COFFEE



LECTURE



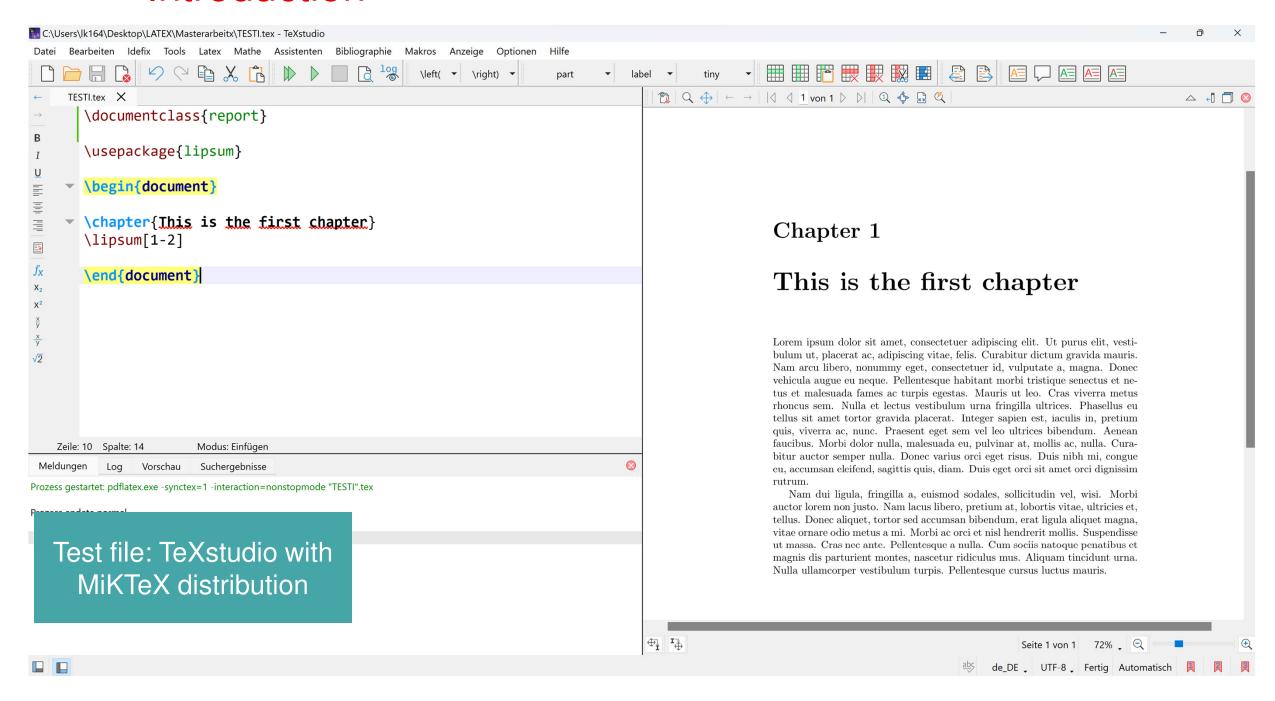
b Universität Bern Make it your own!
Personalize your
LaTeX thesis with
style and class



Dr. Lisa Kattner Research Support Team Science Library Thursday 07.12.2023 13:00, Zoom

Introduction





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What is the difference between class and style?

