files.

2.2 Options for modifying the document

The following options are only available for documents (so not utility classes).

linespacing The `linespacing=opt` option configures the spacing in between lines. For convenience there are also short-forms provided. The available options are:

`singlespacing`
`onehalfspacing`
`doublespacing`

`single` No additional space is added in between lines.

`onehalf` Approximately half a line of empty space is added in between lines.

`double` About a full line height is left in between lines.

parskip The `parskip=opt` option configures the spacing in between paragraphs. This is an extended option originally implemented by KOMA-Script.

<code>never</code>	No inter-paragraph spacing will be inserted even if additional vertical spacing is needed for vertical adjustment with <code>\flushbottom</code> .
<code>never+</code>	No inter-paragraph spacing will be inserted. There must be at least a third of a line of free space at the end of a paragraph.
<code>never*</code>	No inter-paragraph spacing will be inserted. There must be at least a quarter of a line of free space at the end of a paragraph.
<code>...</code>	see KOMA-Script manual, Table 3.7 for more options.
<code>headheight</code>	The <code>headheight=<dim></code> option allows you to set the required size of the header. You may need to modify this if you get a <code>\headheight to low</code> error message. The emssage should tell you what value you need, but you can pass any valid length.
<code>abstract</code>	The <code>abstract=<opt></code> option allows you to configure different behaviors of the abstract. The availabel options are described below:
<code>keywords</code>	Print the <code>\keywords</code> after the abstract.
<code>nokeywords</code>	Do <i>not</i> print the <code>\keywords</code> after the abstract.
<code>totoc</code>	The abstract will be listed in the table of contentes.
<code>notoc</code>	The abstract will <i>not</i> be listed in the table of contentes.

Often relevant KOMA-Script options

The following options are implemented by the parent classes and only listed here for completeness. For more detils, see [its manual](#).

<code>fontsize</code>	The <code>fontsize=<size></code> options takes a size in pt. It is usually in therange of 10-12, but other sizes can work as well.
<code>paper</code>	The <code>paper=<size></code> options accepts a number of options, most ISO formats are supported, but also others like letter or legal.
<code>twoside</code>	The <code>twoside</code> option sets your document up for doublesided printing. The header and footer will take this into account and binding-correction will be applide along the inner edge.
<code>BCOR</code>	The <code>BCOR=<dim></code> option allows you to define a custom binding-correction. Any valid length can be put here, but to large of a value will shrink the outer margin to a not-desirable level.

2.3 Standalone specific options

The standalone utility class has some special options which are documented here.

<code>margin</code>	The <code>margin=<dim></code> option controlls how much whicspace is added arround you standalone document. This usually looks better which is why the default is 0.25 cm, but you can supress it by passing 0 cm.
<code>multi</code>	The <code>multi=<opt></code> option defines which enviroment make up a page. It can be passe more than once.

3 Provided commands

The classes define a set of commands which are explained in the following section.

<code>\HsHClassName</code>	Each class defines the macro <code>\HsHClassName</code> to contain its classname. This is mostly usefull so internals can reuse the classname, but you could also check against it if you needed to.
----------------------------	--

3.1 Title matters

\LaTeX has a set of default commands which are used to define data for the titlepage, like `\title` or `\author`. The classes define a few additional commands, which are documented her.

<code>\matrikelnr</code>	The <code>\matrikelnr{\<nr[, ..]>}</code> macro sets the matrikelnumber of the author(s). It can be a single number or a comma seperated list of numbers. The numbers will be matched to the authors passed into <code>\author</code> .
<code>\professor</code>	You can pass any text to <code>\professor{\<text>}</code> , it will be printed on the bottom of the titelpage.

`\keywords` This macro can be used to define keywords which are relevant to your document. They will be printed as part of the abstract and be put into the PDF's meta-data.

Modifying the Logo

`\HsHlogoPath` The logo is loaded from a file whos name is read from `\HsHlogoPath`. Change it to use a different logo-file.

`\HsHlogoPage` As the PDF file can hae multiple pages, the `\HsHlogoPage` command stores which page to load.

`\includeHsHlogohere` The macro `\includeHsHlogohere[<width>]` is used by `\maketitle` to produce the logo. But if you want it elsewhere, you cann call this macro yourself.

3.2 Commands for document writing

The following commands will be usefull to you when writing a document.

`\declarationofauthorship` The command `\declarationofauthorship[<align>]` can be used to print a "declatation of authorship" in the current location, similar to how `tableofcontents` and `friends` work. It will produce a horizontal line, a text block containing the regulatory text and a signature block for every author. The command is localised for both english and german. Using the optional argument, you can define the positioning. Pass `t` for alignment at the top of the page and `b` for bottom alignment (*default*).

The three commands `\frontmatter`, `\mainmatter` and `\backmatter` are provided for report classes. They separete document section and automatically set up pagenummer styles.

`\frontmatter` `\frontmatter` set the pagenumers to capital roman numerals. This is usually required for everything before the first chapter.

`\mainmatter` `\mainmatter` sets the pagenummering to "normal" arabic numbers. This is usually the style for the document content.

`\backmatter` `\backmatter` can be used for apendixes and alike. It sets the pagenummering to small roman numerals.

3.3 Default L^AT_EX Commands that are modified

Additionally, some of L^AT_EXs default commands are moddified to better fit this class. This is documented here.

`\title` The `\title[<short-title>]{<title>}` command now takes an additional, optional argument. You can use it for a shorter version of your title, that will be used in the header to save on space.

`\maketitle` The `\maketitle` command if L^AT_EX default way to create a titlepage. We redefine it to produce a titlepage that matches the sytel typically used on the Hochschule Hannover. This incudes the logo beeing printed, depending on the `f1` to `f5` documentoptions. The command now also takes an options alignment-parameter: `\maketitle[<align>]`. You can pass `l` | `c` | `r` to get *left*, *center* or *right* alignment.

4 Package laoding

The classes load some packges for internal use as well as loading and configuring common use packages. The details are documented in the following section.

4.1 Allways loaded packages

`fontenc` for output encoding, set to the european characterset

`babel` for langauge-specific typesetting

`bookmark` creates bookmoarks in the PDF

`hyperref` for easy referencing and linking

`caption` to customize captions and make references point to the beginning of the floats

`graphicx` for importing and manipulating images

`amsmath`, `amssymb`, `amsfonts` more options when typesetting math

lmodern sets up the Latin-Modern font
 setspace used for configuring linespacing

There are also some packages for internal functionalaty that shouln't conserne the user, but they are listed here for completness.

scrbase
 pgffor

4.2 Conditionally loaded Packages

A subset of packages is only loaded (or loaded with specifig options) depending on options passed to the package

babel gets configured depending on language
 csquotes for language-specific quotations marks
 ziffer only loaded for german documents, sets comma as decimal seperator
 todonotes loaded depending on todos

4.3 Pre-configured Packages

These packages are coconfigured by the class to work in a cooperative way. The user must load them in this preable via `\usepackage{<pkg-name>}` however, as loading them allways bears additional, unnecicary overhead.

