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hu-berlin-bundle

Documents and Documentations for LaTeX at the
Humboldt-Universität zu Berlin (unofficial)

»Documentation must be regarded as an integral part of the process of design and coding. A good programming language will encourage and assist the programmer to write clear, self-documenting code, and even perhaps to develop and display a pleasant style of writing.« [1, p. 195]

2023/05/14 v1.1.2

texografie
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Contents

1 Introduction

With this (unofficial) bundle you have several documents which are designed according to the corporate design of the Humboldt-Universität zu Berlin.

Following documents or documentclasses are available:

- letter (`hu-berlin-letter.cls`); via `.tex` and `.md`
- base package (`hu-berlin-base.sty`)

1.1 Installation of the bundle

`hu-berlin` is part of the distributions MiKTeX and TeXLive – thus, you can easily install it using the respective package manager. If you would like to install `hu-berlin-bundle` into your local folder manually, do the following: Go to your terminal, browse to the folder of this bundle and run

```
make install
```

If you are using macOS you might be asked for your user account password for the installation.

Further options of this makefile are:

- `clean`: deletes all unnecessary files
- `cleanbundle`: deletes all files except `.dtx`, `.md`. You will get the plain version of this bundle. This might be helpful if you send the bundle to someone else.
- `ctan`: this will create a zip file which can be used to send to CTAN.
- `files`: will only create the files from the `.dtx`-scratch.
- `uninstall`: will erase the locally installed files.

This bundle is constantly updated. For hints, errors or suggestions use the GitHub repository https://github.com/LukasCBossert/hu-berlin-bundle.

1.2 Changelog

All notable changes to this project will be documented in the README.md. This project **does not** adhere to Semantic Versioning. The markdown syntax is inspired by the conventions proposed by keepachangelog.com.

1.2.1 v1.1.2 (2023/05/14)

- (general) fix of deprecated command make `make doc` runable again

1.2.2 v1.1.1 (2021/01/31)

- (letter) fix for language switch when using markdown-pandoc-conversion workflow

1.2.3 v1.1.0 (2021/01/31)

- (letter) language option now available also for the markdown-pandoc-conversion-workflow.

1.2.4 v1.0.9 (2021/01/10)

- (letter) making everything multi-lingual (at least German and English); German is default language. You can load English e.g. by `documentclass[english]{hu-berlin-letter}` (addresses issue No. 3)

1.2.5 v1.0.8 (2020/10/30)

- (letter) replacing actual logo with a dummy text (due to possible copyright conflicts). The correct logo has to be called `hu-berlin-logo.pdf` and needs to be put somewhere in PATH so it will be found. If such file cannot be found a dummy text will be taken instead ('Humboldt-Universität zu Berlin´)

1.2.6 v1.0.7 (2020/10/29)

- (letter) fixed missing `\removeeffields`
- (letter) added missing suffix for hu-logo (`.pdf`)

1.2.7 v1.0.6 (2020-10-22)

- (letter) changed address separator
- (letter) fixed empty minipage when no metadata given
- (letter) changed default backaddress

1.2.8 v1.0.5 (2020-04-28)

- (general) Changed logo format to `.pdf`
- (letter) Changed `\ifkomavarempty` to `\ifkomavarempty`, fixes github-issue nr. 1

1.2.9 v1.0.4 (2019-12-19)

- Added `hu-berlin-base.sty` as a package which contains all relevant code for documents and documentclasses of the bundle.

1.2.10 v1.0.3 (2019-06-26)

- Changed the main font for compatibility with UNIX-systems (TeX Gyre Heros instead of Verdana).

1.2.11 v1.0.2 (2019-06-22)

Renaming files for CTAN compatability.

1.2.12 v1.0.1 (2019-06-21)

Internal changes for publishing. Still one documentclass for a letter.

1.2.13 v1.0.0 (2019-06-21)

First release with a documentclass for letter.

1.3 Copyright

Various parts of this bundle have different copyrights. If not otherwise stated the copyright is The LaTeX project public license (LPPL), version 1.3c

1.3.1 Boilerplate / markdown-template

The template for the markdown conversion, forked from the pandoc-templates and JensErat pandoc-scrlttr2 is dual-licensed, under both the GPL (v2 or higher, same as pandoc) and the BSD 3-clause license (included below).

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2 Preambel

This bundle consists of various files which are either generated by the core file (`.dtx`) or are part of the basic structure of this bundle. You can easily pick up the basic file structure from fig. 2.1.

```
hu-berlin-bundle
├── hu-berlin-bundle.dtx ................................. code and documentation
├── hu-berlin-bundle.pdf ............................................ documentation
├── hu-berlin-base.sty .............................. basic components of the bundle
├── hu-berlin-letter-example-lualatex.tex .................................. letter
├── hu-berlin-letter-example.lco .................................. datafile for letter
├── hu-berlin-letter-example-lualatex.pdf .................................. letter
├── hu-berlin-letter-example-markdown.pdf ..... converted letter from markdown
├── hu-berlin-letter-example-markdown.md ............... example markdown file
├── hu-berlin-letter-template.latex ...................... template for conversion
├── img............................................................. folder for images
│   └── texografie-logo.pdf........................................... logo of maintainer
├── makefile .......................................... makefile to generate all required files
└── README.md .................................. README file with information on installation
```

Figure 2.1: Structure of `hu-berlin` bundle

When you run the `makefile` you get all these various files described above.

Guideline for Users

1 ⟨∗example⟩

3 Letter

We give an example on how to create a letter.

3.1 `.lco`-file

2 ⟨∗lco⟩

This is the file you load into your `.tex` letter. The information you provide here do normally not change from letter to letter. That's why we put it in a separate file.

The first line should provide this information.

3 `\ProvidesFile{hu-berlin-letter-example.lco}`

Now we set up the personal data.

We start with the name of the sender.

4 `\setkomavar{fromname}`

you can also write the position of this person in brackets, this is optional; [⟨*position*⟩]

5 `  [Wissenschaftlicher Mitarbeiter]`

But you need to give a name:

6 `  {Dr. Max Mustermann}`

The mail address

7 `\setkomavar{fromemail}{max.mustermann@hu-berlin.de}`

For phone and fax number you only need to type the last digits.

8 `\setkomavar{fromphone}{1234}`

If you don't have a fax (or a phone), leave it empty. Do *not* delete it.

9 `\setkomavar{fromfax}{5678}`

And finally the URL.

10 `\setkomavar{fromurl}{www.hu-berlin.de}`

If your backaddress is to long – it will be set up automatically – you can redefine it.

11 `%% \setkomavar{backaddress}{HU Berlin\\`
12 `%% Unter den Linden 6\\`
13 `%% D-10099 Berlin}`

Selfexplaining: the faculty.

14 `\setkomavar{faculty}{%`
15 `Philosophische Fakultät`
16 `}`

17 `\setkomavar{institute}{%`

```
18   \mbox{Institut für Briefvorlagen}
19 }

20 \setkomavar{institute.additional}{Here you can add more text.}

21 \setkomavar{institute.head}[Dekanin]{Prof. Dr. Maike Musterfrau}

22 \setkomavar{institute.head.mail}{maike.musterfrau@hu-berlin.de}

23 \setkomavar{office}{%
24   Mohrenstraße 40/41\\
25   Zimmer X\\
26   D-10117 Berlin}

27 \setkomavar{connections}{U Bahnhof Hausvogteiplatz (U2)}

28 \setkomavar{accessibility}{Hausvogteiplatz}

29 \setkomavar{signature}{%
30   \usekomavar{institute.head} --
31   \usekomavar{fromname}
32 }

33 ⟨/lco⟩
```

Example 1

```
1  \ProvidesFile{hu-berlin-letter-example.lco}
2  \setkomavar{fromname}
3    [Wissenschaftlicher Mitarbeiter]
4    {Dr. Max Mustermann}
5  \setkomavar{fromemail}{max.mustermann@hu-berlin.de}
6  \setkomavar{fromphone}{1234}
7  \setkomavar{fromfax}{5678}
8  \setkomavar{fromurl}{www.hu-berlin.de}
9  %% \setkomavar{backaddress}{HU Berlin\\
10 %% Unter den Linden 6\\
11 %% D-10099 Berlin}
12 \setkomavar{faculty}{%
13 Philosophische Fakultät
14 }
15 \setkomavar{institute}{%
16   \mbox{Institut für Briefvorlagen}
17 }
18 \setkomavar{institute.additional}{Here you can add more text.}
19 \setkomavar{institute.head}[Dekanin]{Prof. Dr. Maike
      Musterfrau}
20 \setkomavar{institute.head.mail}{maike.musterfrau@hu-berlin.de}
21 \setkomavar{office}{%
22   Mohrenstraße 40/41\\
23   Zimmer X\\
24   D-10117 Berlin}
25 \setkomavar{connections}{U Bahnhof Hausvogteiplatz (U2)}
26 \setkomavar{accessibility}{Hausvogteiplatz}
27 \setkomavar{signature}{%
28   \usekomavar{institute.head} --
29   \usekomavar{fromname}
```

```
30  }
31  %%
```