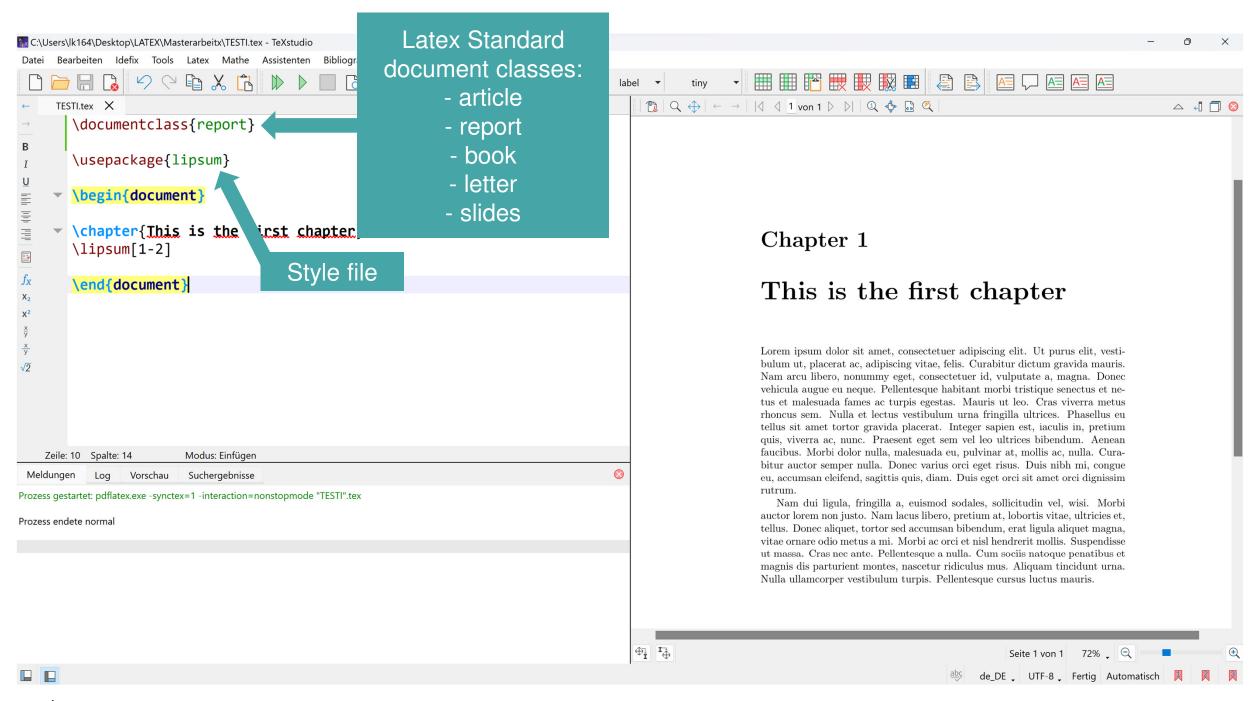
- A class is a combination of typographical settings combined to form a document (file extension *.cls)
- Style files (or packages) change the design of a document (file extension *.sty)

"If new commands could be used with any document class, then make them a package; and if not, then make them a class."

From LaTeX2e for class and package writers, section 2.3

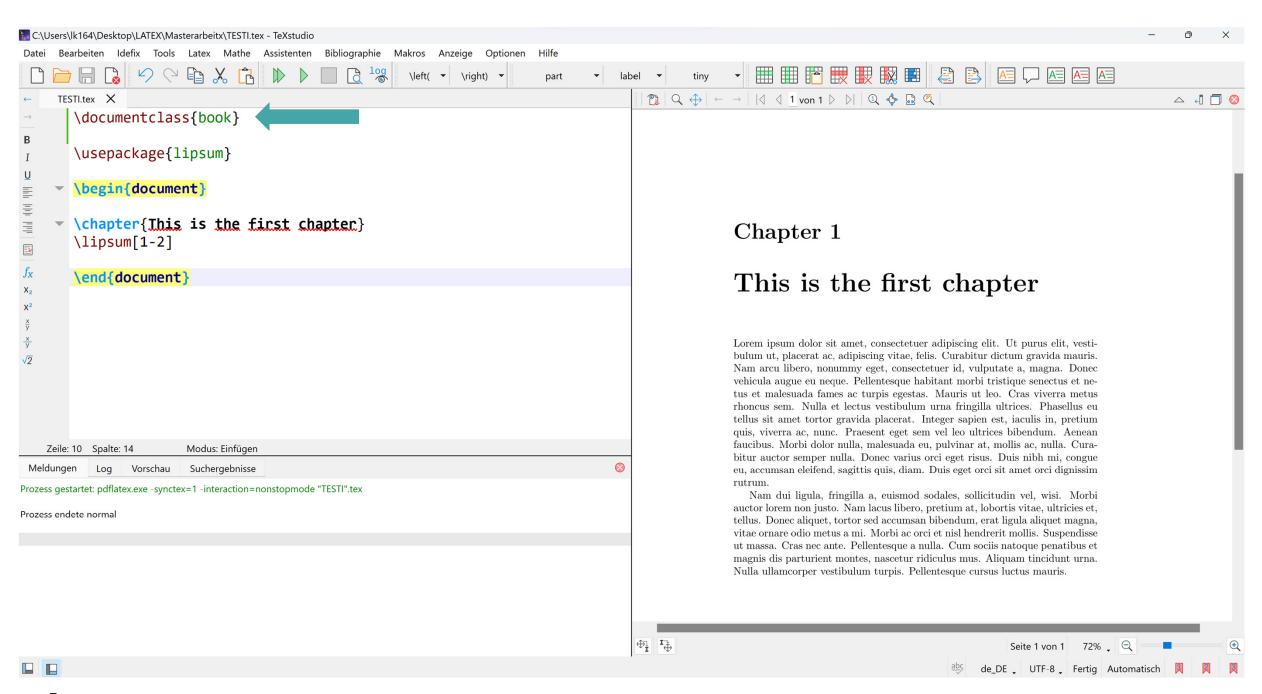
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What is the difference between class and style?





What is the difference between class and style?



