

L^AT_EX Style For *No Starch Press* *

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Abstract

This package provides class for typesetting books for No Starch Press,
<http://www.nostarch.com>

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1 Introduction

This is the “official” L^AT_EX style for *No Starch Press*, <http://www.nostarch.com>. The class is intended to typeset books for this publisher—both hard copies and electronic books.

The suite provides main class, `nostarch.cls`, hyperref interface `nshyper.sty` and MakeIndex style `nostarch.ist`.

2 User’s Guide

2.1 Installation

The installation of the class follows the usual practice [1] for L^AT_EX packages:

1. Run `latex` on `nostarch.ins`. This will produce the following files: L^AT_EX class `nostarch.cls`, L^AT_EX style `nshyper.sty` and MakeIndex style `nostarch.ist`.
2. Put the files `nostarch.cls`, `nshyper.sty` and `nostarch.ist` to the places where L^AT_EX and MakeIndex can find them (see [1] or the documentation for your T_EX system).
3. Update the database of file names. Again, see [1] or the documentation for your T_EX system for the system-specific details.
4. The file `nostarch.pdf` provides the documentation for the package (this is the file you are probably reading now).

As an alternative to items 2 and 3 you can just put the files in the working directory where your `.tex` file is.

To typeset the books in the distinctive *No Starch Press* style you will need the fonts used by them. Unfortunately these fonts (New Baskerville, Futura, The Sans Mono Condensed and Dogma) are not free. You may buy them from the vendor or license from the publisher to typeset your book. Please contact *No Starch Press* directly for the arrangements.

The class uses some other L^AT_EX classes or packages. Most probably, some of them they are already installed on your system. If not (or if their versions are very old), you need to download and install them. Here is the list:

1. Font support packages `nbaskerv` [2], `futurans` [3], `dogma` [4] and `thsmc` [5].
2. `booktabs` package [6].
3. `caption` package [7].
4. `fancyhdr` package [8].
5. `fancyvrb` package [9].
6. `graphics` package [10].

7. `ifpdf` package [11].
8. `listings` package [12].
9. `ragged2e` package [13].
10. `upquote` package [14].

These packages are called internally by `nostarch.cls`; you do not need to explicitly call them from your document.

2.2 Invocation

To use the class, put in the preamble of your document

```
\documentclass[options]{nostarch}
```

options As discussed above, *No Starch Press* uses a number of commercial fonts to typeset their books. The option `cfonts` (default) tells L^AT_EX that you do have these commercial fonts. On the other hand, the option `nocfonts` instructs L^AT_EX to use freely available fonts for typesetting. Of course in this case the result will not look like a *No Starch Press* Book.

options The fontsize changing options (`8pt`, `9pt`, ..., `12pt`) have no effect other than producing a warning in the log.

`8pt` *No Starch Press* uses a special paper size. If you process the manuscript with `pdflatex` to produce PDF output, the paper dimensions will be automatically set up by the class. However, if you use `latex` and `dvips`, you need to tell `dvips` what paper size to choose. One way to do this is to add to the `dvips` options the following:

```
-T 7in,9.25in
```

2.3 Use of `hyperref` Package

The books typeset by *No Starch Press* can be sold either as traditional printed and bound hard copies, or as PDF files. If you, the author, envisage the second possibility, you may want additional possibilities provided by `hyperref` package [15], like “clickable” entries in the table of context and index, etc. The provided package `nshyper.sty` adds the functionality of `hyperref` to the class. This package is highly recommended for the books that are going to be distributed in an electronic form.

To use the package, just add the line `\usepackage{nshyper}` to your preamble. This package should be loaded last since it redefines internals of many other packages. Note that a direct call of `hyperref` by `\usepackage{hyperref}` will not work since `nshyper` patches `hyperref` to work with our class.

2.4 Front Matter

`\frontmatter` A book can be divided into three parts: front matter, main matter and back matter. Front matter starts with the command `\frontmatter`. Normally this is the first command in the class. Front matter contains half page, title page, copyright page, brief contents, detailed contents, foreword(s) and other stuff which is traditionally typeset on roman-numbered pages. The commands in main matter can be divided into *declarations* and *directives*. Declarations do not typeset anything. Rather, they up parameters for the typesetting. Directives use them to typeset the stuff.

2.4.1 Front Matter Declarations

`\title` There are five declarations defined by `nostarch.cls`: `\title`, `\subtitle`, `\author`, `\nostarchlogo` and `\nostarchlocation`. The macro `\title`, like the standard L^AT_EX `\title`, sets the title of the book, for example `\title{The book about everything}`.

`\subtitle` The macro `\subtitle` takes one argument and sets up the subtitle of your book, for example `\subtitle{A Guide For Perplexed}`.

`\author` The command `\author` has just one argument, which is the list of authors, separated by commas and (for the last author) the word “and”. Do not use the command `\and` defined in the standard L^AT_EX. For example, `\author{Ralph Alpher, Hans Bethe and George Gamow}`.

`\nostarchlogo` Due to copyright reasons the logo of *No Starch Press* is not distributed with the package. You should get the logo as a graphics file from the publishers and put in the directory where L^AT_EX can find it (for example, the directory with the other sources of your book). The command `\nostarchlogo` has one argument: the name of the file, for example, `\nostarchlogo{biglogo.pdf}`. The file will be automatically scaled to the proper size.

`\nostarchlocation` *No Starch Press* books are usually published in San Francisco. If you need to change this setting, use `\nostarchlocation` declaration, for example, `\nostarchlocation{San Francisco; London; Tokyo}`.

2.4.2 Front Matter Directives

`\makehalftitle` The command `\makehalftitle` creates *half title page*. This is normally the first page of the book.

`\maketitle` The command `\maketitle` creates *title page*. It uses logo and full title of the book.

`copyrightpage` The copyright page is the *verso* of the title page. It has information about copyright, edition history, the credits of the people who helped you to make the book, CIP information, etc. The exact contents of the copyright page differ from book to book. Therefore the class does not try to create this page automatically, and rather sets up the typographic style for arbitrary contents. For this purpose the environment `copyrightpage` is used. So just put the information provided by the publisher between `\begin{copyrightpage}` and `\end{copyrightpage}`. Use `\textbf{\sffamily title}` for the title of the book on the copyright line.

`cipblock` One of important parts of the copyright page is *CIP block*. It contains catalogue data for your book (CIP means Cataloguing in Publication, by the way). Again, the contents of this field will be provided by the publishers; you just need to put them inside `cipblock` environment, i.e. between `\begin{cipblock}` and `\end{cipblock}`. To make your life easier, this block is typeset verbatim, so line ends and spaces are typeset as is.

`dedicationpage` Dedications, if any, are included in the special dedication page, for which a special environment `dedicationpage` is provided.

`\brieftableofcontents`
`\tableofcontents` The standard L^AT_EX provides just one table of contents. This class uses two tables: brief contents and contents in detail. They are correspondingly typeset by the commands `\brieftableofcontents` and `\tableofcontents`.

`\sectionnumberwidth`
`\subsectionnumberwidth` In most books by *No Starch Press* sections and subsections are unnumbered. However, sometimes the books use numbered sections or subsections. In these cases you may want to adjust the widths left for section and subsection numbers in the detailed table of contents. They are set by `\sectionnumberwidth` and `\subsectionnumberwidth`, and can be changed with the usual `\setlength` command.

Forewords and similar front matter materials are unnumbered chapters: `\chapter*[Foreword by R. E. ~Viewer]{Foreword}`.

Front matter with its formal parts like copyright page, CIP information, etc., can be daunting, especially for novice authors. Feel free to use the sample enclosed and ask the publisher for advice.

2.5 Main Matter

`\mainmatter` The command `\mainmatter` finishes the front matter and starts the main matter of the book. The main matter is divided into chapters, sections, subsections, etc. They are discussed below.