3.2 `.tex`-file

34 ⟨∗letter⟩

35 `\documentclass{hu-berlin-letter}`

Now we load the personal data-file which has the ending `.lco`.
36 `\LoadLetterOption{hu-berlin-letter-example}`

If you have the HU font installed on your computer, you can load it, too:
37 `% \setmainfont[%`
38 `%    BoldFont=ScalaSans-BoldLF,`
39 `%    Numbers=OldStyle]{ScalaSans-RegularLF}`

Now following the reference information
40 `\setkomavar{myref}{}`

41 `\setkomavar{yourref}{}`

42 `\setkomavar{yourmail}{}`

43 `\setkomavar{customer}{}`

44 `\setkomavar{invoice}{}`

45 `\setkomavar{subject}{Betreff}`

46 `\usepackage{blindtext}`

We close the preamble and start the letter
47 `\begin{document}`

The address is written as {⟨*address*⟩}
48 `\begin{letter}{%`

49 `    Erika Musterfrau\par`
50 `    Musterweg 43\par`
51 `    56789 Musterhausen%`

Closing now again.
52 `}`

53 `\opening{Sehr geehrte Frau Musterfrau,}`

This is just some blindtext.
54 `\blindtext[2]`
55 `\clearpage`
56 `\blindtext`

Closing letter

```
57 \closing{Mit freundlichen Grüßen}
```

If you still have something to say/write.

```
58 \ps PS: \dots
```

Any amendment.

```
59 \encl{%
60    Anlage 1\\
61    Anlage 2%
62 }
```

This is the distribution

```
63 \cc{%
64    Verteiler 1\\
65    Verteiler 2%
66 }
```

That's it. Done.

```
67 \end{letter}
68 \end{document}
```

And how does a example letter looks like?

Example 2

```
1   \documentclass{hu-berlin-letter}
2   \LoadLetterOption{hu-berlin-letter-example}
3   \setkomavar{myref}{}
4   \setkomavar{yourref}{}
5   \setkomavar{yourmail}{}
6   \setkomavar{customer}{}
7   \setkomavar{invoice}{}
8   \setkomavar{subject}{Betreff}
9   \usepackage{blindtext}
10  \begin{document}
11  \begin{letter}{%
12    Erika Musterfrau\par
13    Musterweg 43\par
14    56789 Musterhausen%
15  }
16  \opening{Sehr geehrte Frau Musterfrau,}
17  \blindtext[2]
18  \clearpage
19  \blindtext
20  \closing{Mit freundlichen Grüßen}
21  \ps PS: \dots
22  \encl{%
23    Anlage 1\\
24    Anlage 2%
25  }
26  \cc{%
27    Verteiler 1\\
28    Verteiler 2%
29  }
30  \end{letter}
31  \end{document}
```

₆₉ ⟨/letter⟩

3.3 Letter from markdown

₇₀ ⟨∗letter-md⟩

You need to have `pandoc` installed on your computer. To create letters via markdown and `pandoc` run from the command line:

> **!** pandoc –pdf-engine=lualatex –template hu-berlin-letter-template.latex -o YOUR-FILE.pdf YOUR-FILE.md

The `.md` file needs a section with metadata.

It starts and ends with three `---`. All necessary metadata information are listed inbetween.

₇₁ `---`
₇₂ `documentclass: hu-berlin-letter`

The following will load the `.lco`-file, you replace that with the name of your `.lco`-file.

₇₃ `sender: hu-berlin-letter-example`

You should also tell a short subject

₇₄ `subject: Short description`

And if you want to have a different language, define it now. You can choose between German (default) and English.

₇₅ `lang: english`

The information for the addressee has to be written like this:

₇₆ `addressee:`
₇₇ `- Alexander von Humboldt`
₇₈ `- Unter den Linden 6`
₇₉ `- 10099 Berlin`

₈₀ `---`

You find a list with possible options for this metadata information header below.

Now the content of your letter

₈₁ `Thank you very much for your letter.`

Let's see how this example file looks like:

> **Example 3**
>
> ```
>  1  ---
>  2  documentclass: hu-berlin-letter
>  3  sender: hu-berlin-letter-example
>  4  subject: Short description
>  5  lang: english
>  6  addressee:
>  7  - Alexander von Humboldt
>  8  - Unter den Linden 6
>  9  - 10099 Berlin
> 10  ---
> 11  Thank you very much for your letter.
> ```

82 ⟨/letter-md⟩

Here we close the example files.

83 ⟨/example⟩

Guide for Coders

1 ⟨*sty⟩

4 hu-berlin-base-package

2 ⟨*base⟩

Since we do want to compile with LuaLaTeX, we make sure that it will be compilable only with that.

3 \RequirePackage{ifluatex,luatex85}

Now a fix.[1]

```
4 \ifx\directlua\relax
5   \let\directlua\UnDeFiNeD
6 \fi
```

```
7 \ifluatex
8 \else
9 \GenericError{hu-berlin}%
10 {Please use 'LuaLaTeX' as Compiler.^^J I abort here.}
11 \fi
```

We do not need many packages. The ones we need are loaded now.

12 \RequirePackage[english,ngerman]{babel}

Common package for handling figures is **graphicx** [8].

13 \RequirePackage{graphicx}

For loading fonts.

14 \RequirePackage{fontspec}

Actually the corporate design says that the font Verdana should be used. But since this font is not included in UNIX-systems we use a derivative.

15 \setmainfont{TeX Gyre Heros}

If you have Verdana on your system you can uncomment the following line.

16 % \setmainfont{Verdana}

For the wheelchair symbol we load **marvosym** [4]

17 \RequirePackage{marvosym}

And we define various colors from the corporate design manual.

```
18 \RequirePackage{xcolor}
19 \definecolor{hu-berlin-blue}{RGB}{0,65,137}
20 \definecolor{hu-berlin-green}{RGB}{150,190,20}
21 \definecolor{hu-berlin-grey}{RGB}{169,169,169}
22 \definecolor{hu-berlin-brown}{RGB}{82,79,60}
```

---

1 https://tex.stackexchange.com/a/75065

23 `\definecolor{hu-berlin-red}{RGB}{180,0,0}`

That's all for the base package, so we close it.

24 ⟨/base⟩

25 ⟨/sty⟩

26 ⟨∗cls⟩

5 Letter

27 ⟨∗letter⟩

We load **scrlttr2** [3] which is the documentclass for letters. Furthermore we set up some options. The default language is German. But all strings are also available for English. You can load English as option to the documentclass.

28 `\DeclareOption*{\PassOptionsToClass{\CurrentOption}{scrlttr2}}`
29 `\DeclareOption{english}{\PassOptionsToPackage{ngerman,main=english}{babel}}`
30 `\DeclareOption{ngerman}{\PassOptionsToPackage{ngerman}{babel}}`
31 `\ExecuteOptions{ngerman}`
32 `\ProcessOptions\relax`

Now the documentclass itself.

33 `\LoadClass[%`
34 `  fontsize=10pt,`
35 `  version=last,`

If there is anything to debug, you can enable `visualize`

36 `  % visualize`

37 `]{scrlttr2}`

For debugging also uncomment the `\showfields{`⟨*fields*⟩`}` commanand.

38 `% \showfields{head, address, location, refline, foot}`

Since all common and basic features of the bundle are located in a separate package we load that first.

39 `\RequirePackage{hu-berlin-base}`

To get the HU logo on the second and following pages we load **scrlayer-scrpage** [2].[1]

40 `\RequirePackage{scrlayer-scrpage}`
41 `\clearpairofpagestyles`
42 `\DeclareNewLayer[`
43 `  foreground,`
44 `  voffset=\useplength{firstheadvpos},`
45 `  hoffset=\useplength{firstheadhpos},`

---

1 https://tex.stackexchange.com/a/495258/98739

```
46 width=\useplength{firstheadwidth},
47 mode=picture,
48 contents=\putUL{\raisebox{-\height}{\usekomavar{firsthead}}}
49 ]{likefirstpage.head}
50 \AddLayersToPageStyle{scrheadings}{likefirstpage.head}
51 \DeclareNewLayer[
52 foreground,
53 align=r,
54 voffset=\useplength{locvpos},
55 hoffset=\paperwidth-\useplength{lochpos},
56 width=\useplength{locwidth},
57 height=\useplength{locheight},
58 contents=\usekomavar{nextlocation},
59 %pretocontents=\layercontentsmeasure% to show the position of the layer
60 ]{likefirstpage.loc}
61 \AddLayersToPageStyle{scrheadings}{likefirstpage.head,likefirstpage.loc}
```

Now we apply the code for following pages.

```
62 \newkomavar{nextlocation}
63 \setkomavar{nextlocation}{%
64   \raggedright
65   \fontsize{7}{8.5}\selectfont
66   \pagemark
67 }
```