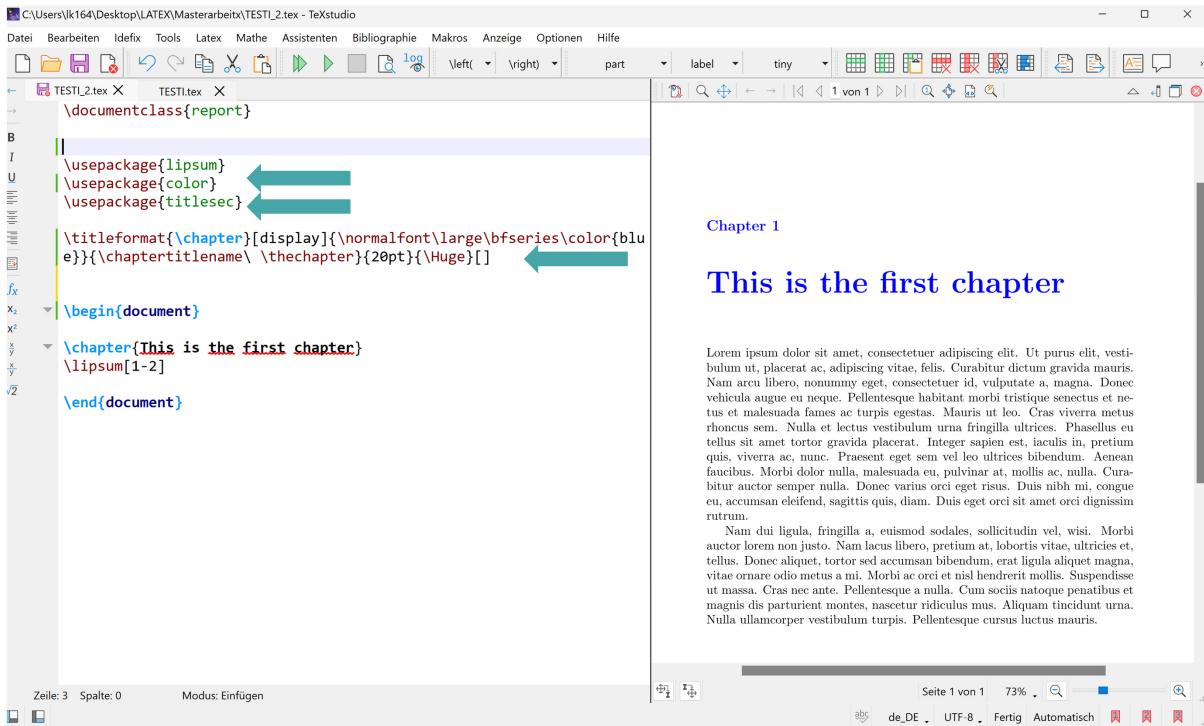


Different Options to change the look of your thesis

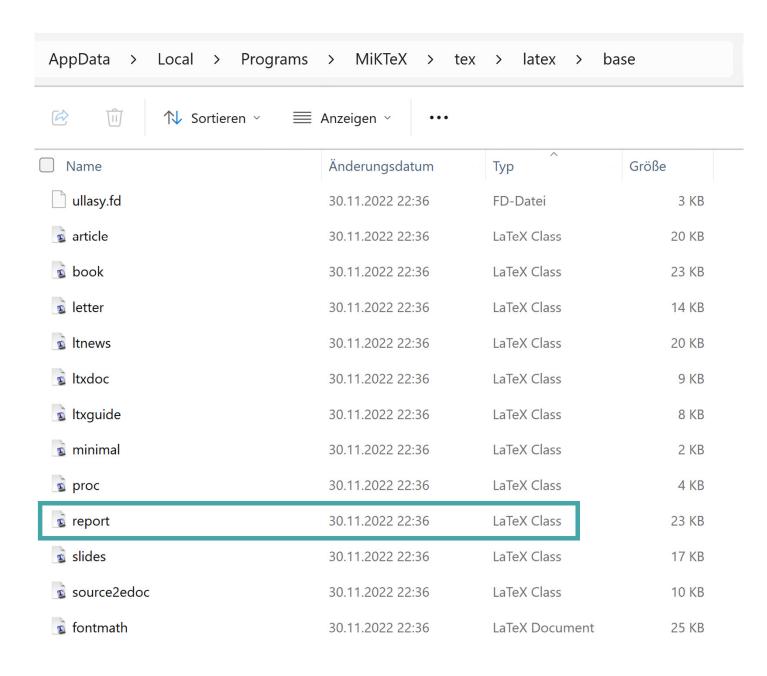
- Use style packages in your thesis file
- Create your own thesis class
- Find templates which do the work for you

u'

