KHas_thesis.sty
Kadir Has University School of Graduate Studies LaTeX Package for Theses and Graduation Projects

Feza Kerestecioğlu
Department of Computer Engineering
Kadir Has University

December 10, 2021
Version 3.10

Contents

1 Introduction

The style KHas_thesis is for typesetting master's and Ph.D. theses as well as master's graduation projects in the format required by the School of Graduate Studies (or, in Turkish, *Lisansüstü Eğitim Enstitüsü*, LEE), Kadir Has University. The KHas_thesis package is based on the format described in the manual [1] and the accompanying templates by LLE for the preparation of theses, which is valid as of December 2021.

The KHas_thesis style is based on the report class of LaTeX. Some commands which apply to report were changed so as to comply with the requirements of the

School of Graduate Studies. There are also additional commands provided by `KHas_thesis` to typeset pages, which you would not find in an ordinary report but, which must be included in the theses submitted to the School of Graduate Studies (e.g., disclaimer page, approval page, abstract in Turkish, etc.).

2 How to Get and Invoke `KHas_thesis`

The style package `KHas_thesis.rar` can be obtained from the web site of the School of Graduate Studies (`https://sgs.khas.edu.tr/`) as well as the personal web site of the author (`http://webprs.khas.edu.tr/~kerestec/KHas_thesis.rar`). After downloading, when you unrar the file `KHas_thesis.rar`, five files will be generated:

`KHasThesisManual.pdf` This user's guide.

`KHas_thesis.sty` The LaTeX style file. This file should be placed in a directory where your TeX-input files reside.

`sampthes.tex` A sample LaTeX file which uses the `KHas_thesis` package as a style. You can use this file as a template to type in your thesis.

`guidelines.pdf` A pdf file of the booklet describing the format for theses and master's graduation projects, namely [1].

`readme.txt` A text file in which the corrections and changes in the newer versions of `KHas_thesis` are reported.

The `KHas_thesis` style has to be invoked directly as a package. As `KHas_thesis` is based on the report class, you have to start your LaTeX source with the command

```
\documentclass[12pt]{report}
```

which must be followed by

```
\usepackage[⟨language option⟩]{KHas_thesis}
```

command. The ⟨*language option*⟩ must be specified either as `english`, or `turkce`. These options are used to write theses in either language. The headings of some parts of your thesis such as disclaimer page, table of contents, references, etc., as well the text generated automatically in these pages are defined by `KHas_thesis` according to the option you invoke. Therefore, if you do not declare an option, you will get error messages complaining that commands used in these parts are not defined.

3 New Commands and Environments

3.1 Title Page

The title pages for master's theses, Ph.D. theses and master's graduation projects can be obtained by different commands, namely

`\makemstitle`

`\makematitle`

`\makephdtitle`

and

`\makeprojecttitle`

commands, respectively.

The pages typeset by these commands look very much the same, save that the name of the relevant degree, program or other standard wording appears on either type of title page. The obvious place for these commands is right after the `\begin{document}` command, since the title is the leading page of any thesis. The `\makematitle` command is introduced newly in version 3.00, since the text typeset in the disclaimer and approval pages for the `english` option should include the phrase "Master of Science" or "Master of Arts". For the `turkce` option, the pages generated for `\makemstitle` or `\makematitle` are same, as both M.S and M.A. are referred to by the same turkish phrase, namely, "Yüksek Lisans".

All four commands above assume that you have defined the title and author of the document in the preamble by the corresponding LaTeX commands, namely `\title{`⟨*title*⟩`}` and `\author{`⟨*name*⟩`}`. You also have to declare the submission year and month of the thesis in the preamble, since these information should appear in the title page, too. This is done by the

`\subyear{`⟨*year*⟩`}`

and

`\submonth{`⟨*month*⟩`}`

commands. An additional information needed for generating the title page is the name of the program for a degree of which the author will submit the thesis or project. This should be declared by a

`\program{`⟨*program*⟩`}`

command. For example, you need to declare ⟨*program*⟩ as "Computer Engineering" if you are pursuing a master of science in computer engineering.