5 Implementation

5.1 Internal commands

`\HsHClassName` The classname of specific class is stored in the `\HsHClassName` which gets used throuout the code.

```
1 \let\HsHClassName\@currname
```

There is also a second macro `\HsHClassName@ParrentClass` which stores the parent classes name.

```
2 \def\HsHClassName@ParrentClass{%
3 <article> scrartcl%
4 <report> scrreprt%
5 <standalone> standalone%
6 }
```

5.2 Option handeling

The options are handled using featues provided by the KOMA-Script ecosystem. To get access to this the `scrbase` package is loaded.

```
7 \RequirePackage{scrbase}
```

We also require some packages for some of the option, these are loaded next.

```
8 \RequirePackage{setspace}
```

A new familiy of keys is created and shared by all ellements of this project. For that the `\DefineFamily` macro is used. The familiy name is *HsH*, matching the usual prefixes.

```
9 \DefineFamily{HsH}
```

Additionally each class-file represents a member in the family. This is defined using the `\DefineFamilyMember` macro. It's optional argument is set to the current filename by default, so we do not need to specify it, just the family name to attatch it to.

```
10 \DefineFamilyMember{HsH}
```

`\HsH@Options@PassToParrent` To be able to pass options to the parent class wehre needed easiely, a command is defined. It also issues a log-message.

```
11 \newcommand{\HsH@Options@PassToParrent}[1]{%
12   \ClassInfoNoLine{\HsHClassName}{passing option to parrent class: #1}%
13   \PassOptionsToClass{#1}{\HsHClassName@ParrentClass}%
14 }
```

`\HsH@Options@DeclareAlias` It is also usefull to have shot-versions of options. The following commands makes it easy to decalare these.

```
15 \newcommand{\HsH@Options@DeclareAlias}[3][HsH]{%
16   \DeclareOption{#2}{\FamilyExecuteOptions{#1}{#3}}%
17 }
```

`fontfamily` The first option to be defined is `fontfamily`. It's defined as a *Numerical* key so that it can accept multiple options and map them to a switch case.

```
18 \DefineFamilyKey{HsH}{fontfamily}{
19   \beginngroup
20   \FamilySetNumerical{HsH}{parskip}{@tmp}{%
21     {sans}{0}, {sans-serif}{0},%
22     {roman}{1}, {serif}{1},%
23   }{#1}
24   \ifx\FamilyKeyState\FamilyKeyStateProcessed
25     \aftergroup\FamilyKeyStateProcessed
26     \ifcase\@tmp% 0
27       \endgroup
28       \renewcommand{\familydefault}{\sfdefault}
29       \if@atdocument\AfterKOMAOptions{\selectfont}\fi
30     \or% 1
31       \endgroup
32       \renewcommand{\familydefault}{\rmdefault}
33       \if@atdocument\AfterKOMAOptions{\selectfont}\fi
34     \else% should never be
35       \endgroup
36     \fi
37   \else
38     \endgroup
39     \FamilyKeyStateUnknownValue
40   \fi
41 }
```

`sans` For convinience, there are also two short-versions defined.

```
roman 42 \HsH@Options@DeclareAlias{sans}{fontfamily=sans}
43 \HsH@Options@DeclareAlias{roman}{fontfamily=roman}
44 (*!standalone)
```

`linespacing` The linespacing options is also a *Numerical* option, mapping to three cases. They execute the aproprate commands of the `setspace` package.

```
45 \DefineFamilyKey{HsH}{linespacing}{
46   \beginngroup
47   \FamilySetNumerical{HsH}{linespacing}{@tempa}{%
48     {single}{0},%
49     {onehalf}{1},%
50     {double}{2},%
51   }{#1}
52   \ifx\FamilyKeyState\FamilyKeyStateProcessed
53     \aftergroup\FamilyKeyStateProcessed
54     \ifcase\@tempa% 0
55       \endgroup
56       \if@atdocument\singlespacing\else\AtEndOfClass{\singlespacing}\fi
57     \or% 1
58       \endgroup
59     \if@atdocument\onehalfspacing\else\AtEndOfClass{\onehalfspacing\AfterTOCHead{\singlespa
```

```

60 \or% 2
61 \endgroup
62 \if@atdocument\doublespacing\else\AtEndOfClass{\doublespacing\AfterTOCHead{\singlespacing}}
63
64 \else% should never be
65 \endgroup
66 \fi
67 \else
68 \endgroup
69 \FamilyKeyStateUnknownValue
70 \fi
71 }

```

singlespacing For convinience, there are also these short-versions defined.

```

onehalfspacing 72 \HsH@Options@DeclareAlias{singlespacing}{linespacing=single}
doublespacing 73 \HsH@Options@DeclareAlias{onehalfspacing}{linespacing=onehalf}
74 \HsH@Options@DeclareAlias{doublespacing}{linespacing=double}

```

parskip The parskip option is special in that it originally a KOMA-Script option that get expanded by this class. Only two new cases are defined here and everything unknown gets passed to the parent class.

It should also be noted that this option can't execute its code ideally, as the commands needed are only defined later when the parent class loads in. So the \setparsizes command is pushed into a hook.

```

75 \DefineFamilyKey{HsH}{parskip}{%
76 \beginngroup
77 \FamilySetNumerical{HsH}{parskip}{@tempa}{%
78 {never+}{0},%
79 {never*}{1},%
80 }{#1}
81 \if@atdocument
82 \ClassError{\HsHClassName}{
83 option 'parskip' can only be configured in preamble!
84 }
85 \fi
86 \ifx\FamilyKeyState\FamilyKeyStateProcessed
87 \aftergroup\FamilyKeyStateProcessed
88 \ifcase@tempa% 0
89 \endgroup
90 \AtEndOfClass{\setparsizes{\z@}{\z@}{.3333\linewidth \@plus 1fil}}
91 \or% 1
92 \endgroup
93 \AtEndOfClass{\setparsizes{\z@}{\z@}{.25\linewidth \@plus 1fil}}
94 \else% should never be
95 \endgroup
96 \fi
97 \else
98 \endgroup
99 \HsH@Options@PassToParent{parskip=#1}
100 \FamilyKeyStateProcessed
101 \fi
102 }