For better adjustments of the layout we load **geometry** [9].

```
68 \RequirePackage{geometry}
69 \geometry{%
70   a4paper
71  ,left            =25mm
72  ,bottom          =16mm
73  ,foot            =4mm
74  ,top             =77mm
75  ,headheight      =15pt
76  ,textwidth       =117mm
77  ,marginparsep    =0mm
78  ,marginparwidth =0mm
79 }
```

Main Text and signature should be raggedright.

```
80 \renewcommand*{\raggedsignature}{\raggedright}
81 \raggedright
```

We also want to put the enclosures at the bottom of the page.[2]

```
82 \def\stopletter{}
83 \let\enclold\encl
84 \renewcommand\encl[1]{\vskip0ptplus1filll\enclold{#1}}
```

---

2 https://tex.stackexchange.com/questions/77991/put-the-encl-at-the-bottom-of-the-page-lettre-cl

We define new `komavar`s and we make it for German and for English as well.

```
85 \providecaptionname{english}{\hubCCseparator}{Copy to}
86 \providecaptionname{english}{\hubEnclSeparator}{Attachment}
87 \providecaptionname{english}{\hubMyRef}{Reference:}
88 \providecaptionname{english}{\hubFromName}{Clerk:}
89 \providecaptionname{english}{\hubDate}{Date:}
90 \providecaptionname{english}{\hubAddress}{Postal address:}
91 \providecaptionname{english}{\hubConnections}{Public transport:}
92 \providecaptionname{english}{\hubOffice}{Office:}
93 \providecaptionname{english}{\hubBank}{Bank:}
94 \providecaptionname{english}{\hubOfficeHours}{Consultation hours:}
95 \providecaptionname{english}{\hubAccessibility}{Entrance:}
```

Now for German.

```
96  \providecaptionname{ngerman}{\hubCCseparator}{Kopie an}
97  \providecaptionname{ngerman}{\hubEnclSeparator}{Anlage}
98  \providecaptionname{ngerman}{\hubMyRef}{Geschäftszeichen:}
99  \providecaptionname{ngerman}{\hubFromName}{Bearbeiter:}
100 \providecaptionname{ngerman}{\hubDate}{Datum:}
101 \providecaptionname{ngerman}{\hubAddress}{Postanschrift:}
102 \providecaptionname{ngerman}{\hubConnections}{Verkehrsverbindungen:}
103 \providecaptionname{ngerman}{\hubOffice}{Sitz:}
104 \providecaptionname{ngerman}{\hubBank}{Bank:}
105 \providecaptionname{ngerman}{\hubOfficeHours}{Sprechzeiten:}
106 \providecaptionname{ngerman}{\hubAccessibility}{Eingang:}
```

First the possibility to name the faculty,

```
107 \newkomavar{faculty}
108 \newkomafont{faculty}{\bfseries\fontsize{8.5}{10}\selectfont}
```

then the institute

```
109 \newkomavar{institute}
110 \newkomafont{institute}{\fontsize{8.5}{10}\selectfont}
```

and further fields for information.

```
111 \newkomavar{institute.additional}
```

We pass the name of the head of the institute.

```
112 \newkomafont{institute.head}{\bfseries}
113 \newkomavar{institute.head}%
```

Its position will be written as the optional argument.

There is even the possibility to print the email-address onto the letter.

```
114 \newkomavar{institute.head.mail}%
```

Since there are many buildings with offices we tell where to find the sender

```
115 \newkomavar{office}
116 \setkomavar*{office}{\hubOffice}
```

and how to get there.

```
117 \newkomavar{connections}
```

```
118 \setkomavar*{connections}{\hubConnections}
```

Furthermore we inform about office hours
```
119 \newkomavar{officehours}
120 \setkomavar*{officehours}{\hubOfficeHours}
```

and if there is accessibility for wheelchairs etc.
```
121 \newkomavar{accessibility}
122 \setkomavar*{accessibility}{{\large\reflectbox{\Wheelchair}} \hubAccessibility
```

```
123 \newkomavar{bank}
124 \setkomavar*{bank}{\hubBank}
125 \setkomavar{bank}{Deutsche Bank PGK AG}
126 \newkomavar{IBAN}
127 \setkomavar{IBAN}{\mbox{IBAN DE95 1007 0848 0512 6206 01}}
128 \newkomavar{BIC}
129 \setkomavar{BIC}{BIC DEUTDEDB110}
```

Now we set the location field, which is the section on the right with additional information:
```
130 \setkomavar{location}{%
```

First anything regarding the font
```
131   \raggedright
132   \fontsize{7}{8.5}\selectfont
133 %     \begin{macrocode}
134 % and for the section of faculty, institute etc. we use \env{minipage}
135 %     \begin{macrocode}
136 \begin{minipage}[t][64mm]{\useplength{locwidth}}
```

then the faculty
```
137 \Ifkomavarempty{faculty}
```

This is a fake space to avoid any trouble if no custom metadata are given.
```
138   {\hspace*{1em}}
139   {\usekomafont{faculty}%
140    \usekomavar{faculty}\\[1\baselineskip]}
```

and the institute.
```
141 \Ifkomavarempty{institute}
142   {}
143   {\usekomafont{institute}\usekomavar{institute}\\[1\baselineskip]}
```

Now anything else regarding the institute.
```
144 \Ifkomavarempty{institute.additional}
145   {}
146   {\usekomavar{institute.additional}\\[1\baselineskip]}
```

What follows is the head of institute and its position name.
```
147 \Ifkomavarempty{institute.head}
148   {}
149   {{\usekomafont{institute.head}%
150    \usekomavar{institute.head}}\\%
```

```
151  \usekomavar*{institute.head}}
```

We close this section and the minipage.

```
152  \end{minipage}
```

Let's turn to further information.
For example date:

```
153    \textbf{\usekomavar*{date}}\\
154    \usekomavar{date}\par
```

and the sender of the letter.

```
155 \Ifkomavarempty{fromname}
156  {}
157  {\textbf{\usekomavar*{fromname}}\\
158    \usekomavar{fromname}\par}
```

And the reference of correspondence.

```
159 \Ifkomavarempty{myref}
160  {}
161  {\textbf{\usekomavar*{myref}}\\
162    \usekomavar{myref}\par}
```

To complete this template we provide the possibility to name further reference fields.

```
163 \Ifkomavarempty{yourref}
164  {}
165  {\textbf{\usekomavar*{yourref}}\\
166    \usekomavar{yourref}\par}

167 \Ifkomavarempty{yourmail}
168  {}
169  {\textbf{\usekomavar*{yourmail}}\\
170    \usekomavar{yourmail}\par}

171 \Ifkomavarempty{customer}
172  {}
173  {\textbf{\usekomavar*{customer}}\\
174    \usekomavar{customer}\par}

175 \Ifkomavarempty{invoice}
176  {}
177  {\textbf{\usekomavar*{invoice}}\\
178    \usekomavar{invoice}\par}

179    \textbf{\usekomavar*{fromaddress}}\\
180    \usekomavar{fromaddress}
181    \Ifkomavarempty{fromphone}
182      {\par}
183      {\\\usekomavar*{fromphone}\usekomavar{fromphone}
184       \Ifkomavarempty{fromfax}
185      {\par}
186      {\\}}
```

```
187    \Ifkomavarempty{fromfax}
188      {}
189      {\usekomavar*{fromfax}\usekomavar{fromfax}\par}
```

Next, emails and url:

```
190 \Ifkomavarempty{institute.head.mail}
191    {}
192    {\usekomavar{institute.head.mail}
193    \Ifkomavarempty{fromemail}
194    {\Ifkomavarempty{fromurl}
195     {\par}
196     {\\}}
197    {\\}}

198 \Ifkomavarempty{fromemail}
199    {}
200    {\usekomavar{fromemail}
201    \Ifkomavarempty{fromurl}
202    {\par}
203    {\\}}

204 \Ifkomavarempty{fromurl}
205    {}
206    {\usekomavar{fromurl}\par}
```

Now the actual location of the sender

```
207 \Ifkomavarempty{office}
208    {}
209    {\textbf{\usekomavar*{office}}\\
210    \usekomavar{office}\par}
```

The last information section should be pinned to the bottom.

```
211 \vfill
```

Inform your addressee about the connection possibilities.

```
212 \Ifkomavarempty{connections}
213    {}
214    {\textbf{\usekomavar*{connections}}\\
215    \usekomavar{connections}\par}

216 \Ifkomavarempty{officehours}
217    {}
218    {\textbf{\usekomavar*{officehours}}\\
219    \usekomavar{officehours}\par}
```

If there is a barrier free entrance, tell it.

```
220 \Ifkomavarempty{accessibility}
221    {}
222    {\textbf{\usekomavar*{accessibility}}\\
223    \usekomavar{accessibility}\par}
```

And last the bank connection

```
224 \Ifkomavarempty{bank}
225   {}
226   {\textbf{\usekomavar*{bank}}}\\
227   \usekomavar{bank}\\
228   \usekomavar{IBAN}\\
229   \usekomavar{BIC}
230   }
```

Finally we close `\setkomavar{⟨location⟩}`

```
231 }
```

To fulfill the Corporate Design rules we adjust a few things.

```
232 \KOMAoptions{%
233   numericaldate =true
234  ,refline        =nodate
235  ,backaddress    =plain
236  ,parskip        =half-
237 }
```

Getting rid of all other fields and their default position.

```
238 \removereffields
```

Redefining length.

```
239 \setplength{refvpos}{110mm}
240 \setplength{refaftervskip}{0pt}
241 \setplength{toaddrhpos}{25mm}
242 \setplength{firstheadhpos}{\useplength{toaddrhpos}}
243 \setplength{lochpos}{15mm}
244 \setplength{locvpos}{\useplength{toaddrvpos}}
245 \addtoplength{locvpos}{.75\baselineskip}
246 \setplength{locwidth}{45mm}
247 \setplength{locheight}{232mm}
```

Now resetting or pre-defining some variables.