`KHas_thesis` will warn you if you do not declare a program. Nevertheless, the titlepage will be typeset even if this information is missing. On the other hand, the default value for the argument of `\subyear` is the year of the current date. Therefore, you need to declare it only if the submission year is going to be different than the year when you are typesetting the thesis.

3.2 Approval Page

A page of approval should follow directly after the title page. Therefore, the command

```
\makeapprovalpage
```

must follow the command that typesets your title page.

On the other hand, you should specify the members of the examining committee by the commands

```
\advisor{⟨title-and-name⟩}
\coadvisor{⟨title-and-name⟩}
\examineri{⟨title-and-name⟩}
\examinerii{⟨title-and-name⟩}
\examineriii{⟨title-and-name⟩}
\examineriv{⟨title-and-name⟩}
```

Also, the institutions with which the examiners are affiliated are declared by the

```
\advisoraff{⟨affiliation⟩}
\coadvisoraff{⟨affiliation⟩}
\examineriaff{⟨affiliation⟩}
\examineriiaff{⟨affiliation⟩}
\examineriiiaff{⟨affiliation⟩}
\examinerivaff{⟨affiliation⟩}
```

commands, respectively.

The `\makeapprovalpage` command will typeset the arguments of each one of these commands as a separate examiner name with her/his affiliation appearing under the name. The difference between the `\advisor` and `\examineri`, etc. is that a phrase like '(Advisor)' is typeset next to the name that is declared as the advisor. Similarly, '(Co-advisor)' appears next to the the name given as the argument of the `\coadvisor` command. Regardless of the order you put these commands in the preamble, the order of the typeset examiners is going to be as follows: First the advisor, then the co-advisor (if any) and then the examiners in the order implied by the command names (that is, first the one specified as `\examineri`, then `\examinerii` and so on).

You will get a `KHas_thesis` warning, if no advisor name is given. But the approval page will still be generated even if this information is missing.

One additional information that will appear on the approval page is the title and name of the Director of the School of Graduate Studies. This must be given in the preamble using the

```
\dean{⟨title-and-name⟩}
```

command.

3.3 Disclaimer Page

The disclaimer page titled "Declaration of Research Ethics and Publishing Methods" can be generated simply by the

```
\makedeclaration
```

command. The declaration in the disclaimer page is typeset automatically and uses the text given in the guidelines of the School of Graduate Studies[1]. The date of approval which appears at the bottom of the disclaimer page has to be specified in the preamble as the argument of a

```
\dateofapproval{⟨date⟩}
```

command. You will get a warning message if you do not declare any date of approval.

The correct place for the `\makedeclaration` command is certainly right after the command which generates the approval page, as required by the School of Graduate Studies [1].

3.4 Acknowledgements and Özet

Two new environments are defined by the `KHas_thesis` style for typesetting the pages where the acknowledgements and "özet" (abstract in Turkish) will appear. They work similar to the standard `abstract` environment. That is, you type

```
\begin{acknowledgements}
⋮
⟨text of acknowledgements page⟩
⋮
\end{acknowledgements}
```

or

```
\begin{ozet}
⋮
⟨text of turkish abstract⟩
⋮
\end{ozet}
```

The format specified by the School of Graduate Studies [1] requires that the title of the thesis appears in the Abstract and Özet pages. Moreover, and naturally, the title should appear in the Özet Page in Turkish. Therefore, the title in Turkish has to be given in the preamble as the argument of a

```
\turkcebaslik{⟨title in Turkish⟩}
```

command. Note that the keywords related to your thesis or report also goes into Abstract and Özet pages. You have to provide the correct formatting for the keywords as specified in [1].

According to the thesis writing guidelines, you have to put your acknowledgements before the (English and Turkish) abstract pages.

The `KHas_thesis` style also provides you the `preface` and `foreword` environments, which work exactly in the same way as `acknowledgements`. Also, an environment `dedication` is available. Nevertheless, it does not generate a title; nor provide any formatting. You are responsible for formatting your own dedication page.