Use packages to change your thesis file







 Find standard *.cls files in your MiKTeX repository



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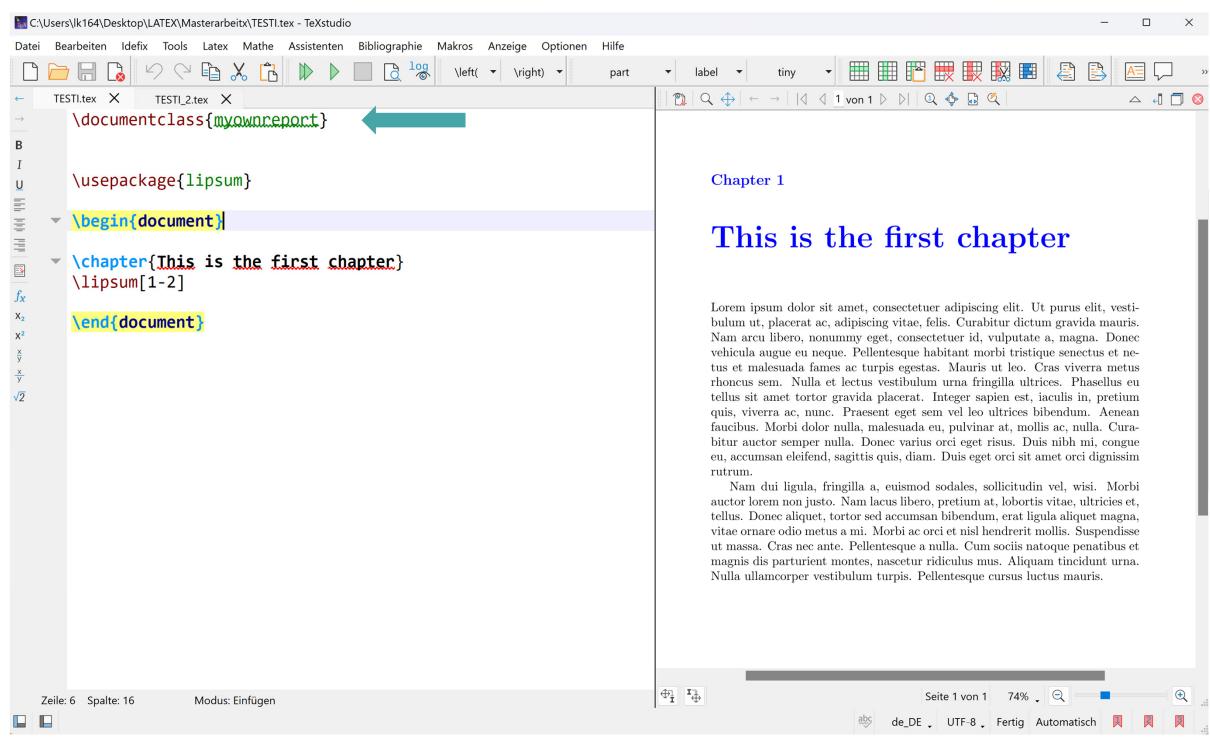
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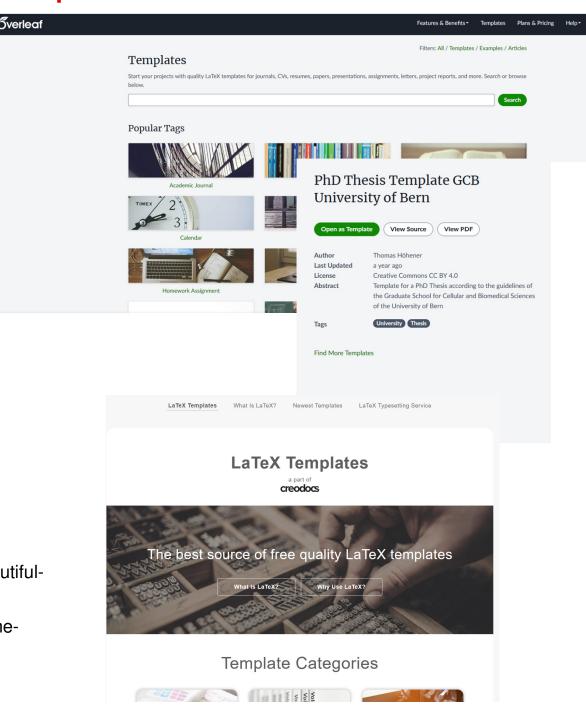
- www.latextemplates.com
- www.overleaf.com
- www.github.com



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https://tex.stackexchange.com/questions/34301/how-to-add-somevisual-style-and-pizzazz-to-course-notes



