The `coppe` document class
Version 3.4

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Abstract

In this work, it is described the `coppe` document class as well as other files distributed by the CoppeTeX project. This class is suitable for writing academic dissertations, thesis and qualifying exams according to the formatting rules of the Alberto Luiz Coimbra Institute for Graduate Studies and Research in Engineering. The minimalist set of macro commands allows its users to concentrate most of their efforts on text composition rather than on the document layout.

1 Introduction

Writing documents in LaTeX may be a laborious task when the authors have to prepare their manuscripts rigorously respecting formatting rules imposed by publishers. Regardless of difficulty, a lot of thesis presented to the Coordination of Graduate Studies and Research in Engineering of the Federal University of Rio de Janeiro (COPPE/UFRJ) is typeseted in LaTeX. This demand motivated the creation of the CoppeTeX project, which tries to facilitate and encourage the use of LaTeX within the COPPE/UFRJ scope.

The `coppe` document class is the main product of CoppeTeX. It was designed to be clear and succinct. It enables the creation of dissertations, qualifying exams and thesis in a simple and automatic way. The main goal of the `coppe` class is to maintain authors strictly focused on text composition without worrying about margins sizes, line spacing, paper size, vertical and horizontal alignment, etc. The CoppeTeX project comprehends also BibTeX and MakeIndex style files for creating lists of references, symbols and abbreviations. Although there aren't official guidelines to write qualifying exams, we provide this option just for convenience, as this exam is a requisite to obtain the DSc degree and, for some of the programs, the MSc degree.

In which follows, it is described the user interface of the `coppe` class. Some details about using the style files cited above are also given. We use the term *thesis* to generally refer to dissertation, qualifying exam, and thesis itself.

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copying, distributing or modifying the source code, among other acts covered by this license.

To see the full text of the GNU GPL license, go to the `COPYING` file attached to this package.

3 Support

We maintain a mailing list where users can send questions, comments, and bugs to. More details can be found here.

However, as the project maintenance was transferred to a new repository, bug reports, as well as new feature requests, should be directed to https://github.com/COPPE-UFRJ/CoppeTeX.

4 User interface

`\frontmatter` A thesis to be approved by the Academic Registry at COPPE/UFRJ must contain
`\mainmatter` three-parts: *front*, *main* and *back* matters [1]. Each one of these parts is started
`\backmatter` by calling its corresponding macro `\frontmatter`, `\mainmatter` or `\backmatter`. The front matter of a thesis consists of front cover and face, cataloging page, dedication, acknowledgments, abstracts, table of contents, and lists of tables, algorithms, symbols and abbreviations. The main matter is just composed by chapters, while the back matter usually consists of bibliographic references, appendices and index.

You must invoke the `\frontmatter` macro immediately after the `\maketitle` one. The `\mainmatter` command comes right before the first chapter, and `\backmatter` must be typed before the list of references.

Front cover

This element was recently introduced by the Academic Registry. It is automatically constructed by the `\maketitle` command.

Front face

The front face is unnumbered. There, it is not allowed to use hyphenation [1]. It is constructed by calling `\maketitle`. Next, it is described the commands used to enter the information required to create it.

`\author` The `\author` command was redefined. Here, it takes two arguments: the author's first names and surname, e.g., `\author{First Names}{Surname}`. The words should be typed with only first letters in uppercase.

`\title` The macros `\title` and `\foreigntitle` are used to enter the titles of your
`\foreigntitle` monograph in the current and foreign languages. The default languages are Brazilian Portuguese and English. The `babel` package is automatically loaded by `coppe.cls`, so you do not need to load it again. The Brazilian Portuguese is the main language and the English is only required for the foreign abstract.