3.5 List of Symbols

To typeset a list of symbols section you type in your source file

```
\begin{symbols}
\sym{⟨symbol⟩}{⟨description⟩}
⋮
\sym{⟨symbol⟩}{⟨description⟩}
\end{symbols}
```

where the arguments of each `\sym` command is a symbol to be listed and its description. This command will line up the symbols and their descriptions in two columns. You may change the indentations of these columns by redefining the lengths `\symtabi` and `\symtabii` using length-changing commands such as `\setlength` or `\addtolength`. Consult a LaTeX manual (e.g. [2]) for the usage of these commands. The default values of `\symtabi` and `\symtabii` are `1.0em` and `7em`, respectively.

Moreover, to insert a blank line in the list, which you might need, e.g., to separate Latin symbols from Greek symbols, you can use a `\sym` command with empty arguments, i.e., `\sym{}{}`.

The `symbols` environment generates a list with the heading "LIST OF SYMBOLS". Similarly you can use the `abbreviations` environment to generate a "LIST OF ACRONYMS AND ABBREVIATIONS". On the other hand, the environment `symabbreviations` that generated a list with the title "LIST OF SYMBOLS/ABBREVIATIONS" in earlier versions of `KHas_thesis` is removed in version 3.00, since such a list would not comply with the template.

3.6 Bibliographies

In addition to the LaTeX environment `thebibliography`, which has been reshaped by the `KHas_thesis` style according to the instructions in [1], there are two new bibliography-making environments.

One of them generates a list suitable for citing the references with numbers in square brackets (sometimes called the *IEEE*[1]*-style* referencing). Other possible referencing styles such as Harvard, Chicago, APA and OSCALA use author names and

[1]Institute of Electrical and Electronics Engineers

publication years in various formats. With the bibliography typesetting environments of `KHas_thesis`, it is possible to generate bibliography lists for all such referencing styles.

The standard `thebibliography` environment generates a bibliography, which is in the IEEE-style. The standard cross-referencing method of LaTeX for bibliographical items still works. That means, each reference item is specified after a

`\bibitem{`⟨*key*⟩`}`

so that you can cite the reference using the *key* of the reference by a `\cite{`⟨*key*⟩`}` command somewhere else in the text.

To generate the reference list for other name-and-year-type styles, you type

```
\begin{harvardbibliography}
\item ⟨reference item⟩
⋮
\item ⟨reference item⟩
\end{harvardbibliography}
```

Also, although it is not explicitly mentioned in [1], an environment to typeset a bibliographical list of *not-cited references* is available. You can type

```
\begin{harvardbibnotcited}{⟨widest-label⟩}
\item ⟨reference item⟩
⋮
\item ⟨reference item⟩
\end{harvardbibnotcited}
```

to generate a bibliography list titled 'REFERENCES NOT CITED'.

4 Modifications to Report Style

Apart from the above commands which are introduced by the `KHas_thesis` style, several commands and environments of `report` style have been redefined to generate a typesetting format which obeys the requirements of the School of Graduate Studies. Although most of these changes are transparent to the user, some of them are listed, below just to inform the TeXnicians:

- The headings of the sectional units from chapter level down to paragraph level have been reformatted according to [1]. The headings for parts and subparagraphs have not been changed in any way. Because, a sectional unit to be called as a 'Part' is not expected to appear in a thesis or submitted to the School of Graduate Studies. On the other hand, nothing is specified about the format of paragraphs and subparagraphs (that is, fifth and sixth level headings) in [1]. Therefore, subparagraphs are typeset as in the ordinary `report` style of LaTeX. Nevertheless, you are not expected to use these items in a thesis anyway.

- To the contrary of the classical `report` style, there is a period after the numbers of the chapters in the chapter headings.

- The paragraph indentations are supressed.