Graduate School for Cellular and Biomedical Sciences University of Bern

Thesis Title

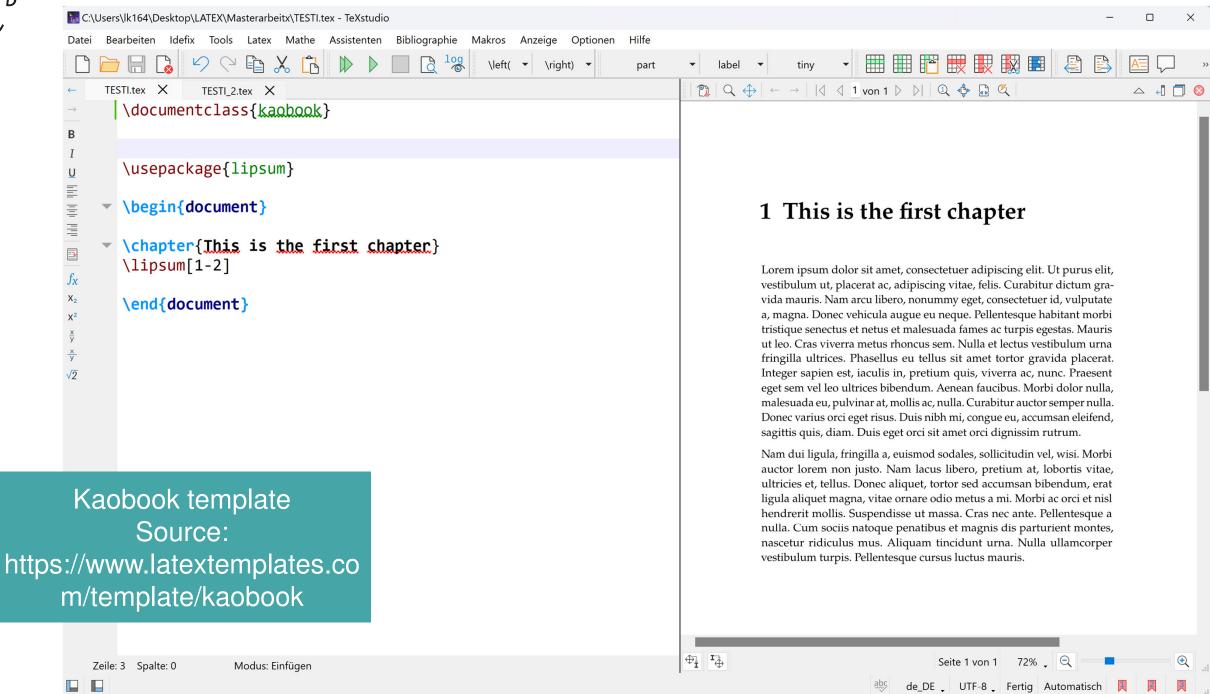
John Smith

for the degree of PhD in Cell Biology

Prof. Dr. Gregor Mendel Institute of Gregor Mendel Faculty of Science of the University of Mendel

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Use thesis templates





Introduction

1.1 The Main Ideas

Many modern printed textbooks have adopted a layout with prominent margins where small figures, tables, remarks and just about everything else can be displayed. Arguably, this layout helps to organise the discussion by separating the main text from the ancillary material, which at the same time is very close to the point in the text where it is referenced.

This document does not aim to be an apology of wide margins, for there are many better suited authors for this task; the purpose of all these words is just to fill the space so that the reader can see how a book written with the kaobook class looks like. Meanwhile, I shall also try to illustrate the features of the class.

The main ideas behind kaobook come from this blog post, and actually the name of the class is dedicated to the author of the post, Ken Arroyo Ohori, which has kindly allowed me to create a class based on his thesis. Therefore, if you want to know more reasons to prefer a 1.5-column layout for your books, be sure to read his blog post.

Another source of inspiration, as you may have noticed, is the Tufte-Latex Class. The fact that the design is similar is due to the fact that it is very difficult to improve something which is already so good. However, I like to think that this class is more flexible than Tufte-Latex. For instance, I have tried to use only standard packages and to implement as little as possible from scratch, therefore, it should be pretty easy to customise anything, provided that you read the documentation of the package that provides that feature.

In this book I shall illustrate the main features of the class and provide information about how to use and change things. Let us get started.

1: This also means that understanding and contributing to the class development is made easier. Indeed, many things still need to be improved, so if you are interested, check out the repository on githabl.

1.1 The Main Ideas 1

1.2 What This Class Does 1

Do 2

1.4 How to Use This Class . . . 3

1.3 What This Class Does Not

Kaobook template Source: https://www.latextemplates.co m/template/kaobook

the document structure than about 3TgX principle that structure and ossible (see also Section Section 1.3 that this class will only provide eral, the opportunity to do things, ctually, some stylistic matters are ble to customise them with ease.