`\advisor` Every COPPE student is coordinated by at least one advisor. M.Sc. and D.Sc.
`\examiner` students can have at most 2 and 3 advisors, respectively. Their names must be provided by issuing the command `\advisor` as below:

```
\advisor{Title}{Advisor's Name}{Surname}{Degree}
```

```
\advisor{Title}{Second Advisor's Name}{Surname}{Degree}
\advisor{Title}{Third Advisor's Name}{Surname}{Degree}
```

The advisors are not necessarily members of the thesis examination board. Thus, it is required to enter the names of all examiners using the `\examiner` macro. The examiners' names are entered differently:

```
\examiner{Title}{First Examiner's Name Surname}{Degree}
\examiner{Title}{Second Examiner's Name Surname}{Degree}
...
\examiner{Title}{N-th Examiner's Name Surname}{Degree}
```

Remember that all names must be given before calling `\maketitle`.

`\department` The Alberto Luiz Coimbra institute is divided into 12 academic units: Biomedical Engineering (PEB), Civil Engineering (PEC), Electrical Engineering (PEE), Mechanical Engineering (PEM), Metallurgical and Materials Science Engineering (PEMM), Nuclear Engineering (PEN), Ocean Engineering (PENO), Energy Planning (PPE), Production Engineering (PEP), Chemical Engineering (PEQ), Systems Engineering and Computer Science (PESC), and Transportation Engineering (PET). You must specify your department using one of the above abbreviations, e.g., `\department{PEC}`.

`\date` This macro is used to set the month and year of defense. This information is required to create the front face, cataloging details page and abstracts. For example, October 2007 should be entered as `\date{10}{2007}`.

`\keyword` The keywords should describe the concentration areas of your work. You must provide them as follows:

```
\keyword{First Keyword}
\keyword{Second Keyword}
...
\keyword{N-th Keyword}
```

Usually, six words are enough.

Cataloging details

This page contains cataloging information useful for librarians. Fortunately, it is automatically generated from the data you entered at the time you call `\maketitle`. It is not needed in qualifying exams, though.

Dedication (optional)

`\dedication` This macro was added for convenience. The input text is placed at the right bottom of a blank page. It is emphasized and in normal size.

Abstracts

abstract (*env.*) As stated by the Academic Registry [1], abstracts must be in one page each, with foreignabstract (*env.*) at most 250 words. We recommended that they should be only one paragraph long. They must be defined inside the environments `abstract` and `foreignabstract`.

Lists of symbols and abbreviations (optional)

`\abbrev` The lists of symbols and abbreviations are optional, although highly recommended.
`\symbl` It is a good practice to define a symbol/abbreviation in its first occurrence in the text. To define a symbol use `\symbl[alphabetic symbol]{Symbol}{Symbol Definition}`, and for abbreviations `\abbrev[alphabetic symbol]{Abbreviation}{Abbreviation Definition}`. These commands are called *dummy*, since they don't output anything at the place they are executed, just an entry in the correspondent list.

`\makeloabbreviations` These lists are lexicographically sorted by using the MakeIndex program, which
`\makelosymbols` is part of any LaTeX implementation. For `\symbl`, if the optional parameter is
`\printloabbreviations` provided, it will used as sort key. This was later, in 2024, implemented also for
`\printlosymbols` `\abbrev`, otherwise `Symbol`, or `Abreviation` will be used as sort key, what can result in an undesirable order if it contains LaTeXcommands, mathematical symbols, or mix of uppercase and lowercase. MakeIndex needs two commands to create a final sorted list: one which generates a list of entries and the other that indicates the position where the list will be printed out. To generate the lists of symbols and abbreviations, the `coppe` class provides the commands `\makeloabbreviations` and `\makelosymbols`, respectively. They must be called in the document preamble. The commands `\printlosymbols` and `\printloabbreviations` have to be invoked at the point where you want these lists appear, e.g., following the list of tables as showed in the example. Once you call `latex`, it will be created two files with extensions `abx` and `syx`, which contain MakeIndex input data. They must be processed with `makeindex` in order to get the lists correctly produced, redirecting the output to files with extension `lab` and `los` respectively:

```
makeindex -s coppe.ist -o example.lab example.abx
makeindex -s coppe.ist -o example.los example.syx
```

Note the `-s` option for specifying the style `coppe.ist`. Now, rerun `latex` twice to get the references solved and you are done.