```

headheight The headheight option just set the \headheight to the given value.

```

103 \def\HsH@opt@headheight{}
104 \FamilyStringKey{HsH}{headheight}{\HsH@opt@headheight}
105 \AtEndOfClass{%
106 \headheight=\HsH@opt@headheight%
107 }

```

abstract The abstract option sets multiple different switches and configurations. We first define the needed macros:

```

108 \newif\if@HsH@option@abstract@show@keywords

```

```

109 \def\HsH@abstract@chap{\addchap*}
Now the actual option can be defined to handle all the cases.
110 \DefineFamilyKey{HsH}{abstract}{%
111   \begingroup
112   \FamilySetNumerical{HsH}{abstract}{@tempa}{%
113     {keywords}{0},%
114     {nokeywords}{1},%
115     {totoc}{2},{toc}{2},%
116     {notoc}{3},{nottotoc}{3},%
117   }{#1}
118   \ifx\FamilyKeyState\FamilyKeyStateProcessed
119     \aftergroup\FamilyKeyStateProcessed
120     \ifcase@tempa% 0
121       \endgroup
122       \@HsH@option@abstract@show@keywordstrue
123     \or% 1
124       \endgroup
125       \@HsH@option@abstract@show@keywordsfalse
126     \or% 2
127       \endgroup
128     \def\HsH@abstract@chap{\addchap}
129     \or% 3
130       \endgroup
131     \def\HsH@abstract@chap{\addchap*}
132   \else% should never be
133     \endgroup
134   \fi
135 \else
136   \endgroup
137 \fi
138 }

```

For the `twoside` option we only redefine the default, everything else is handled by the parent class.

```

139 \DefineFamilyKey{HsH}{twoside}[semi]{%
140   \HsH@Options@PassToParent{twoside=#1,BCOR=1cm}
141   \FamilyKeyStateProcessed
142 }
143 </!standalone>

```

`\HsH@opt@language` First, the macro to store the language name in is created. The default is `nil`, as `babel` will see this as no-language.

```
144 \def\HsH@opt@language{nil}
```

`language` The key is then defined to store its value inside the command. This allows the option to be called multiple times, but only the last set value will be passed on to `babel`.

```
145 \FamilyStringKey{HsH}{language}{\HsH@opt@language}
```

`english` For convenience, there are also these short-versions defined.

```

german 146 \HsH@Options@DeclareAlias{english}{language=english}
ngerman 147 \HsH@Options@DeclareAlias{german}{language=ngerman}
         148 \HsH@Options@DeclareAlias{ngerman}{language=ngerman}

```

`\HsH@opt@faculty` As we need a default value that is not zero, the macro needs to be defined and initialised manually.

```
149 \def\HsH@opt@faculty{1}
```

`faculty` The faculty options is once again a *Numerical* option, mapping the five faculties and storing the selected one in `\HsH@opt@faculty`.

```

150 \FamilyNumericalKey{HsH}{faculty}{\HsH@opt@faculty}{%
151   {0}{1}, {none}{1}, {false}{1}, {off}{1}%

```



```

152 {1}{2}, {f1}{2},%
153 {2}{3}, {f2}{3},%
154 {3}{4}, {f3}{4},%
155 {4}{5}, {f4}{5},%
156 {5}{6}, {f5}{6},%
157 }

```

f1 For convinience, there are also these short-versions defined.

```

f2 158 \HsH@Options@DeclareAlias{f1}{faculty=f1}
f3 159 \HsH@Options@DeclareAlias{f2}{faculty=f2}
f4 160 \HsH@Options@DeclareAlias{f3}{faculty=f3}
f5 161 \HsH@Options@DeclareAlias{f4}{faculty=f4}
    162 \HsH@Options@DeclareAlias{f5}{faculty=f5}

```

todos The boolean option todos is simply created using the commands from scrbase. Boolean options allready default to `<true>` if called without and argument, so no need to define an explicit alias.

```

163 \FamilyBoolKey{HsH}{todos}{@todos}

```

For the standalone class the fontsize option is mocked to present a standardised interface. A user might expect this option to be passable to this class and we shouldnt crete an anoying error just for this.

```

164 <*standalone>
165 \DefineFamilyKey{HsH}{fontsize}{%
166   \ClassInfoNoLine{\HsHClassName}{The 'fontsize' option is only a mock, its has not effect}
167   \FamilyKeyStateProcessed
168 }
169 </standalone>

```

5.2.1 Unknown options

Unknown options will be passed to the parent class. For that a `@else@` key is defined on the HsH family, which will be execute for every unknown key-value option. Unknown bare options are handled by the `\DeclareOption*` command and will be passed there.

```

170 \DefineFamilyKey{HsH}{@else@}{
171   \HsH@Options@PassToParrent{#1}
172   \FamilyKeyStateProcessed
173 }
174 \DeclareOption*{
175   \HsH@Options@PassToParrent{\CurrentOption}
176 }

```

5.2.2 Default options

The different classes all execute a set of default options, which is handled by the following code.

```

177 \FamilyExecuteOptions{HsH}{%
178   fontfamily=sans-serif,
179 <!*standalone>
180   fontsize=11pt,
181   language=ngerman,
182 <article> parskip=never+,
183 <report> parskip=half+,
184   linespacing=single,
185   headheight=2.15\baselineskip,
186 </!standalone>
187 <*article | report>
188   toc=listof,
189   toc=bibliography,
190   abstract=keywords,
191 </article | report>
192   faculty=none,

```

```

193 <!*standalone>
194   margin=0.25cm,
195   multi=tikzpicture,
196   multi=circuitikz,
197 </standalone>
198 }

```

Now we can process the options for the HsH family.

```

199 \FamilyProcessOptions{HsH}\relax

```

5.2.3 Loading the parent class

```

200 \LoadClass{\HsHClassName@ParrentClass}

```

5.3 Package loading

The classes load and configure some common packages to reduce the needed amount of boilerplate code in your preamble.

Additionally there are settings provided for packages that are used more rarely, but will be set up correctly if you decide to load them via `\usepackage{}`.

5.3.1 Ensuring German works

With modern LaTeX systems the encoding of inputfiles is UTF-8 by default, so the `inputenc` package is no longer required. Should the user still use a old setup or use a different encoding, he is responsible for loading `inputenc` himself.