2.5.1 Parts, Chapters and Sections

`\chapter` *No Starch Press* books have chapters, sections, subsections and subsubsections.
`\section` The chapters are usually numbered, but sections and below are not. The
`\subsection` commands for them are the same as in the standard L^AT_EX: `\chapter[short
\subsubsection title]{long title}`, `\section[short title]{long title}`, etc. For example:

```
\section[Building Lego Fire Track]{How To Build A Lego Fire Track
And Why It Is Fun}
```

The “starred” forms `\chapter*`, `\section*` etc. are used when the corresponding division has no number (like unnumbered chapters in the front matter). Since our sections, subsections and subsubsections are unnumbered anyway, this form has meaning only for chapters (but can be used for other divisions as well).

`\chapterart`
`\chapterartfile` *No Starch Press* books use “circular art” for chapter openings (except for unnumbered chapters in the front matter). The command `\chapterart` should be issued immediately after `\chapter` command and before the first paragraph.

Its argument is the artwork used for the current chapter: `\chapterart{<LATEX commands>}`. In the simplest case it is just inclusion of an external graphics file, for example:

```
\chapterart{\includegraphics[width=1.264in]{firetrack.jpg}}
```

Actually, this simplest case is so ubiquitous, that there is a special command `\chapterartfile{<filename>}` for it, so the previous example can be simplified as

```
\chapterartfile{firetrack.jpg}
```

However, you can use instead any L^AT_EX commands to produce the artwork. Remember that it must be 1.264" × 1.222".

The first paragraph after chapter start is typeset in larger size font than the body font. If this paragraph is too long, you may need to manually change the font size back in the middle of it. The simplest way to do this is the combination `\par\noindent\normalfont` in a strategic place.

`\part` Sometimes larger books are separated into parts. The command `\part{<Title>}` is used to typeset parts.

2.5.2 Environments

`itemize` The class offers standard `itemize`, `enumerate` and `description` environment.
`enumerate` There is an environment specific for it: `note`. It is intended for “asides”:
`description`
`note`

```
\begin{note}
  Do not forget to plug off the computer before doing any
  modifications!
\end{note}
```

The material in a `note` will be typeset in italics with bold “NOTE” on the margin.

2.5.3 Tables and Figures

There are several things to keep in mind when using tables and figures with the class.

The tables and figures are not centered. Neither are their captions. The captions for figures go *below* the figures, the captions for tables go *above* the tabular data.

If a caption for a table or figure turns out to be wider than the body, you might want to split the caption into lines. Remember, however, that the mandatory argument to `\caption` becomes “robust” in the L^AT_EX parlance [16] only when there is the optional one. Therefore the correct way to split a caption is the following:

```
\caption[A Long Caption With Lines To Split]{%
  A Long Caption\\ With Lines To Split}
```

Typesetting tables, unfortunately, is rarely done right, and standard L^AT_EX is not an exception. The authors are urged to read the introduction to `booktabs` package [6]. To summarize,

1. Never ever use vertical rules.
2. Never ever use double rules.
3. Use only `\toprule`, `\midrule` and `\bottomrule` for tables.

`\tbfont` *No Starch Press* uses special fonts for table body and table header. Since there are too many tabular-like environments (`tabular`, `tabbing`, `longtable`, ...) we do not redefine them switch on these fonts automatically, but rather provide two font switching commands. The command `\tbfont` should be used *before* tabular environment, and the command `\thfont` should be used in all header cells. Also, usually the table entries are flushed left, so you might want to put `@{}` before the first column declaration in `\begin{tabular}` to suppress the padding on the left. Here is an example of a properly done table layout:

```

\begin{table}
  \caption{Starch Content of Foods}
  \label{tab:starch}
  \tbfont
  \begin{tabular}{@{}lr}
    \toprule
    \thfont Product           & \thfont Starch Content, \% \\
    \midrule
    Bran (wheat)              & 23.0\\
    Brown rice (raw)          & 80.0\\
    Brown bread (average)    & 41.3\\
    White bread (average)    & 46.7\\
    \bottomrule
  \end{tabular}
\end{table}

```

2.5.4 Code Fragments

The class provides two facilities for including code fragments in the books.

`Code` For short unformatted code fragments the `fancyvrb` package [9] facilities are recommended. This package is automatically automatically loaded by the class. Long code fragments should be separated by rules; the class defines verbatim-like `Code` environment, which does exactly this:

```

\begin{Code}
  main() {
    printf("Hello, World\n");
  }
\end{Code}

```

See the documentation of [9] about many features of this package.

For longer code fragments the `listings` package [12] is more appropriate. It is also automatically loaded. This package provides a number of useful features, well describe in its manual. We will briefly mention several of them, which might be of interest for the authors of *No Starch Press*:

1. Automatic code formatting according to the rules of the chosen program language (for example, `\lstset{language=C}` or `\lstset{language=Lisp}`).
2. A rich set of different frames: ruled code with `frame=lines`, boxed code with `frame=single` etc.
3. An option to add captions to the listings (the class automatically formats the captions according to the style of *No Starch Press*).
4. An option to make a listing floating.
5. An option to automatically number code lines.
6. An option to add list of listings (with the command `\lstlistoflistings`).

To make the code in `\verb` commands and `verbatim`-like environments be typeset with the `listings` package, you may want to set `fancyvrb=true` in the preamble of your document.

It should be noted that the authors are recommended *not* to use `\texttt` or `\tt` for inline code fragments. The proper way to add inline code is `\verb` or `\lstinline` from the `listings` package. The difference is obvious, for example, in quote characters.

2.6 Back Matter

`\backmatter` Back matter includes bibliography, index, update page, colophon and other material. It starts with the command `\backmatter`.

2.6.1 Bibliography

No Starch Press at present has no special style for bibliography, so the authors have a relative freedom to choose one. However, it would be a good idea to use the `natbib` package [17]. This class should work with `natbib`.

No support for per chapter bibliography lists is provided by the package.

2.6.2 Index

The books published by *No Starch Press* usually have index. This package provides special style file `nostarch.ist` for index formatting.

`\makeindex`
`\printindex` To create index:

1. Put in the preamble of your document the command `\makeindex`.
2. In the body of your document use `\index` commands as described in [16].

3. Put in the Back Matter the command `\printindex` at the place you want the index to be printed.
4. After a `latex` run `makeindex` with the style `nostarch.ist`. In a Unix system the corresponding command is

```
makeindex -s nostarch.ist mydocument
```

or, in a more verbose way

```
makeindex -s nostarch.ist -o mydocument.ind mydocument.idx
```

(here we assume that your main file is `mydocument.tex`).

Refer to the documentation of your \TeX system for the way to run `makeindex` on your computer.

2.6.3 Updates and Colophon

`\updatespage` *No Starch Press* books usually have updates page, which lists the Web address for updates, errata, etc. The command `\updatespage` starts such page. You are free to choose any text there. Note that if you use the package `nshypher 2.3`, then the command `\url{URL}` becomes a hyperlink in the electronic edition.

`\colophon` The last part of Back Matter is usually a *colophon* which describes how the book was printed and typeset. The command `\colophon` starts this part and prints some standard information about your fonts and \LaTeX package. You may want to add some information after this command.

3 Implementation

3.1 Identification

We start with the declaration who we are. Most `.dtx` files put driver code in a separate driver file `.drv`. We roll this code into the main file, and use the pseudo-guard `<gobble>` for it.

```
1 <class>\NeedsTeXFormat{LaTeX2e}
2 <*gobble>
3 \ProvidesFile{nostarch.dtx}
4 </gobble>
5 <class>\ProvidesClass{nostarch}
6 <nshyper>\ProvidesPackage{nshyper}
7 <*list>
8 [2008/06/06 v1.3 Typesetting books for No Starch Press]
9 </!list>
```

And the driver code:

```
10 <*gobble>
11 \documentclass{ltxdoc}
12 \usepackage{array}
13 \usepackage{url,amsfonts}
14 \usepackage[breaklinks,colorlinks,linkcolor=black,citecolor=black,
15             pagecolor=black,urlcolor=black,hyperindex=false]{hyperref}
16 \PageIndex
17 \CodelineIndex
18 \RecordChanges
19 \EnableCrossrefs
20 \begin{document}
21   \DocInput{nostarch.dtx}
22 \end{document}
23 </gobble>
24 <*class>
```