Page Layout The text width is reduced to improve readability and make space for the margins, where any sort of elements can be displayed. Chapter Headings As opposed to Tufte-Latex, we provide a variety of chapter headings among which to choose; examples will be seen in later chapters.

2 1 Introduction

2: This is another departure from Tufte's design.

3: Sidenotes (like this!) are numbered while marginnotes are not



Figure 1.1: The Mona Lisa. https://commons.wikimedia.org/ wiki/File:Mona_Lisa,_by_Leonardo. da_Vinci,_from_C2RMF_retouched. jpg

Page Headers They span the whole page, margins included, and, in twoside mode, display alternatively the chapter and the section name.²

Matters The commands \frontmatter, \mainmatter and \backmatter have been redefined in order to have automatically wide margins in the main matter, and narrow margins in the front and back matters. However, the page style can be changed at any moment, even in the middle of the document.

Margin text We provide commands \sidenote and \marginnote to put text in the margins.³

Margin figs/tabs A couple of useful environments is marginfigure and margintable, which, not surprisingly, allow you to put figures and tables in the margins (cfr. Figure 1.1).

Margin toc Finally, since we have wide margins, why don't add a little table of contents in them? See \margintoc for that.

Hyperref hyperref is loaded and by default we try to add bookmarks in a sensible way; in particular, the bookmarks levels are automatically reset at \appendix and \backmatter. Moreover, we also provide a small package to ease the hyperreferencing of other parts of the text.

Bibliography We want the reader to be able to know what has been cited without having to go to the end of the document every time, so citations go in the margins as well as at the end, as in Tufte-Latex. Unlike that class, however, you are free to customise the citations as you wish.

The order of the title pages, table of contents and preface can be easily changed, as in any LATEX document. In addition, the class is based on KOMA-Script's scrbook, therefore it inherits all the goodies of that.

1.3 What This Class Does Not Do

As anticipated, further customisation of the book is left to the user. Indeed, every book may have sidenotes, margin figures and so on, but each book will have its own fonts, toc style, special environments and so on. For this reason, in addition to the class, we provide only sensible defaults, but if these features are not needed, they can be left out. These special packages are located in the style directory, which is organised as follows:

kao.sty This package contains the most important definitions of macros and specifications of page layout. It is the heart of the kaobook.

kaobiblio.sty Contains commands to add citations and customise the bibliography.

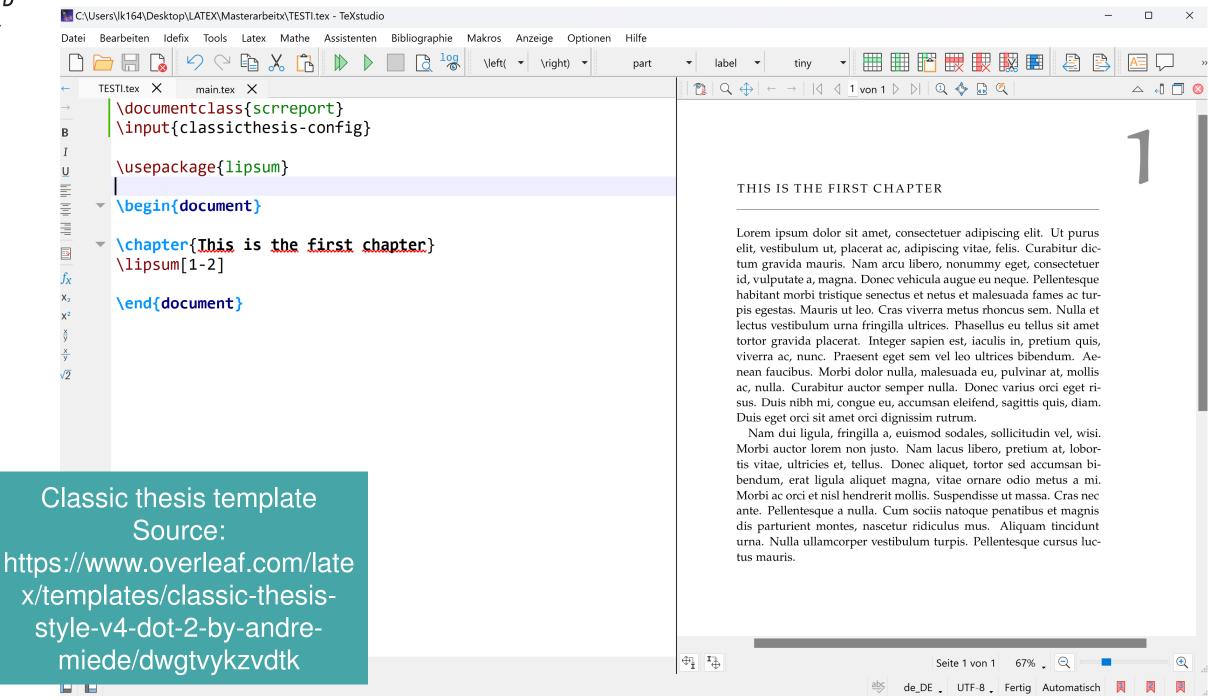
packages.sty Loads additional packages to decorate the writing with special contents (for instance, the Listing package is loaded here as it is not required in every book). There are also defined some useful commands to print the same words always in the same way, e.g. latin words in italics or packages in verbatim.