The font-encoding for the pdf file is also set up to allow for the full european characterset.

```

201 \RequirePackage[T1]{fontenc}
202 \RequirePackage{type1ec}

```

To ensure localised translations of all displayed text automatically depend on the user-selected language, the `babel` package is loaded. This also allows for the use of the `\iflanguage` command, which is relevant later.

```

203 \RequirePackage[main=\HsH@opt@language]{babel}

```

Quotationmarks are also very different between languages, so the following ensures the correct style for the correct language.

```

204 \RequirePackage[autostyle=true]{csquotes}
205 \MakeOuterQuote{"}

```

German uses a comma as the decimal separator, which collides with LaTeX's default english setting of using the comma as a thousands separator and therefore replacing it with some whitespace on printed version. Luckily loading the `ziffer` package sets this up to match the german standart.

```

206 \iflanguage{ngerman}{\RequirePackage{ziffer}}{}

```

5.3.2 Generally usefull packages

We load `hyperref` for clickable links and configure it to write meta-data to the PDF.

```

207 \RequirePackage[hidelinks]{hyperref} % must load before 'bookmarks'
208 \RequirePackage{bookmark}
209 <!*standalone>
210 \AtBeginDocument{
211   \hypersetup{
212     pdfinfo={
213       Title={\@title},
214       Author={\@author},
215       Subject={\@subject},
216       Keywords={\@keywords}
217     }
218   }
219 }
220 </!*standalone>

```

The todonotes package is greate for anotation, but extremly expensive on compiletime. So we load it only if the user requests it. Also its commands are stubed, so that they can be left in the sourcecode and jut not output anything.

```

221 \if@todos
222   \PassOptionsToPackage{
223     textsize=small,
224     figwidth=.6\textwidth
225   }{todonotes}
226   \RequirePackage{todonotes}
227 \else
228   \newcommand{\listoftodos}[1]{}
229   \newcommand{\todo}[2] []{}
230   \newcommand{\missingfigure}[2] []{}
231 \fi

232 \RequirePackage[hypcap=true]{caption}
233 \RequirePackage{graphicx}
234 \RequirePackage{amsmath,amssymb,amsfonts}
235 \RequirePackage[svgnames]{xcolor}

```

5.3.3 Options for packages that could be loaded by the user

Some package are not always needed and potentially heavy to load in by default. But its still usefull to set default options for these packages.

These differ from the settings provided in HsH-classes.cfg in that they are defaults that apply allway and not user-configurable preferences which are user or even project specific. For the bibtex we ensure the *biber* backend is selcted, which matches the settings in .latexmkrc.

```

236 (*article | report)
237 \PassOptionsToPackage{backend=biber}{biblatex}
238 \AtBeginDocument{
239   \makeatletter
240   \@ifpackageloaded{biblatex}{
241     \renewcommand*{\mkbibacro}[1]{\MakeUppercase{#1}}
242   }{}%
243   \makeatother
244 }
245 </article | report>

```

For bibtex we load the free-stadnding units, mostly for backwards compatibility. We also ensure german language specific settings are applied.

```

246 \PassOptionsToPackage{free-standing-units}{siunitx}
247 \AtBeginDocument{
248   \makeatletter
249   \@ifpackageloaded{siunitx}{
250     \iflanguage{ngerman}{
251       \sisetup{output-decimal-marker={,}}
252     }{}
253   }{}
254   \makeatother
255 }

```

For better compatibility with the listings package we load the scrhack package. We also pass some configurations to if it gets loaded.

```

256 \RequirePackage{scrhack}
257 \AtBeginDocument{
258   \makeatletter
259   \@ifpackageloaded{listings}{
260     \RequirePackage{lstautogobble}\lstset{autogobble=true}
261     \iflanguage{ngerman}{
262       \lstset{literate={Ö}{\ "O"}1{Ä}{\ "A"}1{Ü}{\ "U"}1{ß}{\ss}1{ü}{\ "u"}1{ä}{\ "a"}1{ö}{\ "o"}1{
263     }{}
264   }{}
265   \makeatother

```

266 }

The circuitikz needs to be configured so it matches typical European styles.

267 \PassOptionsToPackage{european,EFvoltages,straightvoltages,betterproportions}{circuitikz}

For other packages we provide the settings more as a recommendation of what is useful.

As the user might want to change these, we outsource this to a separate file and input it

\AtBeginDocument. That way the user can just replace the file with his custom version.

268 \AtBeginDocument{

269 \makeatletter

270 \InputIfFileExists{HsH-classes.cfg}{

271 \ClassInfo{\HsHClassName}{Local config file HsH-classes.cfg used.}

272 }{

273 \ClassInfo{\HsHClassName}{No HsH-classes.cfg!! I hope you configured it yourself.}

274 }

275 \makeatother

276 }

5.4 Custom commands

5.4.1 Document separation commands

The following commands are only defined for book type classes by default. But they are also useful for the report class, so we define them in that case.

277 <report>

\if@mainmatter We define a switch which stores if the document is currently at a mainmatter section. It defaults to true as the user needs to explicitly set the state to something different.

278 \newif\if@mainmatter\@mainmattertrue

As a page number change requires a fresh page, this is ensured first. We also need to make sure that on a two-sided document, the first page is always on the left.

\frontmatter The pagenumbers are set to capital Roman numerals.

279 \newcommand{\frontmatter}{

280 \if@twoside\cleardoubleoddpage\else\clearpage\fi

281 \@mainmatterfalse\pagenumbering{Roman}

282 }

\mainmatter The pagenumbers are set to Arabic numerals.

283 \newcommand{\mainmatter}{

284 \if@twoside\cleardoubleoddpage\else\clearpage\fi

285 \@mainmattertrue\pagenumbering{arabic}

286 }

\backmatter The pagenumbers are set to Arabic numerals.

287 \newcommand{\backmatter}{

288 \if@openright\cleardoubleoddpage\else\clearpage\fi

289 \@mainmatterfalse\pagenumbering{roman}

290 }

291 </report>

5.4.2 The Logo for Hochschule Hannover

The following macros are responsible for creating the logo. They load a specific page of a PDF file and display it.

\HsHlogoPath This macro contains the path to load the PDF from. It defaults to HSH-Logo.pdf, which is provided by this project inside the scr/ folder.

292 \newcommand{\HsHlogoPath}{HSH-Logo.pdf}

`\HsHlogoPage` This macro stores the page to use from the PDF. It will be set via the documentoption faculty.

```
293 \newcommand{\HsHlogoPage}{\HsH@opt@faculty}
```

`\includeHsHlogo` Calling this macro produces the logo in-place. You can specify the width as an optional argument. The default is 5 cm.