3.2 Options

First, let us decide whether we have non-free fonts:

```
25 \newif\ifnostarch@cfonts
26 \nostarch@cfontstrue
27 \DeclareOption{cfonts}{\nostarch@cfontstrue}
28 \DeclareOption{nocfont}{\nostarch@cfontsfalse}
```

The size-changing options produce a warning:

```
29 \long\def\nostarch@size@warning#1{%
30   \ClassWarning{nostarch}{Size-changing option #1 will not be
31     honored}}%
32 \DeclareOption{8pt}{\nostarch@size@warning{\CurrentOption}}%
33 \DeclareOption{9pt}{\nostarch@size@warning{\CurrentOption}}%
34 \DeclareOption{10pt}{\nostarch@size@warning{\CurrentOption}}%
35 \DeclareOption{11pt}{\nostarch@size@warning{\CurrentOption}}%
```

```

36 \DeclareOption{12pt}{\nostarch@size@warning{\CurrentOption}}%
    All other options are passed to book:
37 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{book}}
    Now we read the configuration file
38 \InputIfFileExists{nostarch.cfg}{%
39   \ClassInfo{nostarch}{%
40     Loading configuration file nostarch.cfg}{%
41   \ClassInfo{nostarch}{%
42     Configuration file nostarch.cfg is not found}}
And process the options:
43 \ProcessOptions\relax

```

3.3 Loading Class and Packages

We start with the base class

```

44 \LoadClass[10pt]{book}
    A bunch of packages:
45 \RequirePackage{ifpdf, fancyhdr, fancyvrb, booktabs, graphicx,
46 listings, caption, makeidx, upquote}

```

We do not want the option document with ragged2e: this calls footmisc, while we want our own footnotes:

```

47 \RequirePackage{ragged2e}
48 \setlength\RaggedRightParindent{\parindent}
49 \RaggedRight

```

```

\@nschapterpreamble This is the preamble to bibliography and index commands used when nshyper is
loaded. Normally it is empty.
50 \def\@nschapterpreamble{}

```

3.4 Fonts

If we have commercial fonts, we load them. Note that the body text has roman font at 10pt, and typewriter at 8.5pt. Therefore we will load `thsmc` scaled. We also add `dgdefault` for dogma family

```

51 \ifnostarch@cfonts
52   \RequirePackage{nbaskerv}%
53   \RequirePackage{futura}%
54   \RequirePackage[scaled=0.85]{thsmc}%
55   \RequirePackage{dogma}%
56   \newcommand{\dgdefault}{fdg}%

```

Otherwise we just use sans serif font for dogma.

```

57 \else
58   \newcommand{\dgdefault}{\sfdefault}%
59 \fi

```

And switch to normal size—just in case

```

60 \normalsize

```

3.5 Page Dimensions and Paragraphing

`\paperheight` The trim size:
`\paperwidth` 61 `\setlength{\paperheight}{9.25in}`
62 `\setlength{\paperwidth}{7in}`

`\pdfpaperheight` If we deal with `pdftex`, we can use this information more creatively. This was
`\pdfpaperwidth` inspired by memoir [18].
`\pdfvorigin` 63 `\ifpdf\relax`
`\pdfhorigin` 64 `\pdfpageheight=\paperheight`
65 `\pdfpagewidth=\paperwidth`
66 `\pdfvorigin=1in`
67 `\pdfhorigin=1in`
68 `\fi`

`\topmargin` The top margin is 0.625". We use fake headers of 12pt:
69 `\setlength\topmargin{0.625in}`
70 `\addtolength\topmargin{-1in}`
71 `\addtolength\topmargin{-12pt}`

`\textheight` This is the height of the text including footnotes, but excluding running head and
foot.
72 `\setlength\textheight{8in}`
73 `\addtolength{\textheight}{-0.207in}`
Now we take care of the first line height:
74 `\addtolength\textheight{\topskip}`

`\evensidemargin` The margins on even and odd pages are 0.687" + 0.833" (margin par width) +
`\oddsidemargin` 0.167" (margin par gap):
75 `\setlength\evensidemargin{0.687in}`
76 `\addtolength{\evensidemargin}{-1in}`
77 `\addtolength{\evensidemargin}{0.833in}`
78 `\addtolength{\evensidemargin}{0.167in}`
79 `\setlength\oddsidemargin{\evensidemargin}`

`\textwidth` The type area is 5.625", but this includes side gap:
80 `\setlength\textwidth{5.625in}`
81 `\addtolength\textwidth{-0.833in}`
82 `\addtolength\textwidth{-0.167in}`

`\parindent` The paragraph indentation is 0.25":
83 `\setlength\parindent{0.25in}`

`\headheight` We do not have headers in these books. `Fancyhdr` sets `headheight` to 12pt, so we
`\headsep` compensate it above in `\topmargin`
84 `\setlength\headheight{12pt}`
85 `\setlength\headsep{0pt}`

`\footskip` The footer is 8.792" from top

```

86 \setlength{\footskip}{9in}
87 \addtolength{\footskip}{-\textheight}
88 \addtolength{\footskip}{0.067in}
89 \addtolength{\footskip}{\baselineskip}
90 \addtolength{\footskip}{-1in}

```

`\widowpenalty` We forbid widows and clubs. To prevent too extended pages we use `\raggedbottom`:

`\clubpenalty`

```

91 \widowpenalty=10000
92 \clubpenalty=10000
93 \raggedbottom

```

3.6 Headers and Footers

`\headrulewidth` We do not want decorative rules:

`\footrulewidth`

```

94 \renewcommand{\headrulewidth}{0pt}
95 \renewcommand{\footrulewidth}{0pt}

```

We do not have headers:

```

96 \pagestyle{fancy}
97 \lhead{}
98 \rhead{}
99 \chead{}

```

The right footer is stuck $0.833'' + 0.167'' = 1''$ to the right

```

100 \fancyhfoffset[L]{1in}

```

On even pages we put page number and chapter title in footer.

```

101 \fancyfoot [RO]{\fontfamily{\sfdefault}\fontsize{6pt}{6pt}%
102 \fontseries{lq}\selectfont\rightmark%
103 \hspace{2em}\fontseries{bc}\fontsize{9pt}{6pt}\selectfont\thepage}
104 \fancyfoot [LO]{}
105 \fancyfoot [CO]{}

```

On even pages we put page number and chapter number in footer:

```

106 \fancyfoot [LE]{\fontfamily{\sfdefault}\fontseries{bc}\fontsize{9pt}{6pt}%
107 \selectfont\thepage\hspace{2em}%
108 \fontseries{lq}\fontsize{6pt}{6pt}\selectfont%
109 \leftmark}
110 \fancyfoot [RE]{}
111 \fancyfoot [CE]{}

```

3.7 Front Matter

`\subtitle` We use subtitle of the book...

```

112 \newcommand{\subtitle}[1]{\gdef\@subtitle{#1}}

```

`\@subtitle` ... With empty default:

```

113 \def\@subtitle{}

```

```

\nostarchlogo The logotype of the publisher:
114 \newcommand{\nostarchlogo}[1]{\gdef\nostarchlogo{#1}}

@\nostarchlogo The default it empty:
115 \def\@nostarchlogo{}

\nostarchlocation Similarly for location:
116 \newcommand{\nostarchlocation}[1]{\gdef\nostarchlocation{#1}}

@\nostarchlocation The default is SF:
117 \def\@nostarchlocation{San Francisco}

\makehalftitle Now we are ready to typeset the half title page. It is flushed right, cannot be to
the left of the page center and must be 0.25" indented from the right:
118 \def\makehalftitle{%
119 \clearpage
120 {\pagestyle{empty}\cleardoublepage}%
121 \thispagestyle{empty}%
122 \null\vskip1.025in%
123 \leavevmode\noindent\hspace{1.66in}%
124 \begin{minipage}[t]{2.5625in}%
125 \flushright
126 \fontfamily{\sfdefault}\fontseries{b}%
127 \fontsize{12\p@}{13\p@}\selectfont
128 \MakeUppercase{\@title}%
129 \end{minipage}}

maketitle Now the main title page:
130 \def\maketitle{%
131 \bgroup
132 \clearpage
133 {\pagestyle{empty}\cleardoublepage}%
134 \thispagestyle{empty}%
135 \bgroup
136 \list{}{\leftmargin-1in\rightmargin\z@\labelwidth\z@%
137 \labelsep\z@\listparindent\z@\parsep\z@\itemsep\z@%
138 \topsep\z@\partopsep\z@}%
139 \item\relax
140 \centering
141 \null\vskip0.855in%
142 {\fontfamily{\dgdefault}\fontseries{bk}\fontsize{36\p@}{37\p@}\selectfont
143 \MakeUppercase{\@title}\par}%
144 \if\@subtitle\@empty\relax\else
145 {\null\vskip25\p@%
146 \fontfamily{\dgdefault}\fontseries{bq}\fontsize{24\p@}{25\p@}\selectfont
147 \@subtitle\par}%
148 \fi
149 \vspace{1.7in}%
150 \vspace{-\baselineskip}%