First we set the head of the first page, which is the logo. Be sure that you have the right using it! Everything regarding the logo is defined in the corporate design guidlines.[3] You need to have the actual logo of the Humboldt-Universität zu Berlin which has to be called `hu-berlin-logo.pdf`. It can be downloaded here: http://zope.hu-berlin.de/hu-intern/design/downloads/logo If this logo is not found a replacement text is shown instead.

```
248 \setkomavar{firsthead}{%
249 \IfFileExists{hu-berlin-logo.pdf}
250   {\includegraphics[width=145mm]{hu-berlin-logo.pdf}}
251   {{\vspace*{2em}\hfil\scshape [humboldt-universität zu berlin]}}%
252 }
```

```
253 \setkomavar{backaddressseparator}{~\textbar~}
```

---

3 https://www.hu-berlin.de/de/hu-intern/design/basiselemente/
leitfaden-corporate-design-hu.pdf

```
254 \setkomavar{fromphone}{0000}
255 \setkomavar*{fromphone}{Telefon +49 [30] 2093-}

256 \setkomavar{fromfax}{0000}
257 \setkomavar*{fromfax}{Telefax +49 [30] 2093-}

258 \setkomavar*{fromaddress}{\hubAddress}
259 \setkomavar{fromaddress}{%
260   Humboldt-Universität zu Berlin\\
261   Unter den Linden 6\\
262   D-10099 Berlin}
```

The default backaddress is slightly changed:

```
263 \setkomavar{backaddress}{%
264   Humboldt-Universität zu Berlin\\
265   UdL 6\\
266   D-10099 Berlin}

267 \setkomavar*{date}{\hubDate}

268 \setkomavar*{fromname}{\hubFromName}

269 \setkomavar*{myref}{\hubMyRef}

270 \setkomavar*{enclseparator}{\hubEnclSeparator}

271 \setkomavar*{ccseparator}{\hubCCseparator}

272 % \RequirePackage{hyperref}
273 % \AtBeginDocument{{
274 %   \usekomavar[\def\author]{fromname}
275 %   \usekomavar[\def\subject]{subject}
276 %   \hypersetup{%
277 %     pdftitle          = {\subject},
278 %     pdfauthor         = {\author},
279 %     pdfsubject        = {\subject},
280 %     pdfkeywords       = {\author, \subject},
281 %     pdflang           = de,
282 %     pdfdisplaydoctitle = true,
283 %     colorlinks        = true,
284 %     plainpages        = false,
285 %     hypertexnames     = false,
286 %     unicode,
287 %   }
288 % }}

289 ⟨/letter⟩

290 ⟨/cls⟩

291 ⟨*template⟩
```

6 Boilerplate / Template for letters

292 ⟨∗letter-md⟩

Defining the documentclass and the language, too.

```
293 \documentclass[
294 $if(lang)$$lang$$else$german$endif$
295 ]{hu-berlin-letter}
```

We predefine two variables.

```
296 \newkomavar{opening}
297 \newkomavar{closing}
298 \setkomavar{opening}{Sehr geehrte Damen und Herren}
299 \setkomavar{closing}{Mit freundlichen Grüßen}

300 $for(letteroption)$
301 \LoadLetterOption{$letteroption$}
302 $endfor$
303 $if(sender)$\LoadLetterOption{$sender$}$endif$
304 $if(addresseeimage)$\setkomavar{addresseeimage}{$addresseeimage$}$endif$
305 $if(backaddress)$\setkomavar{backaddress}{$backaddress$}\KOMAoptions{backaddr
306 $if(fromalign)$\KOMAoptions{fromalign=$fromalign$}$endif$
307 $if(customer)$\setkomavar{customer}{$customer$}$endif$
308 $if(date)$\setkomavar{date}{$date$}$endif$
309 $if(fromaddress)$\setkomavar{fromaddress}{$fromaddress$}$endif$
310 $if(frombank)$\setkomavar{frombank}{$frombank$}$endif$
311 $if(fromemail)$\setkomavar{fromemail}{$fromemail$}\KOMAoptions{fromemail=true
312 $if(fromfax)$\setkomavar{fromfax}{$fromfax$}\KOMAoptions{fromfax=true}$endif$
313 $if(fromlogo)$\setkomavar{fromlogo}{$fromlogo$}\KOMAoptions{fromlogo=true}$en
314 $if(frommobilephone)$\setkomavar{frommobilephone}{$frommobilephone$}\KOMAopti
315 $if(fromname)$\setkomavar{fromname}{$fromname$}$endif$
316 $if(fromphone)$\setkomavar{fromphone}{$fromphone$}\KOMAoptions{fromphone=true
317 $if(fromurl)$\setkomavar{fromurl}{$fromurl$}\KOMAoptions{fromurl=true}$endif$
318 $if(fromzipcode)$\setkomavar{fromzipcode}{$fromzipcode$}$endif$
319 $if(invoice)$\setkomavar{invoice}{$invoice$}$endif$
320 $if(location)$\setkomavar{location}{$location$}$endif$
321 $if(myref)$\setkomavar{myref}{$myref$}$endif$
322 $if(myrefname)$\setkomavar*{myref}{$myrefname$}$endif$
323 $if(place)$\setkomavar{place}{$place$}$endif$
324 $if(PPcode)$\setkomavar{PPcode}{$PPcode$}$endif$
325 $if(signature)$\setkomavar{signature}{$signature$}$endif$
326 $if(specialmail)$\setkomavar{specialmail}{$specialmail$}$endif$
327 $if(subject)$\setkomavar{subject}{$subject$}$endif$
328 $if(title)$\setkomavar{title}{$title$}$endif$
```

```
329 $if(yourmail)$\setkomavar{yourmail}{$yourmail$}$endif$
330 $if(yourref)$\setkomavar{yourref}{$yourref$}$endif$
331 $if(opening)$\setkomavar{opening}{$opening$}$endif$
332 $if(closing)$\setkomavar{closing}{$closing$}$endif$
333 $if(firstfoot)$\setkomavar{firstfoot}{$firstfoot$}$endif$
```

Ok, let's sum up the possible options you can use to pass data to the letter:
- addresseeimage
- backaddress
- customer
- date
- fromaddress
- frombank
- fromemail
- fromfax
- fromlogo
- frommobilephone
- fromname
- fromphone
- fromurl
- fromzipcode
- invoice
- location
- myref
- myrefname
- place
- PPcode
- signature
- specialmail
- subject
- title
- yourmail
- yourref
- opening
- closing
- firstfoot

Sometimes you might not have an addressee – we are checking this, too.

```
334 $if(addressee)$
335 $else$
336 \KOMAoptions{addrfield=false}
337 $endif$
```

Now the actual content of the letter

```
338 \begin{document}
339 \begin{letter}{%
340 $for(addressee)$
341 $addressee$$sep$\\
```

```
342 $endfor$
343 }
344 $for(include-before)$
345 $include-before$
346 $endfor$
347 \opening{\usekomavar{opening}}
348 $body$
349 \closing{\usekomavar{closing}}
350 $if(ps)$\ps{$ps$}$endif$
351 $if(encl)$\encl{$encl$}$endif$
352 $for(include-after)$$include-after$$endfor$
353 \end{letter}
354 \end{document}

355 ⟨/letter-md⟩
356 ⟨/template⟩
```