If the file provided via `\HsHlogoPath` doesn't exist, the command will produce an error.

```
294 \newcommand{\includeHsHlogo}[1][5cm]{
295   \IfFileExists{\HsHlogoPath}{
296     \includegraphics[width=#1,page=\HsHlogoPage]{\HsHlogoPath}
297   }{
298     \ClassError{\HsHClassName}{\HsHlogoPath\space not found!}{
299       The HsH Logo is necessary for the titlepage! Try putting it next to your source file or
300     }
301   }
302 }
```

5.4.3 Title matters

```
303 (*article | report)
```

The following commands relate to the creation of the titlepage. They implement how the user can define the different datafields.

First the `\@author` macro is set to `\@empty`, this makes it easier to handle it later.

```
304 \let\@author\@empty
```

`\title` We redefine the `\title` command to take an optional argument. This is stored in the additional `\@shorttitle` macro.

```
305 \renewcommand{\title}[2][]{
306   \gdef\@title{#2}
307   \gdef\@shorttitle{#1}
308 }
```

`\@shorttitle` This new macro stores a short version of the title. This will be used in places where the full title might overflow the available space.

```
309 \def\@shorttitle{\@empty}
```

`\matrikelnr` These macros set and store the matrikel-number (or set of numbers), which will be printed on the titlepage.

```
310 \newcommand{\matrikelnr}[1]{\gdef\@matrikelnr{#1}}
311 \def\@matrikelnr{\@empty}
```

`\professor` These three macro-groups give options to the user to print people's names on the titlepage, who are relevant to the document, but not the author.

```
\firstexaminer 312 \newcommand{\professor}[1]{\gdef\@professor{#1}}
\secondexaminer \@professor 313 \def\@professor{\@empty}
\@firstexaminer 314 \newcommand{\firstexaminer}[1]{\gdef\@firstexaminer{#1}}
\@secondexaminer 315 \def\@firstexaminer{\@empty}
316 \newcommand{\secondexaminer}[1]{\gdef\@secondexaminer{#1}}
317 \def\@secondexaminer{\@empty}
```

`\keywords` The macro-group defines and holds keywords which describe the document. They are used when printing the abstract as well as in the PDF's meta-data.

```
318 \newcommand{\keywords}[1]{\gdef\@keywords{#1}}
319 \def\@keywords{\@empty}
```

```
320 (/article | report)
```

5.4.4 Commands for document writing

`\declarationofauthorship` The declaration of authorship is not relevant for the standalone variant.

```
321 (*!stadnalone)
```

The `pgffor` package is required to handle the loop over the list of authors.

```
322 \RequirePackage{pgffor}
```

Now the command is defined. It takes an optional argument which defaults to `b`.

```
323 \newcommand{\declarationofauthorship}[1][b]{
```

First the argument is passed and an error raised for invalid arguments. Passing in `b` will push the declaration to the bottom of the page and add a horizontal line. Passing `t` simply adds some space.

```
324   \if#1b
```

```
325     \vspace*{\fill}
```

```
326     \hrule
```

```
327   \else\if#1t
```

```
328     \vspace*{2em}
```

```
329   \else
```

```
330     \ClassError{\HsHClassName}{Wrong Parameter for ‘\declarationofauthorship’}{
```

```
331       ‘\string\declarationofauthorship’ only accepts ‘t’ and ‘b’ as parameters.
```

```
332     }
```

```
333   \fi\fi
```

Now the actual declaration can be constructed. It uses the text from `\decofauthname` and `\decofauthtext`.

```
334   \vskip 3em
```

```
335   {\centering\bfseries\usekomafont{section}{\decofauthname}\par}
```

```
336   \vskip 3em
```

```
337   \decofauthtext\par
```

The last step is to loop over all authors by reading `\@author` and creating a signature box for each one. `\thanks` also needs to be cleared, as a footnote wouldn't make sense here.

```
338   \begingroup
```

```
339     \renewcommand{\thanks}{\sbox0{
```

```
340       \raggedleft
```

```
341       \foreach \tmp@ in \@author {
```

```
342         \if\tmp@empty\else
```

```
343         \hskip 1em \parbox{4cm}{
```

```
344           \vskip 4em
```

```
345           \hrule\vskip 4pt
```

```
346           \raggedleft\footnotesize\tmp@
```

```
347         }%
```

```
348       \fi
```

```
349     }\par
```

```
350   \endgroup
```

```
351 }
```

`\ifsingleauthor` To ensure `\decofauthtext` is properly spelled for one or multiple authors, we define a conditional that holds this information. Additionally we check the number of authors `\AtBeginDocument` and store it.

```
352 \newif\ifsingleauthor
```

```
353 \AtBeginDocument{
```

```
354   \begingroup
```

```
355     \newcount\count@
```

```
356     \count@=\z@
```

```
357     \@for\tmp@:=\@author\do{\advance\count@\@ne}
```

```
358     \ifnum\count@>\@ne\global\singleauthorfalse\else\global\singleauthortrue\fi
```

```
359   \endgroup
```

```
360 }
```

define the localised texts

```
361 \newcommand{\decofauthname}{Declaration of Authorship}
```

```
362 \newcaptionname{english}\decofauthname{Declaration of Authorship}
```

```

363 \newcaptionname{german,ngerman}\decofauthname{Selbstst\andigkeitserkl\arung}
364 %
365 \newcommand{\decofauthtext}{Language not supported!}
366 \newcaptionname{english}\decofauthtext{%
367   \ifsingleauthor{I}\else{We}\fi\space hereby certify that the work \ifsingleauthor{I}\else{w
368   \ifsingleauthor{am}\else{are}\fi\space submitting is entirely of \ifsingleauthor{my}\else{our}
369   making except where otherwise indicated. \ifsingleauthor{I}\else{We}\fi\space
370   \ifsingleauthor{am}\else{are}\fi\space aware of regulations concerning plagiarism, including
371   disciplinary actions that may result from it. Any use of the works of any other author, in a
372   is properly acknowledged at their point of use.
373 }
374 \newcaptionname{german,ngerman}\decofauthtext{%
375   Hiermit best\a)tige\ifsingleauthor\else{n}\fi\space \ifsingleauthor{ich}\else{wir}\fi, dass
376   folgende Arbeit eigenst\a)ndig von \ifsingleauthor{mir}\else{uns}\fi\space allein erstellt
377   unter Ber\u)cksichtigung der zur Verf\u)gung gestellten Aufgabenstellung sowie dem Arbe
378   unter Angabe aller verwendeten Quellen erarbeitet wurde. Die Regelungen und Konsequenzen ein
379   Plagiats, inklusive disziplinarischer Ma\ss}nahmen, sind \ifsingleauthor{mir}\else{uns}\fi
380   bewusst. Insbesondere wurden alle Zitate und gedanklichen {\u}bernahmenals solche kenntlich
381 }