```

```

151 {\fontfamily{\sfdefault}\fontseries{hq}\fontsize{18\p@}{22\p@}\selectfont
152   by \@author\par}%
153 \vspace{0.45in}%
154 \vspace{\baselineskip}%
155 \if\@nostarchlogo\@empty\relax\else
156   \includegraphics[height=1.08in]{\@nostarchlogo}\par
157 \fi
158 \vspace{12\p@}%
159 \normalfont\@nostarchlocation\par
160 \endlist
161 \egroup
162 \clearpage\egroup}

```

`copyrightpage` This is the page copyright data:

```

163 \newenvironment{copyrightpage}{%
164   \clearpage
165   \bgroup
166   \list{}{\leftmargin-1in\rightmargin\z@\labelwidth\z@%
167     \labelsep\z@\listparindent\z@\parsep8\p@\itemsep\z@%
168     \topsep\z@\partopsep\z@}%
169   \item\relax
170   \thispagestyle{empty}%
171   \normalfont\fontsize{8\p@}{10\p@}\selectfont}{%
172   \endlist
173   \egroup
174   \clearpage}

```

`cipblock` CIP block is supposed to be in typewriter font. So we use verbatim:

```

175 \newenvironment{cipblock}{%
176   \leavevmode\par\normalfont\fontsize{8\p@}{10\p@}\selectfont
177   \textit{Library of Congress Cataloging-in-Publication Data}\par%
178   \ttfamily\@vobeyspaces\obeylines
179   \parindent\z@\parfillskip\@flushglue\parskip\z@skip}{\par\vskip8pt\relax}

```

`dedicationpage` Dedication is centered:

```

180 \newenvironment{dedicationpage}{%
181   \clearpage
182   {\pagestyle{empty}\cleardoublepage}%
183   \thispagestyle{empty}%
184   \null\vskip1.175in%
185   \centering\normalfont}{\clearpage}

```

3.8 Tables of Contents

Standard \LaTeX has just one table of contents. We have two. The table of brief contents will have the extension `tblc`, while the standard table of contents will have the standard extension `toc`.

`\briefcontentsname` The name for brief contents

```

186 \def\breviefcontentsname{Brief Contents}

```

```

\contentsname Same with \contentsname
187 \def\contentsname{Contents in Detail}%
Special treatment if babel is used:
188 \AtBeginDocument{\@ifpackageloaded{babel}{%
189 \addto\captionenglish{%
190 \renewcommand{\contentsname}%
191 {Contents in Detail}}}{}}

```

```

\briefftableofcontents This is the new macro:
192 \newcommand\briefftableofcontents{%
193 \clearpage
194 {\pagestyle{empty}\cleardoublepage}%
195 \bgroup
196 \thispagestyle{empty}%
197 \markboth{\briefcontentsname}{\briefcontentsname}%
198 \null\vskip0.925in%
199 \list{}{\leftmargin-1.0in\rightmargin0.4in\labelwidth\z@%
200 \labelsep\z@\listparindent\z@\parsep\z@\itemsep\z@%
201 \topsep\z@\partopsep\z@}%
202 \item\relax
203 {\centering
204 \fontfamily{\dgdefault}\fontseries{bs}\fontsize{16\p@}{18\p@}\selectfont
205 \MakeUppercase{\briefcontentsname}\par}\vskip40pt%
206 \@starttoc{tbc}%
207 \endlist
208 \egroup}

```

```

\tableofcontents This is the new macro:
209 \renewcommand\tableofcontents{%
210 \clearpage
211 {\pagestyle{empty}\cleardoublepage}%
212 \bgroup
213 \thispagestyle{empty}%
214 \markboth{\contentsname}{\contentsname}%
215 \null\vskip0.175in%
216 \list{}{\leftmargin-1.0in\rightmargin0.6in\labelwidth\z@%
217 \labelsep\z@\listparindent\z@\parsep\z@\itemsep\z@%
218 \topsep\z@\partopsep\z@}%
219 \item\relax
220 {\centering
221 \fontfamily{\dgdefault}\fontseries{bs}\fontsize{16\p@}{18\p@}\selectfont
222 \MakeUppercase{\contentsname}\par}\vskip18pt%
223 \@starttoc{toc}%
224 \endlist
225 \egroup}

```

```

\@dotsep Standard LATEX provides 4.5 for the distance between dots. We will make this
tighter:
226 \renewcommand\@dotsep{1.5}

```

```

\l@part This is how we typeset parts in the table of contents
227 \renewcommand*\l@part[2]{%
228 \ifnum \c@tocdepth >-2\relax
229 \addpenalty{-\@highpenalty}%
230 \addvspace{28\p@}%
231 \begingroup
232 \parindent \z@ \rightskip \@pnumwidth
233 \parfillskip -\@pnumwidth
234 {\leavevmode
235 \fontfamily{\sfdefault}\fontseries{bq}\fontsize{12\p@}{14\p@}\selectfont
236 #1}\par
237 \nobreak
238 \global\@nobreaktrue
239 \everypar{\global\@nobreakfalse\everypar{}}%
240 \endgroup
241 \fi}

```

```

\l@chapter This is how we typeset chapters in the table of contents
242 \renewcommand*\l@chapter[2]{%
243 \ifnum \c@tocdepth >\m@ne
244 \addpenalty{-\@highpenalty}%
245 \vskip 20\p@
246 \setlength\@tempdima{1.5em}%
247 \begingroup
248 \parindent \z@ \rightskip \@pnumwidth
249 \parfillskip -\@pnumwidth
250 \leavevmode
251 \fontfamily{\sfdefault}\fontseries{bq}\fontsize{10\p@}{12\p@}\selectfont
252 #1\nobreak\hfil \nobreak\hbxt@\@pnumwidth{\hss #2}\par
253 \vskip4\p@\penalty\@highpenalty
254 \endgroup
255 \fi}

```

```

\sectionnumberwidth The number width for sections. Normally the width of 99.99
256 \newlength{\sectionnumberwidth}
257 \settowidth{\sectionnumberwidth}{%
258 \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont
259 99.99}

```

```

\subsectionnumberwidth The number width for subsections. Normally the width of 99.99.99
260 \newlength{\subsectionnumberwidth}
261 \settowidth{\subsectionnumberwidth}{%
262 \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont
263 99.99.99}

```

```

\l@section This is how we typeset sections in the table of contents
264 \renewcommand{\l@section}[2]{\@dottedtocline{1}{\z@}{%
265 \sectionnumberwidth}{%
266 \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont#1}{%
267 \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont#2}}

```

```

\l@section This is how we typeset subsections in the table of contents
268 \renewcommand{\l@section}[2]{\dottedtocline{2}{0.5in}%
269   {\subsectionnumberwidth}{%
270     \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont#1}{%
271     \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{11\p@}\selectfont#2}}

```

```

\l@bpart There is a special formatting of parts in the brief table of contents:
272 \newcommand*\l@bpart[2]{%
273   \ifnum \c@tocdepth >-2\relax
274     \addpenalty{-\@highpenalty}%
275     \addvspace{14\p@}%
276     \begingroup
277       \parindent \z@ \rightskip \@pnumwidth
278       \parfillskip -\@pnumwidth
279       {\leavevmode
280         \fontfamily{\sfdefault}\fontseries{h}\fontsize{9\p@}{14\p@}\selectfont
281         #1}\par\vskip7\p@%
282         \nobreak
283         \global\@nobreaktrue
284         \everypar{\global\@nobreakfalse\everypar{}}%
285       \endgroup
286   \fi}