7 Documentation preamble `<style>`

```
357 ⟨*sty⟩
358 ⟨*style⟩
359 \makeatletter
360 \addtolength\marginparwidth{-40pt}
361 \addtolength\marginparsep{4mm}
362 \addtolength\oddsidemargin{-20pt}
363 \addtolength\evensidemargin{-20pt}
364 \let\PrintDescribeMacro=\@gobble
365 \let\PrintDescribeEnv=\@gobble
366 % \def\Describe@Macro#1{\endgroup
367 %     %\marginnote{\PrintDescribeMacro{#1}}%
368 %     \SpecialUsageIndex{#1}\@esphack\ignorespaces%
369 %     }
370 %\def\Describe@Env#1{\endgroup
371 %     %\marginnote{\PrintDescribeEnv{#1}}%
372 %     \SpecialEnvIndex{#1}\@esphack\ignorespaces%
373 %     }
374 \makeatother
375 \AtBeginDocument{\normalmarginpar}
376 \setlength\MacrocodeTopsep{.5\baselineskip}
377 \setlength\MacroIndent{6mm}
378
379
380 \RequirePackage{luatexbase}
```

```
381 \RequirePackage[ngerman,english]{babel}
382 \RequirePackage{calc}
383
384 \RequirePackage[
385   paper       = a4paper,  % - use A4 paper size
386   foot        = 2cm,
387   inner       = 3cm,  %  - total body: left margin (odd pages)
388   top         = 3cm,  %  - total body: top margin
389   outer       = 3cm,  %  - total body: right margin (odd pages)
390   bottom      = 3cm,  %  - total body: bottom margin
391   marginparwidth = 2cm,  %  - width for side note
392   marginparsep  = .5cm,  %  - space between notes and body text (content)
393 %  showframe,
394 ]{geometry}
395
396 \newlength\fullwidth
397 \setlength\fullwidth{\textwidth+\marginparwidth+\marginparsep}
398
399 \KOMAoptions{
400 numbers     = noenddot,
401 }
402 \AtBeginDocument{
403   \KOMAoptions{
404 % headwidth  = {\fullwidth},
405 % footwidth  = {\fullwidth},
406 footheight = 20pt,
407 headheight = 29pt,
408 captions   = tableheading,
409 }}
410
411
412
413 \title{\huberlintitle}
414 %\subtitle{\huberlinsubtitle}
415 \author{\huberlinauthor}
416 \date{\Version}
417
418
419 %---- Required Packages
420 \RequirePackage{ifluatex,luatex85}
421 \ifx\directlua\relax
422   \let\directlua\UnDeFiNeD
423 \fi
424 \ifluatex
425 \else
426 \GenericError{hu-berlin}%
427  {Please use 'LuaLaTeX' as Compiler.^^J I abort here.}
```

```
428 \fi
```

For fonts we load the package **fontspec** [7] which has almost no limits handling font-stuff.

```
429 \RequirePackage{fontspec}

430 \RequirePackage[mono=false]{libertine}
431 \RequirePackage{amssymb}
432
433 \defaultfontfeatures{%
434   Ligatures = TeX
435 }
```

For fonts we use the available `TeX Gyre Pagella` as main font.[1]

```
436 \setmainfont[%
437    Ligatures = TeX
438   ,Numbers   = OldStyle]{TeX Gyre Pagella}
```

And we declare also the other fonts, too.

```
439 \setmonofont[%
440   Scale=1
441 ]{TeX Gyre Cursor}
442 \setsansfont[%
443   ,LetterSpace = .8
444 ]{TeX Gyre Adventor-Regular}
445 \linespread{1.05}
446
447
448
449 \RequirePackage{marginnote}
450 \renewcommand*{\marginfont}{%
451   \rule{0pt}{0.7\baselineskip}%
452   \footnotesize%
453   \color{hu-berlin-brown}}
454
455 \RequirePackage[
456   german = guillemets,
457   style  = german,
458 ]{csquotes}
459
460 \RequirePackage{enumitem}
461 \setlist{
462   nosep,
463   % itemindent=1em,
464   % labelindent=0.5\parindent,
465   leftmargin=*}
466 \newlist{tabitemize}{itemize}{2}% neue Listenumgebung
467 \setlist[tabitemize]{%
```

---

1 http://www.gust.org.pl/projects/e-foundry/tex-gyre

```
468   nosep,
469   leftmargin=*
470 }
471 \setlist[tabitemize,1]{label=\labelitemi}
472 \setlist[tabitemize,2]{label=\labelitemii}
473
474
475 \clubpenalty=10000  % prevent single lines at the beginning of a paragraph (S
476 \widowpenalty=10000  % prevent single lines at the end of a paragraph (Hurenk
477 \displaywidowpenalty=10000    %
478
479 \RequirePackage{pdfpages}
480 \RequirePackage{biblatex}
481 \addbibresource{\jobname-bibliography.bib}
482 \addbibresource{\jobname-ctan.bib}
483 \RequirePackage{ccicons} %creative commons
484 \RequirePackage{xparse}
485 \RequirePackage{ragged2e}
486 \RequirePackage{microtype}
487 \RequirePackage{xspace}
488 \RequirePackage{graphicx}
489 \graphicspath{{img/}}

490 \RequirePackage{etoolbox}
491 %https://tex.stackexchange.com/a/235881/98739
492 \AfterEndPreamble{%
493   \maketitle
494   \renewcommand\MacroFont{\ttfamily}
495   \renewcommand\AltMacroFont{\ttfamily\linespread{.8}}}% slanted verbatim
496 }
497
498 % https://tex.stackexchange.com/a/401466/98739
499 \makeatletter
500 \renewcommand*{\maketitle}{%
501   % taken and shortened from /usr/share/texmf/tex/latex/koma-script/scrartcl.
502   \begin{titlepage}
503   \newgeometry{left=3cm,right=3cm,top=1.5cm,bottom=2cm}
504   \global\@topnum=\z@
505   \setparsizes{\z@}{\z@}{\z@\@plus 1fil}\par@updaterelative
506   \null
507    {\large\@author\hfill \href{mailto:lukas@texografie.de}{lukas@texografie.de}\
508   \vskip 10em%
509 {\begin{center}\color{hu-berlin-blue}
510 {\fontsize{50}{55}\selectfont\huberlinshort{} \par\vskip .5em%
511 \Large\sffamily\@title}\par
512 \vskip .5em
513 \end{center}}%
```

```
514 {\ifx\@subtitle\@empty\else\usekomafont{subtitle}\@subtitle\par\fi}%
515 \null\vskip 5em%
516 \blockcquote[195]{Hoare1973}{Documentation must be regarded as an integral pa
517  A good programming language will encourage and assist the programmer to writ
518  self-documenting code,
519  and even perhaps to develop
520  and display a pleasant style
521  of writing.}
522 \null\vfill
523 {\usekomafont{subtitle}{\@date \hfill
524 \includegraphics[width=4cm]{img/texografie-logo.pdf}\\}}%
525   \par
526  \vskip 0em
527   \restoregeometry
528   \end{titlepage}
529 }%
530 \makeatother
531
532 \RequirePackage{xcolor}
533 \definecolor{hu-berlin-blue}{RGB}{0,65,137} % HEX 004189
534 \definecolor{hu-berlin-green}{RGB}{150,190,20} % HEX 93C11A % Topoi
535 \definecolor{hu-berlin-grey}{RGB}{169,169,169}
536 \definecolor{hu-berlin-brown}{RGB}{82,79,60}
537 \definecolor{hu-berlin-red}{RGB}{180,0,0}
538
539
540 \RequirePackage{dirtree}
541 \renewcommand*\DTstylecomment{%
542   \color{hu-berlin-grey}%
543   \footnotesize%
544   \sffamily}
545 \renewcommand*\DTstyle{%
546   \ttfamily%
547   \small%
548   }
549
550 \RequirePackage[
551   markcase     = noupper,
552   footsepline = .5pt,
553   % headsepline = .5pt,
554   autooneside = false,% use left and right marks with a onesided document
555   automark,% set \leftmark and \rightmark automatically by *\section and \sub
556   draft  = false,
557   ]{scrlayer-scrpage}
558
559 \pagestyle{scrheadings}
560 \clearpairofpagestyles
```

```
561 \rofoot*{\thepage}
562 \lofoot*{\textcolor{hu-berlin-blue}{\huberlintitle}\ \vrule\ \textcolor{hu-
    berlin-brown}{\huberlinsubtitle}}
563 \rohead*{hu-berlin-bundle}
564 \lohead*{Version: \Version}

565 % https://tex.stackexchange.com/a/352925/98739
566 \newcommand*\partnumber{}
567 \DeclareNewLayer[
568   background,
569   textarea,
570   addwidth=\marginparsep+\marginparwidth,
571   mode=picture,
572   contents={%
573 \putC{\makebox[0pt][c]{\raisebox{-.5\height}{\scalebox{50}{\textcolor{black!5
574   }
575 ]{partnumber}
576 \DeclareNewPageStyleByLayers{part}{partnumber}
577 \renewcommand\partpagestyle{part}
578 \renewcommand*{\partformat}{\gdef\partnumber{\thepart}}
579
580 % only a dirty workaround for the part title
581 \newcommand*\changedpartwidth[1]{%
582   \makebox[\linewidth][l]{%
583 \parbox{\dimexpr\textwidth+\marginparsep+\marginparwidth\relax}{\raggedpart#1
584   }%
585 }
586 % add \changedpartwidth as last command to the settings for font element part
587 \addtokomafont{part}{\Huge\changedpartwidth}
588
589
590
591 %-https://tex.stackexchange.com/a/339516/98739 | https://tex.stackexchange.co
592 % footnotes in the footer:
593 \deffootnote%
594   %[\normalparindent]%<width of mark>
595   {0.0cm}%<indent of footnote text>
596   {\normalparindent}%<paragraph indent in the footnote text>
597   {\makebox[\normalparindent][r]%
598   {\thefootnotemark\hspace*{3pt}}}}%<definition of mark>
599 \newlength{\normalparindent}
600 \AtBeginDocument{\setlength{\normalparindent}{\parindent}}
601 \setfootnoterule{0pt}% Kein Fußnotenstrich
602 %\setfootnoterule[<height>]{<length>}
603
```