References

It is well known that bibliography databases can be easily maintained with the aid of BibTeX. Thus, the CoppeTeX project designed two BibTeX styles, `coppe-plain.bst` and `coppe-unsrt.bst`. The `coppe-plain.bst` creates a list of references alphabetically sorted. The later is a numbered style, which sorts references by the order of citation. To use them, you have to select either `coppe-plain` or `coppe-unsrt` as the BibTeX style and include your BibTeX references without the `bib` extension, as in the following example:

```
\bibliographystyle{coppe-unsrt}
\bibliography{example}
```

As of May 4th, 2023, there are new bibliograhic styles for english, `en-coppe-plain.bst` and `en-coppe-plain.bst`, that uses other string constants, such as "Technical Report" instead of "Relatório Técnico".

Run in sequence LaTeX, BibTeX, and twice again LaTeX to resolve reference. These styles are `natbib` compatible. This means that you can freely issue the commands `\citet` and `\citep`, as well as any other `natbib` feature.

5   Class options

There are some options users can specify in order to customize the appearance of the output produced by the `coppe` class. These options can be passed to `coppe` as follows: `\documentclass[option1, option2]{coppe}`. In which follows, we give a brief description of all supported options.

dsc, msc, dscexam, mscexam The `coppe` class is able to produce thesis, dissertations, and qualifying exams, which are enabled by the `dsc`, `msc`, `mscexam`, and `dscexam` options, respectively.

doublespacing The default line spacing is one-and-a-half. For enabling double spacing between lines, use the `doublespacing` option.

numbers The default citation style is the author-year scheme, which must be followed by the use of its corresponding BIBTEX style, namely, the `coppe-plain.bst` file. For numbered citations, specify the option `numbers` to the `coppe` class. In this case, it is mandatory the use of `coppe-unsrt.bst`, as the bibliography style.

english CoppeTEX uses Babel. The default language is Portuguese (actually `brazilian`), with English being the second language. If option `english` is used, English becomes the main language and Portuguese the secondary. Look at the Babel package to switch between languages.

5.1   Changing document identification

`\freeconfig` The user could *optionally* use the command `freeconfig` to modify the parameters that print the document identification. The command `freeconfig` needs all those paramerters, which are degree initials, degree name, title, foreign title, local doctype, and foreign doctype as in the following example:

> `\freeconfig{Dr.}{Philosophiae Doctor}{PhD}{Doutor}{Dissertation}{Tese}`

6   Quick, useful tips

Pictures.   The default picture format of LATEX is the Encapsulated PostScript (EPS). If you use pdfLATEX, the default format becomes the PDF, but you can equally load PNG files. For such, you must enter the name of your image file without extension, e.g., `\includegraphics{filename}`, and `pdflatex` will firstly look for a file called `filename.pdf` and after for file `filename.png`. For producing high quality pictures with embedded fonts we recommend the Ipe drawing software available here.

Fonts.   The default font in LATEX is the Computer Modern. If you would like to try its enhanced version, consider using the `lmodern` package. To use Times, it is recommended to load the package `mathptmx`, rather than the deprecated `times`. There is also an enhanced Times version available with the `tgtermes` package. You can still use the Arial font face with the package `uarial`.

Hyperref. When working with PDF's, there is the possibility to add extra information to the file as the author's name, document title, subject, keywords, etc. This is easily done with the `hyperref` package. It is also useful to enable hyperlinks. Fortunately, the `coppe` class will do this automatically if `hyperref` is loaded.

Printing. To get your work correctly printed, you must ensure that any page scaling option (e.g., fit or shrink to printable area) isn't enabled. This kind of option often comes in print dialogs of document visualization softwares.

`longquote` **Quotation** To quote text larger than three lines, according to ABNT, you must increase the left margin to 4 cm, do not use quotation marks, and use a smaller font. The `coppe` class provides the `longquote` environment to easily make these adjustments.