```

```

\l@bchapter There is a special formatting of chapters in the brief table of contents:
287 \newcommand*\l@bchapter[2]{%
288   \ifnum \c@tocdepth >\m@ne
289     \addpenalty{-\@highpenalty}%
290     \setlength\@tempdima{1.5em}%
291     \begingroup
292       \parindent \z@ \rightskip \@pnumwidth
293       \parfillskip -\@pnumwidth
294       \leavevmode
295       \fontfamily{\sfdefault}\fontseries{k}\fontsize{9\p@}{14\p@}\selectfont
296       #1\nobreak\leaders\hbox{$\m@th
297         \mkern \dotsep mu\hbox{.}\mkern \dotsep
298         mu$}\hfill
299       \nobreak\hb@xt@\@pnumwidth{\hss #2}\par
300       \penalty\@highpenalty
301     \endgroup
302   \fi}

```

3.9 Main Matter

```

\mainmatter We redefine \mainmatter to take care of that blank verso page...
303 \renewcommand\mainmatter{%
304   \clearpage
305   {\thispagestyle{empty}\cleardoublepage}%
306   \@mainmattertrue
307   \pagenumbering{arabic}}

```

3.10 Back Matter

`\backmatter` We redefine `\backmatter` to take care of that blank verso page...

```
308 \renewcommand\backmatter{%
309   \clearpage
310   {\thispagestyle{empty}\cleardoublepage}%
311   \@mainmatterfalse}
```

3.11 Sectioning

We do not number sections and below:

```
312 \setcounter{secnumdepth}{0}
```

`\sectionmark` Our section commands do not mark:

```
313 \def\sectionmark#1{%
```

Chapters, unlike the ones in [19], have *two* obligatory arguments. The second argument is the command to fill the “circular graphics”. Otherwise we follow the design in [19]. One problem, however: we *cannot* use `\secdef` because we have three arguments, not two.

`\if@firstpara` We introduce a macro to get special typesetting for the first paragraph after a part or a chapter begins:

```
314 \newif\if@firstpara
315 \@firstparafalse
```

`\@chapterart` We also keep track of the current artwork for chapter start:

```
316 \def\@chapterart{}
```

`\secdef` The standard L^AT_EX `secdef` assumes that starred commands have no optional argument. This is not right for us:

```
317 \def\secdef#1#2{\@ifstar{\@dblarg{#2}}{\@dblarg{#1}}}
```

`\part` Our parts differ from the ones in standard L^AT_EX since we use empty pagestyle rather than plain in part pages. The trick with `\cleardoublepage` is from [8]

```
318 \renewcommand\part{%
319   \clearpage
320   {\pagestyle{empty}\cleardoublepage}%
321   \everypar{}%
322   \markboth{}{}%
323   \def\@chapterart{}%
324   \thispagestyle{empty}%
325   \null\vskip0.715in%
326   \secdef\@part\@spart}
```

`\@part` This code is used when we have a numbered part.

```
327 \def\@part[#1]#2{%
328   \ifnum \c@secnumdepth >-2\relax
```

```

329     \refstepcounter{part}%
330     \addcontentsline{toc}{part}{\MakeUppercase{\partname}}
331     \thepart\protect\linebreak\penalty\@highpenalty\MakeUppercase{#1}}%
332     \addcontentsline{tbc}{bpart}{\MakeUppercase{\partname~\thepart: #1}}%
333 \else
334     \addcontentsline{toc}{part}{\MakeUppercase{#1}}%
335     \addcontentsline{tbc}{bpart}{\MakeUppercase{#1}}%
336 \fi
337 {\centering
338  \interlinepenalty \@M
339  \normalfont
340  \ifnum \c@secnumdepth >-2\relax
341    \fontfamily{\sfdefault}\fontsize{80pt}{80pt}\fontseries{bc}\selectfont
342    \MakeUppercase{\partname\nobreakspace\thepart}%
343    \par
344    \vskip 0.45in%
345  \fi
346  \fontfamily{\dgdefault}\fontsize{16pt}{16pt}\fontseries{br}\selectfont
347  \MakeUppercase{#2}\par}%
348 \endpart}

```

`\@spart` This is used for starred parts (probably not something we are going to encounter...)

```

349 \def\@spart[#1]#2{%
350   \addcontentsline{toc}{part}{\MakeUppercase{#1}}%
351   \addcontentsline{tbc}{bpart}{\MakeUppercase{#1}}%
352   {\centering
353    \fontfamily{\dgdefault}\fontsize{16pt}{16pt}\fontseries{br}\selectfont
354    \MakeUppercase{#2}\par}%
355   \@endpart}

```

`\@endpart` When part is finished, we change the settings of the first paragraph:

```

356 \def\@endpart{%
357   \@afterindentfalse
358   \vskip49\p@%
359   \@firstparatrue
360   \@afterheading}

```

`\chapter` First, we suppress floats, set up empty page style and delete indentation after the chapter. Then we check whether the chapter is starred:

```

361 \def\chapter{%
362   \clearpage
363   {\pagestyle{empty}\cleardoublepage}%
364   \everypar{}%
365   \thispagestyle{empty}%
366   \global\@topnum\z@
367   \@afterindentfalse
368   \gdef\@chapterart{}%
369   \secdef\@chapter\@schapter}

```

`\@chapter` The actual work is done by `\@chapter` macro.

```
370 \def\@chapter[#1]#2{%
371   \vspace*{0.622in}
372   \ifnum \c@secnumdepth > \m@ne
373     \refstepcounter{chapter}%
374     \typeout{Chapter:\thechapter\space\@currentlabel}%
375     \markboth{\@chapapp~\thechapter}{#1}%
376     \typeout{\@chapapp\space\thechapter.}%
377     \addcontentsline{toc}{chapter}{\thechapter%
378       \protect\linebreak\penalty\@highpenalty
379       \MakeUppercase{#1}}%
380     \addcontentsline{tbc}{bchapter}{%
381       \chaptername~\thechapter:~#1}%
382     {\centering
383       \fontfamily{\sfdefault}\fontseries{bc}\fontsize{120pt}{120pt}
384       \selectfont
385       \thechapter\par\nobreak\vskip27pt}%
386   \else
387     \addcontentsline{toc}{chapter}{%
388       \MakeUppercase{#1}}%
389     \addcontentsline{tbc}{bchapter}{#1}%
390     \markboth{#1}{#1}%
391     \fi
392     {\centering
393       \fontfamily{\dgdefault}\fontseries{br}\fontsize{16pt}{20pt}\selectfont
394       \MakeUppercase{#2}\par}\nobreak\vskip25pt\relax%
395     \@firstparatrue
396     \@afterheading}%
```

`\@schapter` This is used when we have a starred chapter:

```
397 \def\@schapter[#1]#2{%
398   \vspace*{2.747in}
399   {\centering
400     \addcontentsline{toc}{chapter}{%
401       \MakeUppercase{#1}}%
402     \addcontentsline{tbc}{bchapter}{#1}%
403     \markboth{#1}{#1}%
404     {\fontfamily{\dgdefault}\fontseries{br}\fontsize{16pt}{20pt}\selectfont
405       \MakeUppercase{#2}\par}}\nobreak\vskip25pt\relax%
406   \@firstparatrue
407   \@afterheading}%
```

`\@afterheading` We cannot use the standard `\@afterheading` since we want to put the first paragraph in larger font and put there the artwork. So we take `\@afterheading` code and patch it:

```
408 \def\@afterheading{%
409   \@nobreaktrue
410   \everypar{%
411     \if@nobreak
```

```

412     \@nobreakfalse
413     \clubpenalty \@M
414     \setbox\z@\lastbox
415   \else
416     \clubpenalty \@clubpenalty
417     \everypar{}%
418   \fi
419   \if@firstpara