```

`\declarationAuthorship`

```

382 \def\declarationAuthorship{%
383   \ClassWarning{\HsHClassName}{%
384     Command \string\declarationAuthorship\space is deprecate.\MessageBreak
385     Replace it with \string\declarationofauthorship.
386   }%
387   \declarationofauthorship%
388 }
389 \!stadnalone)

```

5.4.5 Micalanious commands

Utility commands

For writing absolout values, we provide the `\abs{ $\langle equ \rangle$ }` command, which puts groable, vertical bars on both sides of the equation inside.

```

390 \newcommand{\abs}[1]{\ensuremath{\left\vert\right\vert#1\right\vert\right\vert}}

```

Configuring mathmode-indices

The only hard requirements for documents writing on Hochschule Hannover is, that the indices in mathematic formulas must be typeset in an upright ("steil") font, not the default kursive font. We configure this by first defining a macro to replace the default `\sb` macro. We can than assign this to `_`. For that to work we need to change its catcode to make it modifiable.

Note: You can allways use `\sb` to use the original behaviour for special cases.

```

391 \def\@subinrm#1{\sb{\mathrm{#1}}}
392 {\catcode'\_ =13 \global\let_ =\@subinrm}

```

`\upsubscripts` Now we can define a command to activate this new behavior by changing the catcode of `_` to 13, which makes it a normal macro.

```

393 \newcommand\upsubscripts{\catcode'\_ =12}

```

`\normalsubscripts` To switch back we simply need to reset the catcode of `_` back to the original, which makes it a buildin operator with the default behavior.

```

394 \newcommand\normalsubscripts{\catcode'\_ =8}

```

5.5 Document setup

The following sets up the look and feel of the documents using this classe. All configuration and stylin is done here.

5.5.1 Fonts and text styling

```
395 \RequirePackage{lmodern}
```

5.5.2 Page layout

```
396 \<!*standalone>
397 \areaset[current]{0.75\paperwidth}{0.8\paperheight}
398 \if@todos
399   \addtolength\paperwidth{5cm}
400   \addtolength\marginparwidth{5cm}
401 \fi
402 \</!*standalone>
```

5.5.3 Styling L^AT_EX default constructs

Floats

```
403 \<!*standalone>
```

Floats should always prefer the *here* placement, than the *top* of the following page.

```
404 \renewcommand{\fps@figure}{h!t}
405 \renewcommand{\fps@table}{h!t}
```

Floats should be centered by default and the width of the caption box is limited.

```
406 \g@addto@macro\@floatboxreset\centering
407 \setcapwidth{0.8\textwidth}
```

The names of floating environments are redefined to show abbreviations only.

```
408 \defcaptionname{english}\figurename{Fig.}
409 \defcaptionname{german,ngerman}\figurename{Abb.}
410 \defcaptionname{english}\tablename{Tab.}
411 \defcaptionname{german,ngerman}\tablename{Tab.}
```

For subfigures we need to define a name used in autoreferences.

```
412 \AtBeginDocument{
413   \makeatletter
414   \@ifpackageloaded{subfigure}{
415     \let\subfigureautorefname\figureautorefname
416   }{}%
417   \makeatother
418 }
419 \</!*standalone>
```

Lists

For unordert lists the markers are redefined to look a little nicer.

```
420 \renewcommand{\labelitemi}{\raisebox{.3ex}{\scalebox{0.7}{\bullet}}}}
421 \renewcommand{\labelitemii}{\raisebox{.3ex}{\scalebox{0.7}{\circ}}}}
422 \renewcommand{\labelitemiii}{\raisebox{.1ex}{-}}
423 \renewcommand{\labelitemiv}{\raisebox{-.1ex}{\scalebox{1.3}{\cdot}}}}
```

Abstract

We define some custom behavior for the abstract.

```
424 \defcaptionname{german,ngerman}\abstractname{Abstract}
425 \newcaptionname{english}\keywordsname{Keywords}
426 \newcaptionname{german,ngerman}\keywordsname{Schl{"u"}sselw{"o"}rter}
427 \renewenvironment{abstract}{
428   \quotation
429   \setparsizes{\z@}{\z@}{.25\linewidth \@plus 1fil}\selectfont
430   \HsH@abstract@chap{\abstractname}
431 }{%
432   \ifx\@keywords\@empty\else\if@HsH@option@abstract@show@keywords
433     \par\bigskip
434     \noindent\textbf{\keywordsname}\hskip 2em\@keywords
435   \fi\fi\par
436   \endquotation
437 }
```


Misc

We activate one of the commands defined above to make math-indices upright by default.

```
438 \upsubscripts
```

We want a ragged bottom instead of spreading the paragraphs over the page.

```
439 \raggedbottom
```

The ruler shown in the top and left margin with the `draft` option is removed.

```
440 \let\layercontentsmeasure\relax
```

5.5.4 Header and footer

```
441 (*article | report)
```

The header and footer are styled using the low-level commands provided by the KOMA-Script package `scrlayer-scrpage`.

```
442 \RequirePackage{scrlayer-scrpage}
```

```
443 \FamilyOptions{KOMA}{headsepline,singlespacing=true}
```

First we define the new pagestyle `HsHheadings`.

```
444 \newpagestyle{HsHheadings}{
```

```
445   {
```

```
446     \parbox[b]{\sls@headwidth}{
```

```
447       \LaTeXraggedright
```

```
448       \ifx\@shorttitle\@empty\@title\else\@shorttitle\fi
```

```
449     }%
```

```
450   }
```

```
451   {
```

```
452     \parbox[b]{\sls@headwidth}{
```

```
453       \LaTeXraggedleft
```

```
454       \leftmark
```

```
455     }%
```

```
456   }
```

```
457   {
```

```
458     \parbox[b]{.45\sls@headwidth}{
```

```
459       \LaTeXraggedright
```

```
460       \ifx\@shorttitle\@empty\@title\else\@shorttitle\fi
```

```
461     }%
```

```
462     \hfill
```

```
463     \parbox[b]{.45\sls@headwidth}{
```

```
464       \LaTeXraggedleft
```

```
465       \headmark
```

```
466     }%
```

```
467   }
```

```
468   (\textwidth,.1pt)
```

```
469 }{
```

```
470   {\pagemark}
```

```
471   {\hfill\pagemark}
```

```
472   {\hfill\pagemark}
```

```
473 }
```