kaorefs.sty Some useful commands to manage labeling and referencing, again to ensure that the same elements are referenced always in a consistent way.

environments.sty Provides special environments, like boxes. Both simple and complex environments are available; by complex we mean

$u^{^{t}}$

Use thesis templates





2

TEST CHAPTER

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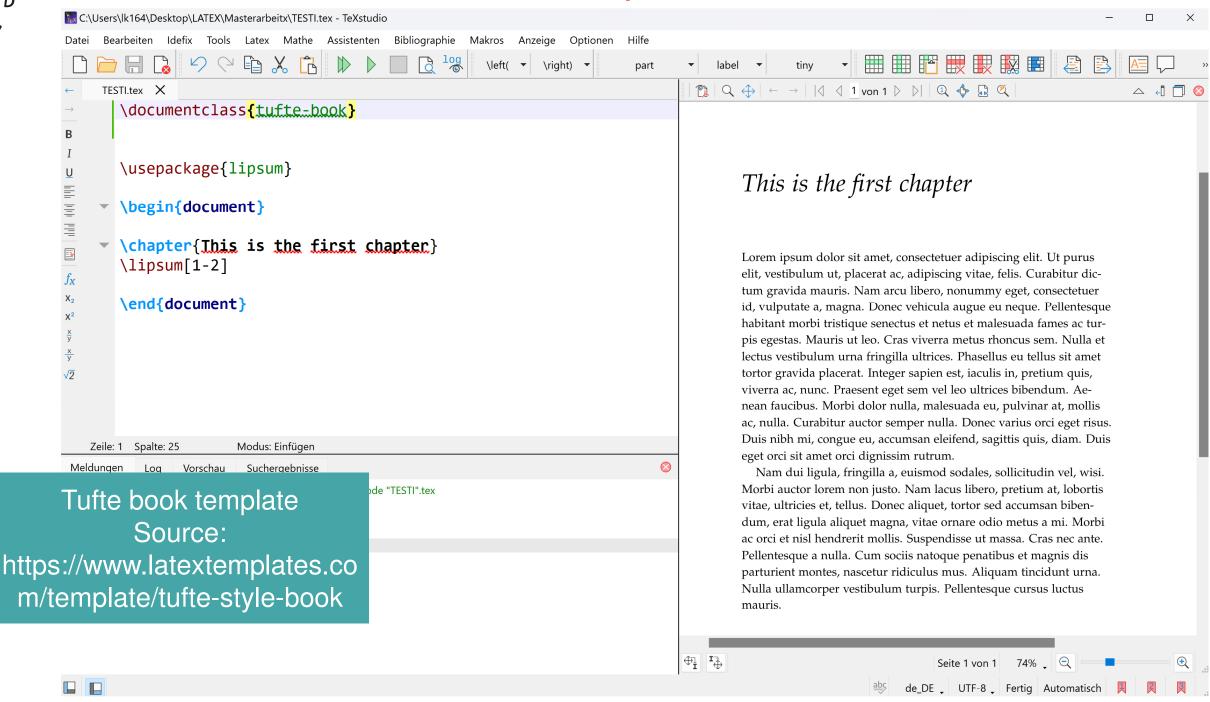
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8 TEST CHAPTER

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The Design of Tufte's Books

THE PAGES of a book are usually divided into three major sections: the front matter (also called preliminary matter or prelim), the main matter (the core text of the book), and the back matter (or end matter).

THE FRONT MATTER of a book refers to all of the material that comes before the main text. The following table shows a list of material that appears in the front matter of *The Visual Display of Quantitative Information, Envisioning Information, Visual Explanations,* and *Beautiful Evidence* along with its page number. Page numbers that appear in parentheses refer to folios that do not have a printed page number (but they are still counted in the page number sequence).

		Books			
Page content Blank half title page		VDQI	ΕI	VE	BE
Blank half title page		(1)	(1)	(1)	(1)
Frontispiece ²		(2)	(2)	(2)	(2)
Full title page		(3)	(3)	(3)	(3)
	right page	(4)	(4)	(4)	(4)
	ents	(5)	(5)	(5)	(5)
	cation	(6)	(7)	(7)	7
	raph	-	_	(8)	-
	duction	(7)	(9)	(9)	9

² The contents of this page vary from book to book. In *VDQI* this page is blank; in *EI* and *VE* this page holds a frontispiece; and in *BE* this page contains three epigraphs.