```

The first paragraph has a special font and artwork in the beginning:

```

420     \rule{\z@}{49\p@}%
421     \ifx\@chapterart\@empty%
422   \else
423     \makebox[0pt][r]{\raisebox{-0.5in}[0pt][0pt]{%
424       \@chapterart\hspace{0.21in}}}%
425     \parshape=5
426     0.963in 3.622in
427     0.913in 3.672in
428     0.813in 3.772in
429     0.563in 4.022in
430     0in \textwidth
431   \fi
432   \fontsize{14pt}{16.5pt}\selectfont%
433   \parskip=3pt
434   \else
435     \parskip=0pt
436     \normalsize\selectfont
437   \fi
438   \@firstparafalse}}%

```

`\chapterart` This creates the chapterart:

```

439 \newcommand{\chapterart}[1]{\gdef\@chapterart{#1}}%

```

`\chapterartfile` The simplified version of `\chapterart`:

```

440 \newcommand{\chapterartfile}[1]{\gdef\@chapterart{%
441   \includegraphics[width=1.264in]{#1}}}%

```

`\section` Sections correspond to HeadA in our specs. We use `\everypar{}` in case section starts just after chapter start.

```

442 \renewcommand{\section}{\everypar{}%
443   \@startsection{section}{1}{-0.75in}{16pt}{6pt}{%
444     \fontfamily{\sfdefault}\fontseries{b}\fontsize{12pt}{16pt}\selectfont}}%

```

`\subsection` Subsections correspond to HeadB in our specs:

```

445 \renewcommand{\subsection}{\everypar{}%
446   \@startsection{subsection}{2}{0pt}{14pt}{4pt}{%
447     \fontfamily{\sfdefault}\fontshape{it}%
448     \fontseries{bc}\fontsize{12pt}{17pt}\selectfont}}%

```

`\subsubsection` Subsections correspond to HeadC in our specs:

```
449 \renewcommand{\subsubsection}{\everypar{}}%
450 \@startsection{subsubsection}{3}{0pt}{10pt}{2pt}{%
451 \fontfamily{\sfdefault}\fontseries{bp}\fontsize{10pt}{14pt}%
452 \selectfont}}%
```

We do not redefine levels below, leaving the options from [19] in place.

3.12 Lists

This follows design of [19] with the values from our specifications:

`\leftmargin` The host of `\leftmargin` commands:

```
\leftmargini 453 \setlength{\leftmargin}{0.25in}
\leftmarginii 454 \setlength{\leftmargini}{0.25in}
\leftmarginiii 455 \setlength{\leftmarginii}{0.25in}
\leftmarginiv 456 \setlength{\leftmarginiii}{0.25in}
457 \setlength{\leftmarginiv}{0.25in}
```

`\rightmargin` Right margin is always zero:

```
458 \setlength{\rightmargin}{0pt}
```

`\@listi` This is the default list on the first level

```
\@listI 459 \def\@listi{\leftmargin\leftmargini
460 \labelwidth\leftmargin\relax
461 \advance\labelwidth-\labelsep\relax
462 \parsep0\p@\relax
463 \topsep6\p@\relax
464 \itemsep4\p@\relax}
465 \let\@listI\@listi
```

`\@listii` And the lists for the next levels:

```
\@listiii 466 \def\@listii{\leftmargin\leftmarginii
\@listiv 467 \labelwidth\leftmarginii
\@listv 468 \advance\labelwidth-\labelsep
\@listvi 469 \parsep0\p@\relax
470 \topsep0\p@\relax
471 \itemsep0\p@\relax}
472 \def\@listiii{\leftmargin\leftmarginiii
473 \labelwidth\leftmarginiii
474 \advance\labelwidth-\labelsep
475 \parsep0\p@\relax
476 \topsep0\p@\relax
477 \itemsep0\p@\relax}
478 \def\@listiv{\leftmargin\leftmarginiv
479 \labelwidth\leftmarginiv
480 \advance\labelwidth-\labelsep
481 \parsep0\p@\relax
482 \topsep0\p@\relax
```

```

483 \itemsep0\p@\relax}
484 \def\@listv{\leftmargin\leftmarginv
485 \labelwidth\leftmarginv
486 \advance\labelwidth-\labelsep
487 \parsep0\p@\relax
488 \topsep0\p@\relax
489 \itemsep0\p@\relax}
490 \def\@listvi{\leftmargin\leftmarginvi
491 \labelwidth\leftmarginvi
492 \advance\labelwidth-\labelsep
493 \parsep0\p@\relax
494 \topsep0\p@\relax
495 \itemsep0\p@\relax}

```

itemize We make bullets flushleft:

```

496 \def\itemize{%
497 \ifnum \@itemdepth >\thr@@\toodeep\else
498 \advance\@itemdepth\@ne
499 \edef\@itemitem{labelitem\romannumeral\the\@itemdepth}%
500 \expandafter
501 \list
502 \csname\@itemitem\endcsname
503 {\def\makelabel##1{##1}}%
504 \fi}

```

enumerate We make numbering flushleft:

```

505 \def\enumerate{%
506 \ifnum \@enumdepth >\thr@@\toodeep\else
507 \advance\@enumdepth\@ne
508 \edef\@enumctr{enum\romannumeral\the\@enumdepth}%
509 \expandafter
510 \list
511 \csname label\@enumctr\endcsname
512 {\usecounter\@enumctr\def\makelabel##1{##1}}%
513 \fi}

```

quotation In quotation environment the paragraphs are indented. We use 9pt Roman for quotations:

```

514 \renewenvironment{quotation}{%
515 \list{}{\listparindent\parindent\relax
516 \itemindent\listparindent\relax
517 \rightmargin0.5in\relax
518 \leftmargin0.5in\relax}%
519 \item\fontsize{9pt}{11pt}\selectfont}{\endlist}

```

quote Quote is for short quotations without indentations:

```

520 \renewenvironment{quote}{%
521 \list{}{\listparindent0pt\relax
522 \itemindent\listparindent\relax

```

```

523 \rightmargin0.5in\relax
524 \leftmargin0.5in\relax}%
525 \item\fontsize{9pt}{11pt}\selectfont}{\endlist}

```

note Note is a special environment for asides. It is in italics with the word “NOTE” on the margin:

```

526 \newenvironment{note}{%
527 \list{\makebox[0pt][r]{\fontfamily{%
528 \dgdefault}\fontseries{b}\fontsize{9pt}{11pt}\selectfont
529 NOTE\hspace{2em}}}{\listparindent0pt\relax
530 \topsep9\p@\relax
531 \itemindent0\p@\relax
532 \rightmargin0\p@\relax
533 \leftmargin0\p@\relax
534 \labelwidth0\p@\relax
535 \labelsep0\p@}%
536 \item\itshape}{\vspace{-3pt}\endlist}

```

3.13 Footnotes

\footnoterule We want one inch by 0.25 footnote rule:

```

537 \renewcommand\footnoterule{%
538 \kern6\p@
539 \hrule height 0.25pt depth 0pt width 1in
540 \kern2\p@}

```

@footnotetext We want 4pt between footnotes. Unfortunately the standard functions introduces **@finalstrut**, which we do not need here...

```

541 \long\def\@footnotetext#1{\insert\footins{%
542 \reset@font\footnotesize
543 \interlinepenalty\interfootnotelinepenalty
544 \splittopskip\footnotesep
545 \splitmaxdepth \dp\strutbox \floatingpenalty \@MM
546 \hsize\columnwidth \@parboxrestore
547 \protected@edef\@currentlabel{%
548 \csname p@footnote\endcsname\@thefnmark
549 }%
550 \color@begingroup
551 \@makefntext{%
552 \rule\z@{13.5pt}\ignorespaces#1}%
553 \color@endgroup}}%

```

\footins We make some space between footnotes:

```

554 \setlength{\skip\footins}{16\p@ \@plus 4\p@ \@minus 0\p@}

```

@makefntext We do not indent the footnotes:

```

555 \renewcommand\@makefntext[1]{%
556 \parindent 0\p@%
557 \RaggedRightParindent0\p@%