This will put the numbers of the chapters and sections into the margin.

```
604 \renewcommand\sectionlinesformat[4]{%
```

```
605    \makebox[0pt][r]{#3}#4%
606 }

607 \RequirePackage{url}
608 %   \urlstyle{same}
609
610 \setkomafont{title}{\sffamily\color{hu-berlin-blue}\flushleft\bfseries}
611 \setkomafont{disposition}{\color{hu-berlin-brown}\sffamily\bfseries\large}
612 \setkomafont{section}{\usekomafont{disposition}}
613 \setkomafont{subsection}{\usekomafont{disposition}}
614 \setkomafont{subsubsection}{\usekomafont{disposition}}
615 % \setkomafont{paragraph}{\bfseries}
616 % \setkomafont{subsubsection}{\sffamilybold}
617 \setkomafont{subtitle}{\large\color{hu-berlin-brown}\sffamily\flushleft}
618 \setkomafont{pageheadfoot}{\footnotesize\sffamily\color{hu-berlin-
   grey}}
619 \setkomafont{descriptionlabel}{\bfseries}
620 \setkomafont{footnotelabel}{\bfseries}
621 \addtokomafont{titlehead}{\flushright}
622 % \setkomafont{headsepline}{\color{hu-berlin-blue}}
623 %\setkomafont{marginnote}{\MakeUppercase\color{hu-berlin-brown}}
624 \addtokomafont{caption}{\scriptsize}
625 \setkomafont{captionlabel}{\bfseries\sffamily}
626 \setkomafont{subject}{\bfseries\sffamily}
627 \setcapindent{0pt}
628
629 \raggedbottom
630
631 \RequirePackage{listings}
632 \PassOptionsToPackage{final}{listings}
633 \RequirePackage[%
634    skins
635   ,listings
636   ,breakable
637   ,xparse
638   ,documentation
639 ]{tcolorbox}
640 \lstMakeShortInline[language=TeX,basicstyle=\ttfamily]|
```

Following we load **hyperxmp** [6] and **hyperref** [5] for PDF-meta data and interactive
linked text.

```
641 \RequirePackage{hyperxmp}
642 \RequirePackage{hyperref}
643 \hypersetup{% setup the hyperref-package options
644    unicode     = true,
645    pdfauthor        = {hu-berlin}, %  – author (PDF meta)
646    pdfauthortitle      = {},
647    pdfcopyright  = {Copyright (c) \the\year . All rights reserved.},
```

```
648   pdfhighlight   = /N,
649   pdfdisplaydoctitle = true,
650   pdflang     = {},%de en
651   pdfcaptionwriter   = {Lukas C. Bossert},
652   pdfkeywords    = {hu-berlin},
653   pdfencoding    = auto,
654   pdfproducer    = {hu-berlin with LuaLaTeX},
655   bookmarksnumbered  = true,
656   bookmarksopenlevel = 2,
657   bookmarksopen  = true,
658   bookmarksdepth = 3,
659   colorlinks     = true,     %Colours links instead of ugly boxes
660   urlcolor       = hu-berlin-blue,    %Colour for external hyperlinks
661   linkcolor      = black,   %Colour of internal links
662   citecolor      = black,   %Colour of citations
663   linktoc        = page,
664   pdfborder      = {0 0 0},
665   breaklinks     = true,  %allow line break inside links
666   final
667 }
668 \RequirePackage{bookmark}
669 \AtBeginDocument{%
670 \RequirePackage[
671   sort,
672   nameinlink,
673   compress,
674   ngerman,english
675 ]{cleveref}
676 }
677
678 %---- newcommands
679 \newcommand{\TeXografie}{Lukas C. Bossert
680   (www.texografie.de)}
681 \newcommand\huberlin{\huberlintitle\xspace}
682
683
684 \newcommand\huberlinFolder{%
685   \begingroup%
686   \normalfont%
687   \color{hu-berlin-blue}%
688   % \faFolderOpen% taken from fontawesome
689   \hspace{.3em}%
690   \endgroup}
691
692
693
694 \RedeclareSectionCommands[
```

```
695    tocraggedpagenumber,
696    toclinefill=\tocpageseparator,
697    tocindent=0em,
698    tocnumwidth=4em,
699    tocpagenumberbox=\tocpagenumberbox% <- added
700 %   tocpagenumberformat=\textsf,
701 ]{chapter,section,subsection,subsubsection,paragraph}
702
703 \newcommand\tocgobble[1]{}% <- added
704 \newcommand\tocpageseparator{\footnotesize\,\mbox{---}\,}
705 \newcommand\tocpagenumberbox[1]{\mbox{#1}}% <- added
706 \KOMAoptions{toc=indentunnumbered}
707
708 \RedeclareSectionCommand[
709 %   tocbeforeskip=1.25em plus 1pt
710     ,tocentryformat=\large\scshape%
711     ,tocindent=0em
712     ,tocnumwidth=4em
713     ,tocpagenumberbox=\tocgobble% <- added
714 ]{part}
715 %\addtokomafont{partentry}{\scshape\sffamily\bfseries}
716
717 \RedeclareSectionCommand[%
718 %     ,beforeskip=1.15em plus 1pt%
719 ,tocentryformat=\textbf%
720    %   ,toclinefill={\TOCLineLeaderFill}%\TOCLineLeaderFill[\textbf{.}]
721 ]{chapter}
722
723
724 \newtcolorbox{example}[1][]{
725    breakable,
726    top=5pt,
727    bottom=5pt,
728    colback=hu-berlin-blue!10,
729    colframe=hu-berlin-blue,
730    left=5pt,
731    right=5pt,
732     sharp corners,
733    boxrule=0pt,
734    bottomrule=2pt,
735    toprule=2pt,
736     enhanced jigsaw,
737    lefttitle=0pt,
738     coltitle=white,
739     fonttitle=\bfseries,
740     fontupper=\small,%\ttfamily,
741    % colbacktitle=hu-berlin-blue!20
```

```
742   #1,
743 }
744
745 % Replace the squat-u symbol for spaces
746 % https://tex.stackexchange.com/a/488123/98739
747 \makeatletter
748 \def\lst@visiblespace{\lst@ttfamily{\char32}$\textcolor{hu-berlin-
    grey}{\cdot}$}
749 \makeatother
750
751
752 \lstset{%
753   basicstyle = \linespread{0.7}\ttfamily
754   ,breaklines = true
755   ,breakatwhitespace
756   ,alsoletter=\\\{\}\*\[\]\-
757   ,showstringspaces=true
758   }
759
760 \lstdefinestyle{hu-berlinlistingstyledef}{%
761   tabsize        = 4,
762   breaklines     = true,
763   breakatwhitespace = true,
764   postbreak=\mbox{$\hookrightarrow$},
765   %keepspaces    = true,
766   escapeinside = {(*@}{@*)},
767   moredelim     = {[is][\ttfamily\bfseries\color{hu-berlin-blue}]{|}{|}},
768   moredelim     = {[is][\ttfamily\bfseries\color{hu-berlin-blue}]{|1}{1|}},
769   moredelim     = {[is][\ttfamily\bfseries\color{hu-berlin-red}]{|2}{2|}},
770   aboveskip=0pt,
771   belowskip=0pt,
772   captionpos=b,
773   resetmargins=true,
774   sensitive=true,
775   upquote=true,
776   showspaces=true,
777   showtabs=true,
778   tab=\textcolor{hu-berlin-grey}{\rightarrowfill},
779   %numbers=left,
780   %numberstyle=\footnotesize\ttfamily\color{hu-berlin-grey},
781   comment       = [l]{\%},
782   commentstyle = \footnotesize\color{hu-berlin-grey}\addfontfeature{LetterSpa
783   % deletecomment = [l]{\%<}
784   % morecomment  = [l][\nullfont]{\%<},
785   % deletecomment  = [is]{\%<}{>},
786 }
787
```

```
788 \lstdefinestyle{hu-berlinlistingstyle}{%
789   language  = {TeX},
790   style     = {hu-berlinlistingstyledef},
791 }
792
793
794
795
796
797
798 \tcbset{%
799 hu-berlinstyle/.style={%
800   enhanced,
801   before skip=2mm,
802   after skip=3mm,
803   boxrule=0.7pt,
804   left=2mm,
805   right=2mm,
806   top=2mm,
807   bottom=2mm,
808   sharp corners,
809   colback=white,
810   colbacklower=white,
811   % fonttitle=\sffamily\bfseries,
812   breakable,
813   %before skip=\baselineskip,
814   coltitle=white,
815   colbacktitle=hu-berlin-blue!50!black,
816   fonttitle=\bfseries\sffamily\footnotesize,
817   % before upper={\mynote{\thetcbcounter}},
818   title={\hfill{Example \thetcbcounter}},
819   },
820 codecomment/.style={%
821   listing outside comment,%
822   boxrule=0pt,
823   colback=white,
824   }
825 }
826
827 \newtcolorbox{warning}[1][]{
828   enhanced,
829   before skip=2mm,
830   after skip=3mm,
831   boxrule=0.7pt,
832   left=5mm,
833   right=2mm,
834   top=2mm,
```

```
835   bottom=2mm,
836   colback=white,
837   colframe=yellow!20!black,
838   sharp corners,
839   rounded corners=southeast,
840   arc is angular,
841   arc=3mm,
842   underlay={%
843 \path[fill=hu-berlin-grey!80!black] ([yshift=3mm]interior.south east)--
   ++(-0.4,-0.1)--++(0.1,-0.2);
844 \path[draw=hu-berlin-grey,shorten <=-0.05mm,shorten >=-0.05mm] ([yshift=3mm]i
   ++(-0.4,-0.1)--++(0.1,-0.2);
845 \path[fill=red!50!black,draw=none] (interior.south west) rectangle node[white]
846 },
847   drop fuzzy shadow,
848   #1
849   }
850
851 \AtBeginDocument{%
852 \newtcblisting[%
853   auto counter,
854   crefname   = {example}{examples},
855   Crefname   = {Example}{Examples},
856 ]{codetext}[2][]{%
857   hu-berlinstyle,
858 %   side text,
859   rounded corners=northeast,
860   arc=6mm,
861   listing style=hu-berlinlistingstyle,
862   label = #2,
863   #1,
864   }
865
866 \newtcblisting[%
867   use counter from=codetext,
868   crefname={code example}{code examples},
869   Crefname={Code example}{Code examples}%
870 ]{huberlincode}[2][]{%
871   hu-berlinstyle,
872   rounded corners=southeast,
873   arc=6mm,
874   listing only,
875   listing style=hu-berlinlistingstyle,
876   label = #2,
877   #1,
878 }
879
```

```
880
881 \DeclareTCBInputListing[%
882   use counter from=codetext,
883   crefname={code example}{code examples},
884   Crefname={Code example}{Code examples}%
885 ]{\huberlinlisting}{ O{} m }{%
886   hu-berlinstyle,
887   listing file={#2},
888   listing only,
889     listing style=hu-berlinlistingstyle,
890   #1,
891 }
892 }

893 \makeatletter
894 \newrobustcmd*{\fnurl}[1][]{\hyper@normalise\ltd@fnurl{#1}}
895 \def\ltd@fnurl#1#2{\footnote{#1\hyper@linkurl{\Hurl{#2}}{#2}}}
896 \makeatother
```