Tufte book template Source: s://www.latextemplates

https://www.latextemplates.co m/template/tufte-style-book

front matter in Tufte's books varies slightly from gn of front matter. First, the pages in front matter mbered with lowercase roman numerals (e.g., i, d, the front matter page numbering sequence is

usually separate from the main matter page numbering. That is, the page numbers restart at 1 when the main matter begins. In contrast, Tufte has enumerated his pages with arabic numerals that share the same page counting sequence as the main matter.

16 A TUFTE-STYLE BOOK

There are also some variations in design across Tufte's four books. The page opposite the full title page (labeled "frontispiece" in the above table) has different content in each of the books. In *The Visual Display of Quantitative Information*, this page is blank; in *Envisioning Information* and *Visual Explanations*, this page holds a frontispiece; and in *Beautiful Evidence*, this page contains three epigraphs.

The dedication appears on page 6 in *VDQI* (opposite the introduction), and is placed on its own spread in the other books. In *VE*, an epigraph shares the spread with the opening page of the introduction

None of the page numbers (folios) of the front matter are expressed except in *BE*, where the folios start to appear on the dedication page.

THE FULL TITLE PAGE of each of the books varies slightly in design. In all the books, the author's name appears at the top of the page, the title it set just above the center line, and the publisher is printed along the bottom margin. Some of the differences are outlined in the following table.

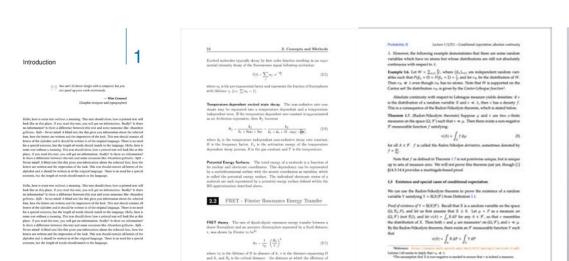
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Author				
Typeface	serif	serif	serif	sans serif
Style	italics	italics	italics	upright, caps
Size	24 pt	20 pt	20 pt	20 pt
Title				
Typeface	serif	serif	serif	sans serif
Style	upright	italics	upright	upright, caps
Size	36 pt	48 pt	48 pt	36 pt
Subtitle				
Typeface	_	_	serif	_
Style	-	-	upright	-
Size	-	=	20 pt	-
Edition				
Typeface	sans serif	_	-	-
Style	upright, caps	=	-	-
Size	14 pt	-	-	-
Publisher				
Typeface	serif	serif	serif	sans serif
Style	italics	italics	italics	upright, caps
Size	14 pt	14 pt	14 pt	14 pt

The tables of contents in Tufte's books give us our first glimpse of the structure of the main matter. *The Visual Display of Quantitative Information* is split into two parts, each containing some number of chapters. His other three books only contain chapters—they're not broken into parts.

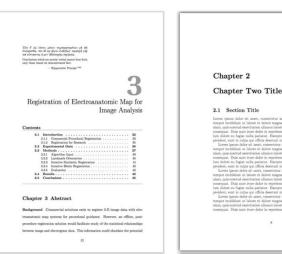


Different Options to change the look of your thesis

- Use packages in your thesis file
- Create your own thesis class
- Find templates which do the work for you











2 Software Maintenance: an overview

2.1 Introductio

Software maintenance starts an early as the first software stiffacts are delivered, an characterized by a high cost and dow speed of implementation [153]. It have be started that it is the most expensive activity of software development, taking up to 90% the total costs [49, 53]. Table 2.1 shows a summary of suchies condusted along the yashow the cost involved in software maintanent. (However, despite of the high out, i...)

Lehman [100] argues, in his Continuing Change Inn of software evolution, tha software changes are a fact of life for software systems if they are intended to remain useful. Indeed, the maintenance of a software is generally performed to conform nebusiness rules, to correct faults, to adapt the software (to new platform, network, or b intends with other systems), to improve the software performance, and so

The changeability nature of off-town, and in societies drown, are profess or if we compare is the fine off-more, such as compares, and due to effect of the order off-town, who can compares, and due to entropy described more. While these list are replaced with ore enough of the fine point of fine. According to the control of the fine point of fine. According to the control of the control of the fine point of fine. According to the control of the fine point of fine. According to the control of the fine point of the fine point of the fine point of fine point of fine point of the fine point of fine po

Additionally, Frederick P. Brooks [54] says that many of the problems with softwar instruction derive from the inherent complexity of its structures and the nonline rease of software size. This is not different for software maintenance. Actually, it

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Thanks



for your attendance



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