```

```

558 \noindent
559 \@makefnmark\space#1}

```

3.14 Tables, Figures and Listings

`\thefigure` We want dash instead of dot between chapter number and figure number:

```

560 \renewcommand \thefigure
561     {\ifnum \c@chapter>\z@ \thechapter-\fi \@arabic\c@figure}

```

`\thetable` We want dash instead of dot between chapter number and table number:

```

562 \renewcommand \thetable
563     {\ifnum \c@chapter>\z@ \thechapter-\fi \@arabic\c@table}

```

`\thelistings` And the same for listings:

```

564 \renewcommand \thelstlisting
565     {\ifnum \c@chapter>\z@ \thechapter-\fi \@arabic\c@lstlisting}

```

`nostarchfigfmt` This is our captions format for figures and listings

```

566 \DeclareCaptionFormat{nostarchfigfmt}{\fontfamily{\sfdefault}%
567 \fontshape{it}\fontsize{8.5pt}{9pt}\fontseries{k}\selectfont\unskip#1#2#3}

```

`nostarchtabfmt` This is our captions format for tables

```

568 \DeclareCaptionFormat{nostarchtabfmt}{\fontfamily{\sfdefault}%
569 \fontshape{rm}\fontsize{8.5pt}{9pt}\fontseries{h}\selectfont\unskip#1#2%
570 \fontseries{k}\selectfont#3}

```

The figure, listing and table styles:

```

571 \captionsetup[figure]{format=nostarchfigfmt,singlelinecheck=off,
572 aboveskip=8pt,belowskip=8pt}
573 \captionsetup[lstlisting]{format=nostarchfigfmt,singlelinecheck=off,
574 aboveskip=8pt,belowskip=8pt}
575 \captionsetup[table]{format=nostarchtabfmt,singlelinecheck=off,
576 aboveskip=0pt,belowskip=4pt}

```

`\tbfont` This is the font used for table body:

```

577 \def\tbfont{%
578 \fontfamily{\sfdefault}\fontseries{k}\fontsize{8pt}{10pt}\selectfont}

```

`\thfont` Font for table headers:

```

579 \def\thfont{%
580 \fontfamily{\sfdefault}\fontseries{h}\fontsize{8pt}{10pt}\selectfont}

```

`\heavyrulewidth` Changing booktabs defaults:

```

\lightrulewidth 581 \heavyrulewidth=3\p@
\cmidrulewidth 582 \lightrulewidth=1.5\p@
583 \cmidrulewidth=1.5\p@

```

`\bottomrule` Our `\bottomrule` is thin:

```
584 \def\bottomrule{\noalign{\ifnum0='}\fi
585 \abovebaseline=\abovebaseline
586 \global\@belowrulesep=\belowbottomsep
587 \global\@thisruleclass=\@ne
588 \ifnextchar[{\@BTrule}{\@BTrule[\lightrulewidth]}}
```

`\belowrulesep` Again redefining booktabs:

```
\belowbottomsep 589 \belowrulesep=0.7ex
\abovetopsep 590 \belowbottomsep=0.65pt
591 \abovebaseline=0.7ex
592 \abovetopsep=0.65pt
```

3.15 Verbatim and Listings Customization

`Code` This is for framed code:

```
593 \DefineVerbatimEnvironment{Code}{Verbatim}{frame=lines,framerule=0.25pt}
```

`\FV@ListParameterHook` The skip before code is too large for us

```
594 \FV@AddToHook\FV@ListParameterHook{\vspace{-6pt}}
```

We also enable verbatim footnotes.

```
595 \VerbatimFootnotes
```

We set up captions with captions:

```
596 \lstset{captionpos=b}
```

And make the code to be in typewriter font:

```
597 \lstset{basicstyle=\ttfamily,columns=fullflexible}
```

3.16 Bibliography

`\bibsection` We actually use chapter for bibliographic sections, but here we try to be nice to `natbib`:

```
598 \AtBeginDocument{
599 \def\bibsection{%
600 \clearpage
601 {\pagestyle{empty}\cleardoublepage}%
602 \everypar{}%
603 \thispagestyle{empty}%
604 \global\@topnum\z@
605 \@afterindentfalse
606 \gdef\@chapterart{}%
607 \nschapterpreamble
608 \vspace*{0.622in}%
609 \addcontentsline{toc}{chapter}{\MakeUppercase{\bibname}}%
610 \addcontentsline{tbc}{bchapter}{\bibname}%
611 \centering
612 {\fontfamily{\dgdefault}\fontseries{br}\fontsize{16pt}{20pt}\selectfont
```

```

613         \MakeUppercase{\bibname}\par}}\nobreak\vskip25pt\relax%
614     \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}}}%

```

`thebibliography` We want bibliography to be in the table of contents:

```

615 \renewenvironment{thebibliography}[1]{%
616     \bibsection
617         \list{\@biblabel{\@arabic\c@enumiv}}%
618             {\settowidth\labelwidth{\@biblabel{#1}}%
619              \leftmargin\labelwidth
620              \advance\leftmargin\labelsep
621              \@openbib@code
622              \usecounter{enumiv}%
623              \let\p@enumiv\@empty
624              \renewcommand\theenumiv{\@arabic\c@enumiv}}%
625         \sloppy
626         \clubpenalty4000
627         \@clubpenalty \clubpenalty
628         \widowpenalty4000%
629         \sfcode'\.\@m}
630     {\def\@noitemerr
631      {\@latex@warning{Empty 'thebibliography' environment}}}%
632     \endlist}

```

3.17 Index

`theindex` We want our index to be in the table of contents too:

```

633 \renewenvironment{theindex}{%
634     \clearpage
635     {\pagestyle{empty}\cleardoublepage}%
636     \everypar{}%
637     \thispagestyle{empty}%
638     \global\@topnum\z@
639     \@afterindentfalse
640     \gdef\@chapterart{}%
641     \if@twocolumn
642     \@restonecolfalse
643     \else
644     \@restonecoltrue
645     \fi
646     \twocolumn[%
647     \nschapterpreamble
648     \vspace*{0.622in}%
649     \addcontentsline{toc}{chapter}{\MakeUppercase{\indexname}}%
650     \addcontentsline{tbc}{bchapter}{\indexname}%
651     {\centering
652      {\fontfamily{\dgdefault}\fontseries{br}%
653       \fontsize{16pt}{20pt}\selectfont
654       \MakeUppercase{\indexname}\par}}%
655     \nobreak\vskip25pt\relax}%

```

```

656 \@mkboth{\MakeUppercase\indexname}%
657 {\MakeUppercase\indexname}%
658 \parindent\z@
659 \parskip\z@ \@plus .3\p@\relax
660 \columnseprule \z@
661 \columnsep 0.25in%
662 \let\item\@idxitem}
663 {\if@restonecol\onecolumn\else\clearpage\fi}

```

`\@idxitem` This is how we format level 1 index entries:

```

664 \renewcommand\@idxitem{%
665 \par\hangindent0.45in\normalfont\fontsize{9.5\p@}{11.5\p@}\selectfont
666 \raggedright}

```

`\subitem` Level 2 entries:

```

667 \renewcommand\subitem{\@idxitem \hspace*{0.15in}}

```

`\subsubitem` Level 3 entries:

```

668 \renewcommand\subsubitem{\@idxitem \hspace*{0.3in}}

```

`\indexspace` The space between the groups

```

669 \renewcommand\indexspace{\par \vskip 14\p@\relax}

```

`\indexgroup` When an index starts a new letter, we call this macro:

```

670 \newcommand\indexgroup[1]{\fontfamily{\sfdefault}%
671 \fontseries{bc}\fontsize{11\p@}{13\p@}\selectfont#1}\par\vskip4\p@}

```

3.18 Update Page and Colophon

`\updatesname` Just the name for updates:

```

672 \def\updatesname{Updates}

```

`\updatespage` This is the command that start update page. It looks like chapter, but it does not mark the pages or appear in the tables of contents:

```

673 \newcommand\updatespage{%
674 \clearpage
675 {\pagestyle{empty}\cleardoublepage}%
676 \everypar{}%
677 \thispagestyle{empty}%
678 \global\@topnum\z@
679 \gdef\@chapterart{}%
680 \vspace*{1.875in}%
681 {\centering
682 \fontfamily{\dgdefault}\fontseries{br}%
683 \fontsize{16pt}{20pt}\selectfont
684 \MakeUppercase{\updatesname}\par\nobreak\vskip40\p@}%
685 \@nobreaktrue
686 \everypar{}%