The first command is used to refrence packages with: `\\pkg{`⟨*package name*⟩`}`.[2] The name of the package is linked to its entry on CTAN and refrenced to the bibliography in the end of this documentation.

```
897 \RequirePackage{newfile}
898 \newoutputstream{pkglist}

899 \NewDocumentCommand{\pkg}{om}{%
900   \IfNoValueTF{#1}
901 {\lowercase{\href{http://www.ctan.org/pkg/#2}}{\textbf{#2}}}
902 {\lowercase{\href{http://www.ctan.org/pkg/#1-#2}}{\textbf{#2}}}%
903 \space\cite{#2}%
904 \addtostream{pkglist}{#2}}

905 \newrobustcmd*{\lit}[1]{\textsf{#1}}
906 \newrobustcmd*{\Code}[1]{\texttt{#1}}
907 \newrobustcmd*{\tex}{\TeX}
908 \newrobustcmd*{\etex}{\mbox{e-TeX}}
909 \newrobustcmd*{\pdftex}{pdf\-\tex}
910 \newrobustcmd*{\xetex}{Xe\-\tex}
911 \newrobustcmd*{\luatex}{Lua\-\tex}
912 \newrobustcmd*{\latex}{\LaTeX}%{La\kern-0.07em TeX}
913 \newrobustcmd*{\pdflatex}{pdf\-\latex}
914 \newrobustcmd*{\xelatex}{Xe\-\latex}
915 \newrobustcmd*{\lualatex}{Lua\-\latex}
916 \newrobustcmd*{\miktex}{Mik\-\tex}
917 \newrobustcmd*{\texlive}{\tex~live}
918 \newrobustcmd*{\bibtex}{Bib\kern-0.07em TeX}
919 \newrobustcmd*{\lppl}{\latex{} Project Public License}
```

---

2 Do not forget to insert the name of the package into the makefile in the definition of `PKG`.

```
920 \newrobustcmd*{\pdf}{{PDF}}
921 \newrobustcmd*{\md}{{MarkDown}}
922 \newrobustcmd*{\utf}{\mbox{{UTF}-8}}
923 % no \mbox here, we may have to break things
924 \newrobustcmd*{\bibfield}[1]{\Code{#1}}
925 \newrobustcmd*{\opt}[1]{\Code{#1}}
926 \newrobustcmd*{\bibmacro}[1]{\Code{#1}}
927 \newrobustcmd*{\bibtype}[1]{\Code{@#1}}
928 %\renewrobustcmd*{\cmd}[1]{\Code{\textbackslash #1}}
929 \renewrobustcmd\meta[1]{\normalfont{\textlangle}{\itshape#1\/}{\textrangle}}
930
931 % directly taken from ltxdoc.dtx
932 \renewrobustcmd\marg[1]{%
933   {\ttfamily\textcolor{hu-berlin-red}{\{}}%
934    \meta{#1}%
935   {\ttfamily\textcolor{hu-berlin-red}{\}}}%
936   }
937
938 \renewrobustcmd\oarg[1]{%
939   {\ttfamily\textcolor{hu-berlin-green}{[}}%
940    \meta{#1}%
941   {\ttfamily\textcolor{hu-berlin-green}{]}}%
942   }
943
944 % adapted from listings.dtx (lstdoc.sty)
945 \renewrobustcmd\cmd[1]{%
946   \texttt{\color{hu-berlin-blue}\textbackslash\string#1}\xspace%
947   }
948
949 \newrobustcmd\env[2][]{%
950   \texttt{%
951 \color{hu-berlin-blue}%
952 \textbackslash begin\{\string#2\}#1}%
953   \ldots
954   \texttt{%
955 \color{hu-berlin-blue}%
956 \textbackslash end\{\string#2\}}%
957   \xspace}
```

For a common layout of the parameter style to identify code of the different documents, files and packages we use `\param{`⟨*name of the parameter*⟩`}`.

```
958 \newcommand\param[1]{%
959   \begingroup%
960   \normalfont%
961   \ttfamily%
962   \bfseries%
963   \textless%
```

```
964   #1%
965   \ttfamily%
966   \bfseries%
967   \textgreater%
968   \endgroup}

969 \pdfstringdefDisableCommands{%
970   \def\lstinline#1{<#1>}
971   \def\tex{TeX}%
972   \def\etex{e-TeX}%
973   \def\xetex{XeTeX}%
974   \def\latex{LaTeX}%
975   \def\xelatex{XeLaTeX}%
976   \def\bibtex{BibTeX}%
977   \def\lppl{LaTeX Project Public License}%
978   \def\pdf{PDF}%
979   \def\utf{UTF-8}%
980   \def\\{}%
981   \def\texttt#1{<#1>}%
982   \def\marg#1{\{#1\}}%
983   \def\oarg#1{[#1]}%
984   \def\color#1#2{}%
985   \def\env#1{<#1>}
986   \def\cmd#1{#1}
987 }
988 % https://tex.stackexchange.com/a/24067/98739
989 \makeatletter
990 \patchcmd{\scr@startchapter}{\if@openright\cleardoublepage\else\clearpage\fi}{
991 \makeatother
992 %
993 \RequirePackage[tightLists=false]{markdown}
994 \markdownSetup{rendererPrototypes={%
995 link = {\href{#3}{#1}}%
996 }}
997 ⟨/style⟩

998 ⟨/sty⟩
```
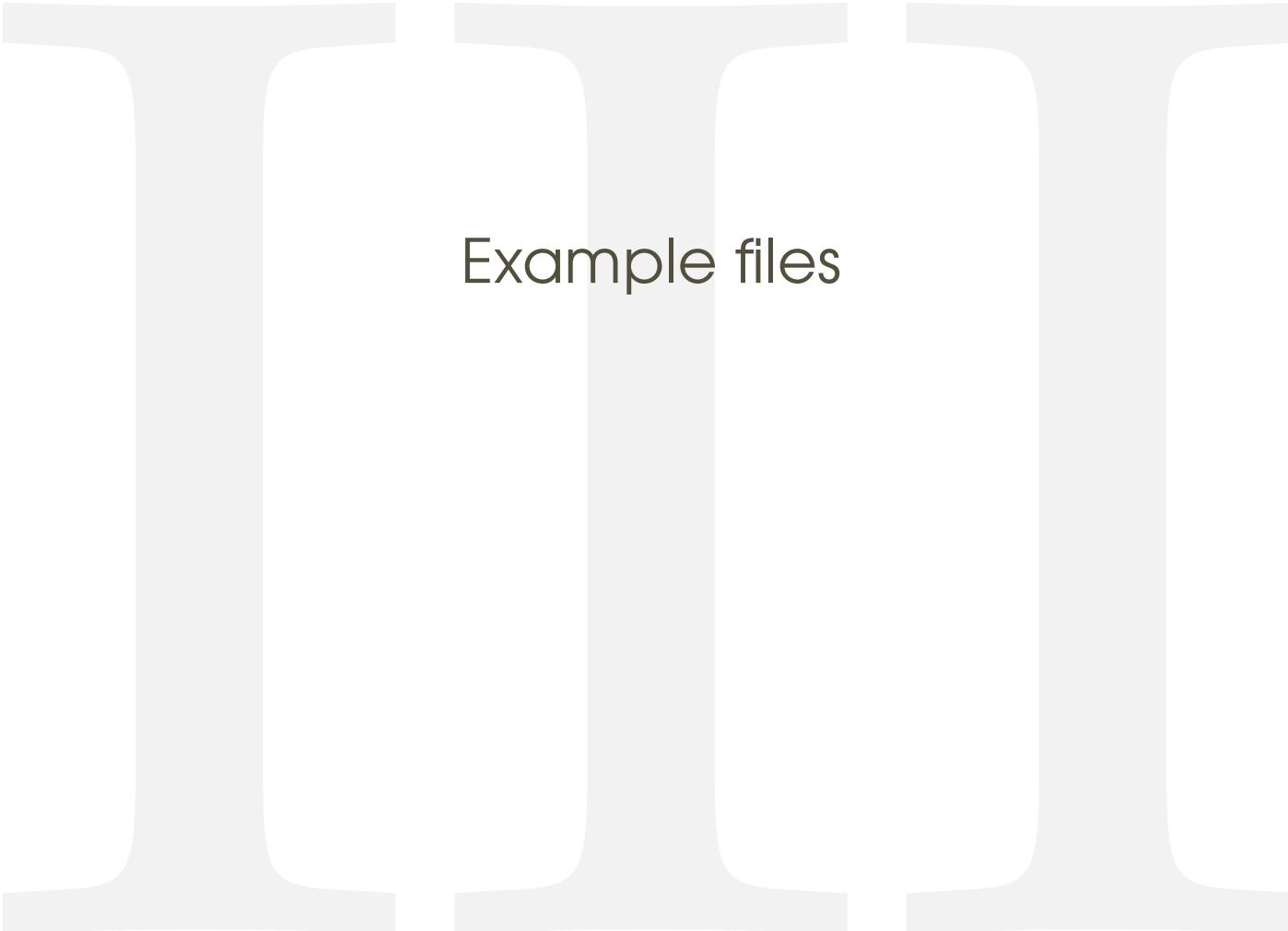
References