Then all generic settings are applied:

```
474 \clearpairofpagestyles
```

```
475 \ofoot*{\pagemark}
```

```
476 \pagestyle{HsHheadings}
```

```
477 (*article) \automark{section}
```

```
478 (*report) \automark{chapter}
```

```
479 (*report) \renewcommand*{\chapterpagestyle}{HsHheadings}
```

```
480 </article | report>
```

5.5.5 Titlepage

`\maketitle` The definition of `\maketitle` is mostly taken from the source-code of the KOMA-Script parentclass, but was modified to create the desired style.

```
481 (*article | report)
```

```
482 \newcommand{\professortext}{Professor}
```

```

483 \newcommand{\firstexaminertext}{First examiner}
484 \newcommand{\secondexaminertext}{Second examiner}
485 \newcaptionname{english}\professortext{Professor}
486 \newcaptionname{english}\firstexaminertext{First examiner}
487 \newcaptionname{english}\secondexaminertext{Second examiner}
488 \newcaptionname{german,ngerman}\professortext{Professor(in)/Lehrbeauftragte(r)}
489 \newcaptionname{german,ngerman}\firstexaminertext{Erstpr{"u}fer(in)}
490 \newcaptionname{german,ngerman}\secondexaminertext{Zweitpr{"u}fer(in)}
491 \newtoks\@tabtoks
492 \newcommand\addtabtoks[1]{\global\@tabtoks\expandafter{\the\@tabtoks#1}}
493 \newcommand\eadddtabtoks[1]{\edef\mytmp{#1}\expandafter\addtabtoks\expandafter{\mytmp}}
494 %%%\newcommand*\resettabtoks{\global\@tabtoks{}}
495 \newcommand*\printtabtoks{\the\@tabtoks}
496 \addtokomafont{publishers}{\normalsize}
497 \g@addto@macro\titlename{\singlespacing}
498 %
499 <article>\renewcommand\maketitle[1][c]{
500 <report>\renewcommand\maketitle[1][l]{
501   \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
502     \else
503       \def\and{%
504         \end{tabular}
505         \hspace 1em \@plus.17fil
506         \begin{tabular}[t]{c}%
507       }
508     \fi
509 <*article>
510     \par
511     \ifx@uppertitleback\@empty\else
512       \ClassWarning{KOMAClassName}{%
513         non empty \string\uppertitleback\space ignored
514         by \string\maketitle\MessageBreak
515         in 'titlepage=false' mode%
516       }
517     \fi
518     \ifx@lowertitleback\@empty\else
519       \ClassWarning{KOMAClassName}{%
520         non empty \string\lowertitleback\space ignored
521         by \string\maketitle\MessageBreak
522         in 'titlepage=false' mode%
523       }
524     \fi
525 </article>
526 <report> \begin{titlepage}
527 <article> \begin{group
528   \let\@param#1
529   \ifx\@param\@empty
530     \ClassError{\myClassName}{\maketitle\space with empty option}{
531       \maketitle[] has been called (with an empty parameter), this doesn't work.
532       Use \maketitle instead.
533     }
534   \fi
535 <*report>
536   \if@titlepageiscoverpage
537     \edef\titlepage@restore{
538       \noexpand\endgroup
539       \noexpand\global\noexpand\@colht\the\@colht
540       \noexpand\global\noexpand\@colroom\the\@colroom
541       \noexpand\global\vsizethe\vsizethe
542       \noexpand\global\noexpand\@titlepageiscoverpagefalse
543       \noexpand\let\noexpand\titlepage@restore\noexpand\relax
544     }
545   \begin{group

```

```

546 \topmargin=\dimexpr \coverpagetopmargin-1in\relax
547 \oddsidemargin=\dimexpr \coverpageleftmargin-1in\relax
548 \evensidemargin=\dimexpr \coverpageleftmargin-1in\relax
549 \textwidth=\dimexpr
550 \paperwidth-\coverpageleftmargin-\coverpagerightmargin\relax
551 \textheight=\dimexpr
552 \paperheight-\coverpagetopmargin-\coverpagebottommargin\relax
553 \headheight=0pt
554 \headsep=0pt
555 \footskip=\baselineskip
556 \@colht=\textheight
557 \@colroom=\textheight
558 \vsize=\textheight
559 \columnwidth=\textwidth
560 \hsize=\columnwidth
561 \linewidth=\hsize
562 \else
563 \let\titlepage@restore\relax
564 \fi
565 \let\footnotesize\small
566 \let\footnoterule\relax
567 \let\footnote\thanks
568 \</report>
569 \<article> \let\titlepage@restore\relax
570 \renewcommand*\thefootnote{\@fnsymbol\c@footnote}%
571 \let\@oldmakefnmark\@makefnmark
572 \renewcommand*\@makefnmark{\rlap\@oldmakefnmark}%
573 \<article> \next@tdpage
574 \ifx\@extratitle\@empty
575 \<article> \ifx\@frontispiece\@empty\else \mbox{}\fi
576 \<*report>
577 \ifx\@frontispiece\@empty\else
578 \if@twoside\mbox{}\next@tpage\fi
579 \noindent\@frontispiece\next@tdpage
580 \fi
581 \</report>
582 \else
583 \<article> \@makeextratitle
584 \<*report>
585 \noindent\@extratitle
586 \ifx\@frontispiece\@empty
587 \else
588 \next@tpage
589 \noindent\@frontispiece
590 \fi
591 \next@tdpage
592 \</report>
593 \fi
594 \<*article>
595 \ifx\@frontispiece\@empty
596 \ifx\@extratitle\@empty\else\next@tdpage\fi
597 \else
598 \next@tpage
599 \@makefrontispiece
600 \next@tdpage
601 \fi
602 \global\@topnum=\z@
603 \</article>
604 \setparsizes{\z@}{\z@}{\z@\@plus 1fil}\par@updaterelative
605 \vspace*{1cm}
606 \begin{minipage}[t]{\textwidth}%
607 \ifx\@titlehead\@empty \else
608 \usekomafont{titlehead}{\@titlehead}%