```

```

687 \if@nobraek
688 \@nobraekfalse
689 \clubpenalty \@M
690 \setbox\z@\lastbox
691 \else
692 \clubpenalty \@clubpenalty
693 \everypar{}%
694 \fi}}

```

`\colophonname` Just the name for colophon:

```
695 \def\colophonname{Colophon}
```

`\colophon` Colophon does not start a separate page:

```

696 \newcommand\colophon{%
697 \everypar{}%
698 \global\@topnum\z@
699 \gdef\@chapterart{}%
700 \vspace*{0.875in}%
701 {\centering
702 \fontfamily{\dgdefault}\fontseries{br}%
703 \fontsize{16pt}{20pt}\selectfont
704 \MakeUppercase{\colophonname}\par\nobreak\vskip40\p@}%
705 \@nobraektrue
706 \everypar{%
707 \if@nobraek
708 \@nobraekfalse
709 \clubpenalty \@M
710 \setbox\z@\lastbox
711 \else
712 \clubpenalty \@clubpenalty
713 \everypar{}%
714 \fi}\par
715 The fonts used in \emph{\@title} are New Baskerville, Futura, The
716 Sans Mono Condensed and Dogma. The book was typeset with
717 \LaTeXe{} package
718 \texttt{nostarch} by Boris Veytsman
719 \emph{(\csname ver@nostarch.cls\endcsname).}\par}

```

3.19 End of Class

```
720 </class>
```

3.20 Dealing with hyperref

First, we load `hyperref` with right options. I do not know why bookmarks do not work, but this is important to switch off:

```

721 <*nshyper>
722 \RequirePackage[breaklinks,colorlinks,linkcolor=black,
723 citecolor=black,pagecolor=black,urlcolor=black,hyperindex,
724 bookmarks=false]{hyperref}

```

hyperref expects the starred parts and chapters to have only one argument— but we have two!

```

725 \AtBeginDocument{%
726   \def\@schapter[#1]#2{%
727     \H@old@schapter[#1]{#2}%
728     \@nschapterpreamble}%
729   \def\@spart[#1]#2{%
730     \H@old@spart[#1]{#2}%
731     \Hy@GlobalStepCount\Hy@linkcounter
732     \xdef\@currentHref{part*.\the\Hy@linkcounter}%
733     \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}}}%

```

We change the preamble for bibliography and index:

```

734 \def\@nschapterpreamble{%
735   \begingroup
736   \let\@mkboth\@gobbletwo
737   \Hy@GlobalStepCount\Hy@linkcounter
738   \xdef\@currentHref{\Hy@chapapp*.\the\Hy@linkcounter}%
739   \Hy@raisedlink{\hyper@anchorstart{\@currentHref}\hyper@anchorend}%
740   \endgroup}

```

We can add information about the file to the pdf metadata as well:

```

741 \let\@old@maketitle\maketitle
742 \def\maketitle{%
743   \hypersetup{pdfauthor=\@author, pdftitle=\@title}%
744   \@old@maketitle}
745 \</nshyper>

```

3.21 MakeIndex Style File

These lines will produce some warnings when running Makeindex as they try to cover two different versions of the program:

```

746 <*ist>
747 lethead_prefix   "\\indexgroup{"
748 lethead_suffix   "}\nopcodebreak\n"
749 lethead_flag     1
750 heading_prefix   "\\indexgroup{"
751 heading_suffix   "}\nopcodebreak\n"
752 headings_flag    1
753 </ist>

```

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Change History

v0.1			
	General: First fully functional version		3
v0.2			
	<code>\@chapter</code> : Moved up	22	
	<code>enumerate</code> : Flush left numbers	25	
	<code>itemize</code> : Flush left bullets	25	
	<code>\topmargin</code> : Moved down	13	
v0.3			
	<code>\@afterheading</code> : Moved the circle art	22	
	<code>\@footnotetext</code> : Changed LaTeX default	26	
	<code>\clubpenalty</code> : Changed settings	14	
	<code>\footins</code> : Changed LaTeX defaults	26	
	<code>\footnoterule</code> : Increased kern above the rule	26	
	<code>nostarchfigfmt</code> : Added style	27	
	<code>nostarchtabfmt</code> : Added style	27	
	<code>\section</code> : Changed indentation	23	
v0.4			
	<code>\@afterheading</code> : Added special treatment for the case of empty chapter art	22	
v0.5			
	<code>\@endpart</code> : Changed LaTeX default	21	
	<code>\@nostarchlocation</code> : Introduced the macro	15	
	<code>\@nostarchlogo</code> : Introduced the macro	15	
	<code>\@part</code> : Changed LaTeX default	20	
	<code>\@spart</code> : Changed LaTeX default	21	
	<code>\@subtitle</code> : Introduced the macro	14	
	General: Documentation update	3	
	<code>maketitle</code> : Changed LaTeX default	15	
	<code>\brieftableofcontents</code> : Introduced macro	17	
	<code>dedicationpage</code> : Introduced the macro	16	
	<code>cipblock</code> : Introduced the macro	16	
	<code>\l@chapter</code> : Changed LaTeX default	18	
	<code>\l@part</code> : Changed LaTeX default	18	
	<code>\l@section</code> : Changed LaTeX default	18	
	<code>\l@subsection</code> : Changed LaTeX default	19	
	<code>\makehalftitle</code> : Introduced the macro	15	
	<code>\nostarchlocation</code> : Introduced the macro	15	
	<code>\nostarchlogo</code> : Introduced the macro	15	
	<code>copyrightpage</code> : Introduced the macro	16	
	<code>\part</code> : Changed LaTeX default	20	
	<code>\subtitle</code> : Introduced the macro	14	
	<code>\tableofcontents</code> : Changed LaTeX default	17	
v0.6			
	<code>\@chapter</code> : Reverted to standard interface	22	
	<code>\@idxitem</code> : Changed default	30	
	<code>\@schapter</code> : Reverted to standard interface	22	
	General: Added MakeIndex style	32	
	Documentation update	3	
	Introduced package <code>nshyper</code>	31	
	<code>\backmatter</code> : Changed LaTeX default	20	
	<code>\bibsection</code> : Introduced the macro	28	
	<code>\chapter</code> : Reverted to standard interface	21	
	<code>\chapterart</code> : Introduced the command	23	
	<code>\chapterartfile</code> : Introduced the command	23	
	<code>\colophon</code> : Introduced the macro	31	
	<code>\colophonname</code> : Introduced the macro	31	
	<code>thebibliography</code> : Introduced the macro	29	
	<code>theindex</code> : Introduced the macro	29	
	<code>\indexgroup</code> : Introduced the macro	30	
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<code>\mainmatter</code> : Changed LaTeX default	19	v1.1	<code>\@makefn</code> <code>text</code> : Added space between footnote mark and footnote text	26
<code>\secdef</code> : Changed LaTeX default	20		General: Added interface to listings package and upquote package. Updated documentation	3
<code>\subitem</code> : Changed default	30		<code>\brief</code> <code>tableof</code> <code>contents</code> : Added toc name to the verso footers	17
<code>\subsubitem</code> : Changed default	30		<code>\footnote</code> <code>rule</code> : Increased kern below the rule	26
<code>\updatesname</code> : Introduced the macro	30		<code>\l@subsection</code> : Changed numwidth	19
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v0.7			<code>\topmargin</code> : Made shorter	13
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<code>\@schapter</code> : Changed dimensions	22		<code>\@chapter</code> : Corrected a stupid mistake: put refstepcounter out of a group	22
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<code>\brief</code> <code>tableof</code> <code>contents</code> : Changed dimensions	17		<code>\l@subsection</code> : Made number width user settable	19
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<code>\@dotsep</code> : Tightened dots	17			
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<code>\tableof</code> <code>contents</code> : Changed dimensions	17			
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General: First public release	3			

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