- All numbered sectional units of three levels (from `chapter`s to `subsection`s) are included in the Table of Contents. All first level headings which appear after the page of the Table of Contents and which are not numbered, such as Acknowledgements List of Tables, etc. are included in the table of contents directly (except, of course, the entry for the Table of Contents itself). You do not need the `\addtocontents` command to make them appear in the Table of Contents any more. The disclaimer and approval pages are not listed in the Table of Contents. Further, the indentations of the lines of the Table of Contents have been rearranged to make them correctly aligned.

- Figure and table captions are reformatted according to the School of Graduate Studies' guidelines [1].

- Proper pagestyle, margins, line and paragraph spacing are provided. The line spacing is 1.5, except in footnotes and quotations, where single line spacing has to be used. There is an extra 1.5 space between the paragraphs. Also note that the `\raggedbottom` command is in effect. Therefore, the bottom margin might vary a bit from page to page. You can invoke the `\flushbottom` command in the preamble of your document if you wish. Nevertheless, this is not recommended for theses, which include pages with long formulae or large figures and are sparse in regular text, since the spacing in such pages might look ugly.

- The spacings for displayed formulae are also taken care of by `KHas_thesis`. Nevertheless, you can use the TEX commands `\abovedisplayskip`, `\belowdisplayskip`, `\abovedisplayshortskip` and `\belowdisplayhortskip` for the 'fine tuning' of the spaces before and after the formulae if you wish. You have to use these commands *after* your `\begin{document}` command.

- Footnotes are numbered consecutively throughout the whole thesis. If you would like to use the number of the recent footnote in any way, note that the footnotes are numbered by a new counter named `thsfootcnt` (whose value can be printed by `\thethsfootcnt` command). This change is needed because the `report` style resets the `footnote` counter whenever a new chapter starts.

- The `appendix` command is redefined. As in the standard `report` style it still changes the way sectional units are numbered. That is, the chapter numbers are put as A, B, etc. As a modification, now it also produces a line in the Table of Contents which starts with the word "APPENDIX" and the number of the chapter. So, after using the appendix command, you do not have to specify the optional parameter of the `chapter` command to obtain the entry in the Table of Contents as required. Therefore, you will start the part of your source file where you write your appendices simply as

```
\appendix
\chapter{⟨appendix title⟩}
⋮
```

5 Bugs and Warnings

You should be warned about the following bugs and drawbacks of `KHas_thesis`.

1. The page of approval can accomodate a jury up to five examiners (including the advisor and co-advisor). In view of the *Kadir Has University Regulations For Graduate Education*, thesis examination committees are composed of three or five examiners. For one or other reason, if you will need a page listing more than five examiners, you might need to format your own approval page.

2. The capitalization of the chapter headings are not provided in some cases. Therefore, you have to type the chapter and section names in the correct case as they should appear in the document.

3. If an appendix (say, the first one) does not have a title, the chapter heading will appear as "APPENDIX A:", i.e., with a column after the chapter number. Therefore, I strongly recommend you to title all appendix chapters. I think, this should not be considered as a bug, since all chapters (including the appendices) deserve a title.

4. To invoke the correct pagenumbering, do not forget to use the

   ```
   \pagenumbering{roman}
   ```

   command right after `\begin{document}` and

   ```
   \pagenumbering{arabic}
   ```

   after the `\chapter` command which starts the first chapter of the thesis.

5. `KHas_thesis` requires and loads the `geometry`, `graphicx` and `fancyhdr` packages.

6. Note that `KHas_thesis` does not support any document class or style other than `report` and `12pt`. These are the only class and styles which you will need to typeset your thesis anyway. If you will use any other packages, it is strongly recommended that you load `KHas_thesis` as the last package in your preamble.

The author will very much appreciate it if you inform him on other bugs, or suggestions you might have, by an e-mail to `kerestec@khas.edu.tr`.

References

[1] The School of Graduate Studies, *Thesis And Dissertation Writing Guide For Post Graduate Programs*, Kadir Has University, Istanbul, 2021.

[2] Lamport, L., *A Document Preparation System: LaTeX*, 2nd ed., Addison-Wesley, Reading, 1994.