[1]   Charles Antony Richard Hoare. »Hints on programming language design«. In: *Computer Systems Reliability*. Ed. by C. Bunyan. State of the Art Report 20. 1973, pp. 193–216. URL: http://flint.cs.yale.edu/cs428/doc/HintsPL.pdf (visited on 09/06/2018).

[2]   Markus Kohm. *The Scrlayer-scrpage package. Define and manage page styles*. Version 3.40. Apr. 24, 2023. URL: https://komascript.de/ (visited on 05/14/2023).

[3]   Markus Kohm. *The Scrlttr2 package. Koma-Script 'letter' class*. Version 3.40. Apr. 24, 2023. URL: https://komascript.de/ (visited on 05/14/2023).

[4] Mojca Miklavec, Martin Vogel, and Thomas Henlich. *The Marvosym package. Martin Vogel's Symbols (marvosym) font*. Version 2.2a. URL: http://www.marvosym.de (visited on 05/14/2023).

[5] Oberdiek Package Support Group et al. *The Hyperref package. Extensive support for hypertext in LaTeX*. Version 7.00x. Apr. 22, 2023. URL: https://github.com/latex3/hyperref (visited on 05/14/2023).

[6] Scott Pakin. *The Hyperxmp package. Embed XMP metadata within a LaTeX document*. Version 5.11. URL: https://ctan.org/pkg/hyperxmp (visited on 05/14/2023).

[7] Will Robertson and The LaTeX Project Team. *The Fontspec package. Advanced font selection in XeLaTeX and LuaLaTeX*. Version 2.8a. URL: https://ctan.org/pkg/fontspec (visited on 05/14/2023).

[8] The LaTeX Project Team and David Carlisle. *The Graphicx package. Enhanced support for graphics*. Version 1.2d. Sept. 16, 2021. URL: https://ctan.org/pkg/graphicx (visited on 05/14/2023).

[9] Hideo Umeki and David Carlisle. *The Geometry package. Flexible and complete interface to document dimensions*. Version 5.9. Jan. 2, 2020. URL: https://ctan.org/pkg/geometry (visited on 05/14/2023).

Example files

8 Letter

8.1 From `.tex`

[HUMBOLDT-UNIVERSITÄT ZU BERLIN]

Humboldt-Universität zu Berlin | UdL 6 | D-10099 Berlin

Philosophische Fakultät

Institut für Briefvorlagen

Here you can add more text.

**Prof. Dr. Maike Musterfrau
Dekanin**

Erika Musterfrau
Musterweg 43
56789 Musterhausen

Betreff

Sehr geehrte Frau Musterfrau,

Dies hier ist ein Blindtext zum Testen von Textausgaben. Wer diesen Text liest, ist selbst schuld. Der Text gibt lediglich den Grauwert der Schrift an. Ist das wirklich so? Ist es gleichgültig, ob ich schreibe: „Dies ist ein Blindtext" oder „Huardest gefburn"? Kjift – mitnichten! Ein Blindtext bietet mir wichtige Informationen. An ihm messe ich die Lesbarkeit einer Schrift, ihre Anmutung, wie harmonisch die Figuren zueinander stehen und prüfe, wie breit oder schmal sie läuft. Ein Blindtext sollte möglichst viele verschiedene Buchstaben enthalten und in der Originalsprache gesetzt sein. Er muss keinen Sinn ergeben, sollte aber lesbar sein. Fremdsprachige Texte wie „Lorem ipsum" dienen nicht dem eigentlichen Zweck, da sie eine falsche Anmutung vermitteln. Dies hier ist ein Blindtext zum Testen von Textausgaben. Wer diesen Text liest, ist selbst schuld. Der Text gibt lediglich den Grauwert der Schrift an. Ist das wirklich so? Ist es gleichgültig, ob ich schreibe: „Dies ist ein Blindtext" oder „Huardest gefburn"? Kjift – mitnichten! Ein Blindtext bietet mir wichtige Informationen. An ihm messe ich die Lesbarkeit einer Schrift, ihre Anmutung, wie harmonisch die Figuren zueinander stehen und prüfe, wie breit oder schmal sie läuft. Ein Blindtext sollte möglichst viele verschiedene Buchstaben enthalten und in der Originalsprache gesetzt sein. Er muss keinen Sinn ergeben, sollte aber lesbar sein. Fremdsprachige Texte wie „Lorem ipsum" dienen nicht dem eigentlichen Zweck, da sie eine falsche Anmutung vermitteln.

Datum:
14. 5. 2023
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[HUMBOLDT-UNIVERSITÄT ZU BERLIN]

Seite 2

Dies hier ist ein Blindtext zum Testen von Textausgaben. Wer diesen Text liest, ist selbst schuld. Der Text gibt lediglich den Grauwert der Schrift an. Ist das wirklich so? Ist es gleichgültig, ob ich schreibe: „Dies ist ein Blindtext" oder „Huardest gefburn"? Kjift – mitnichten! Ein Blindtext bietet mir wichtige Informationen. An ihm messe ich die Lesbarkeit einer Schrift, ihre Anmutung, wie harmonisch die Figuren zueinander stehen und prüfe, wie breit oder schmal sie läuft. Ein Blindtext sollte möglichst viele verschiedene Buchstaben enthalten und in der Originalsprache gesetzt sein. Er muss keinen Sinn ergeben, sollte aber lesbar sein. Fremdsprachige Texte wie „Lorem ipsum" dienen nicht dem eigentlichen Zweck, da sie eine falsche Anmutung vermitteln.

Mit freundlichen Grüßen

Prof. Dr. Maike Musterfrau – Dr. Max Mustermann

PS: …

Anlage: Anlage 1
Anlage 2

Kopie an: Verteiler 1
Verteiler 2

8.2 From `.md`

[HUMBOLDT-UNIVERSITÄT ZU BERLIN]

Humboldt-Universität zu Berlin | UdL 6 | D-10099 Berlin

Philosophische Fakultät

Institut für Briefvorlagen

Here you can add more text.

Prof. Dr. Maike Musterfrau
Dekanin

Alexander von Humboldt
Unter den Linden 6
10099 Berlin

Short description

Sehr geehrte Damen und Herren

Thank you very much for your letter.

Mit freundlichen Grüßen

Prof. Dr. Maike Musterfrau – Dr. Max Mustermann

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14/5/2023
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