```

```

609     \fi
610     \hfill
611 % image with referencepoint in lower left corner:
612     \raisebox{0pt}{\ht\strutbox}{\dp\strutbox}{\includeHsHlogohere}
613     \end{minipage}
614     \raisebox{10pt}{\rule{\textwidth}{0.5pt}}
615     \null
616 <article>     \vskip 2em
617 <report>     \vfill
618     \begingroup
619         \if\@param c\centering\fi
620         \if\@param r\raggedleft\fi
621         \ifx\@subject\@empty\else
622             {\usekomafont{subject}{\@subject\par}}
623 <article>     \vskip 1.5em
624 <report>     \vskip 3em
625     \fi
626     {\usekomafont{title}{\huge\@title\par}}
627 <article>     \vskip .5em
628 <report>     \vskip 1em
629     {\ifx\@subtitle\@empty\else\usekomafont{subtitle}{\@subtitle\par}\fi}
630 <article|report>     \vskip 4em
631     {\ifx\@matrikelnr\@empty
632         \if\@author\@empty\else\usekomafont{author}{
633             \parbox{\dimexpr\linewidth}{
634                 \if\@param c\centering\fi
635                 \if\@param r\raggedleft\fi
636                 \@author
637             }
638         }\fi
639     \else
640         \if\@author\@empty\else
641             % sneaky comma needed after \@matrikelnr to deal with single item lists
642             \foreach \x [count=\i,evaluate=\i as \y using {\@matrikelnr,}\@i-1]] in \@author {
643                 \usekomafont{author}{
644                     \def\arraystretch{1.2}
645                     \if\@param l\begin{tabular}{@{}l l}\printtabtoks\end{tabular}\fi
646                     \if\@param c\begin{tabular}{l l}\printtabtoks\end{tabular}\fi
647                     \if\@param r\begin{tabular}{r r@{}}\printtabtoks\end{tabular}\fi
648                 }%
649             \fi
650         \fi}
651 <article>     \vskip 1em
652 <report>     \vskip 1.5em
653     {\usekomafont{date}{\@date\par}}
654 <article>     \vskip 1em
655 <report>     \vskip \z@ \@plus3fill
656     \usekomafont{publishers}{
657         \def\arraystretch{1.2}
658         \if\@param l\begin{tabular}{@{}l l}\fi
659         \if\@param c\begin{tabular}{l l}\fi
660         \if\@param r\begin{tabular}{r r@{}}\fi
661             \if\@professor\@empty\else\textbf{\professortext:}&\@professor\\\fi
662             \if\@firstexaminer\@empty\else\textbf{\firstexaminertext:}&\@firstexaminer\\\fi
663             \if\@secondexaminer\@empty\else\textbf{\secondexaminertext:}&\@secondexaminer\\\fi
664         \end{tabular}
665     }
666 <*article>
667     \ifx\@dedication\@empty\else
668         \vskip 2em
669         {\usekomafont{dedication}{\@dedication \par}}%
670     \fi
671 </article>

```

```

672     \par
673   \endgroup
674 <article>   \vskip 2em
675 <report>    \vskip 3em
676 <article>   \ifx\titlepagestyle\@empty\else\thispagestyle{\titlepagestyle}\fi
677     \@thanks\global\let\@thanks\@empty
678 <*report>
679     \vfill\null
680   \if@twoside
681     \@tempwatrue
682     \expandafter\ifnum \@nameuse{scr@v@3.12}>\scr@compatibility\relax
683     \else
684       \ifx\@uppertitleback\@empty\ifx\@lowertitleback\@empty
685         \@tempwafalse
686       \fi\fi
687     \fi
688     \if@tempswa
689       \next@tpage
690       \begin{minipage}[t]{\textwidth}
691         \@uppertitleback
692       \end{minipage}\par
693       \vfill
694       \begin{minipage}[b]{\textwidth}
695         \@lowertitleback
696       \end{minipage}\par
697       \@thanks\global\let\@thanks\@empty
698     \fi
699   \else
700     \ifx\@uppertitleback\@empty\else
701       \ClassWarning{\KOMAClassName}{%
702         non empty \string\uppertitleback\space ignored
703         by \string\maketitle\MessageBreak
704         in 'twoside=false' mode%
705       }
706     \fi
707     \ifx\@lowertitleback\@empty\else
708       \ClassWarning{\KOMAClassName}{%
709         non empty \string\lowertitleback\space ignored
710         by \string\maketitle\MessageBreak
711         in 'twoside=false' mode%
712       }
713     \fi
714   \fi
715   \ifx\@dedication\@empty
716   \else
717     \next@tdpage\null\vfill
718     {\centering\usekomafont{dedication}{\@dedication \par}}%
719     \vskip \z@ \@plus3fill
720     \@thanks\global\let\@thanks\@empty
721     \cleardoubleemptypage
722   \fi
723   \ifx\titlepage@restore\relax\else\clearpage\titlepage@restore\fi
724 </report>
725 <article>   \endgroup
726 <report>    \end{titlepage}
727   \setcounter{footnote}{0}
728   \expandafter\ifnum \csname scr@v@3.12\endcsname>\scr@compatibility\relax
729     \let\@thanks\relax
730     \let\maketitle\relax
731     \let\@maketitle\relax
732     \global\let\@thanks\@empty
733     \global\let\@author\@empty
734     \global\let\@date\@empty

```

```

735 \global\let\@title\@empty
736 \global\let\@subtitle\@empty
737 \global\let\@extratitle\@empty
738 \global\let\@frontispiece\@empty
739 \global\let\@titlehead\@empty
740 \global\let\@subject\@empty
741 \global\let\@publishers\@empty
742 \global\let\@uppertitleback\@empty
743 \global\let\@lowertitleback\@empty
744 \global\let\@dedication\@empty
745 \global\let\@matrikelnr\@empty
746 \global\let\@professor\@empty
747 \global\let\author\relax
748 \global\let\title\relax
749 \global\let\extratitle\relax
750 \global\let\titlehead\relax
751 \global\let\subject\relax
752 \global\let\publishers\relax
753 \global\let\uppertitleback\relax
754 \global\let\lowertitleback\relax
755 \global\let\dedication\relax
756 \global\let\date\relax
757 \global\let\matrikelnr\relax
758 \global\let\professor\relax
759 \fi
760 \global\let\and\relax
761 }
762 </article | report>

```

6 Change History

v1.00		
General: Initial Version. Official first		\declarationAuthorship, as it got
release	1	replaced by
		\declarationofauthorship 15
v2.00		v3.00
General: This version changes the		General: added typelec package to get
default build-system to latexmk . .	1	better font-scaling 10
v2.01		removed the inputenc package, as
\declarationAuthorship: Deprecate		utf8 is now default 10