7 A simple example

```
 1 ⟨*example⟩
 2 \documentclass[dsc]{coppe}
 3
 4 \usepackage{booktabs}% tabelas mais bonitas
 5 \usepackage{rotating}% rodando coisas, como tabelas
 6 \usepackage{longtable} % tabelas longas
 7 \usepackage[most]{tcolorbox} % caixas de texto
 8 \usepackage{amsmath,amssymb}
 9 \usepackage{hyperref}
10 \usepackage{listings} % para usar listagens
11
12
13 \makelosymbols
14 \makeloabbreviations
15
16 \begin{document}
17   \title{Título da Tese}
18   \foreigntitle{Thesis Title}
19   \author{Nome do Autor}{Sobrenome}
20   \advisor{Prof.}{Nome do Primeiro Orientador}{Sobrenome}{D.Sc.}
21   \advisor{Prof.}{Nome do Segundo Orientador}{Sobrenome}{Ph.D.}
22   \advisor{Prof.}{Nome do Terceiro Orientador}{Sobrenome}{D.Sc.}
23
24   \examiner{Prof.}{Nome do Primeiro Examinador Sobrenome}{D.Sc.}
25   \examiner{Prof.}{Nome do Segundo Examinador Sobrenome}{Ph.D.}
26   \examiner{Prof.}{Nome do Terceiro Examinador Sobrenome}{D.Sc.}
27   \examiner{Prof.}{Nome do Quarto Examinador Sobrenome}{Ph.D.}
28   \examiner{Prof.}{Nome do Quinto Examinador Sobrenome}{Ph.D.}
29   \department{PESC}
30   \date{01}{2024}
31
32   \keyword{Primeira palavra-chave}
33   \keyword{Segunda palavra-chave}
34   \keyword{Terceira palavra-chave}
35
```

```
36    \maketitle
37
38    \frontmatter
39    \dedication{A alguém cujo valor é digno desta dedicatória.}
40
41    \chapter*{Agradecimentos}
42
43    Gostaria de agradecer a todos.
44
45    \begin{abstract}
46
47    Apresenta-se, nesta tese, ...
48
49    \end{abstract}
50
51    \begin{foreignabstract}
52
53    In this work, we present ...
54
55    \end{foreignabstract}
56
57    \tableofcontents
58    \listoffigures
59    \listoftables
60    \printlosymbols
61    \printloabbreviations
62
63    \mainmatter
64    \chapter{Introdução}
65
66    Este é um documento exemplo para o uso da classe CoppeTeX, destinado a ajudar os alunos da
67
68    A classe \verb|coppe| foi criada por Vicente Helano e George Ainsworth, porém, em 2024, é
69
70    A versão mais atual dessa classe é mantida no GitHub, no repositório \url{https://github.c
71
72    Esse documento segue a norma de formatação de teses e dissertações da COPPE. Ele também po
73
74    Esse documento é usado como exemplo de coisas que podem ser feitas. Ele está configurado p
75
76    É importante de notar que essa classe não foi construída sobre a classe \LaTeX \  para a A
77
78    Apesar desse modelo ser muito bom, ele tem um defeito: a limitação do sistema de referênci
79
80    Mais ainda, as regras da COPPE ainda não se adaptaram, no início de 2024, as novas regras
81
82    Este documento não substitui, mas complementa, o documento que descreve a classe.
83
84
85
86  \chapter{Configurações Iniciais}
87
88    A primeira coisa a fazer é escolher o tipo de documento. Isso é feito como uma opção no c
89
```

```
 90     Como pode ser visto nesse documento, muita coisa pode ser configurada, o que gerará o tra

 91

 92     Recomendo ler o documento ''The \verb*|coppe| document class'' para entender melhor todas

 93

 94 \section{Linguagem principal do texto}

 95

 96   Essa classe considera que o texto principal está em português e algumas partes específicas

 97 \begin{itemize}

 98 \item A opção \verb|english| deve ser usada no comando \verb|\documentclass|.

 99 \item Os estilos de bibliografia usados devem ser \verb|en-coppe-plain.bst| ou \verb|en-cop

100 \end{itemize}

101

102   A variação de linguagem, em inglês ou português apenas, já é suportada pela classe Coppe\T

103

104

105 \section{Por que usar o \LaTeX}

106

107   Há uma grande discussão entre usuário de Word e \LaTeX, principalmente, quanto ao uso dess

108

109   Nós escolhemos o \LaTeX por alguns motivos: grande facilidade de seguir um estilo sem se p

110

111   As principais desvantagens são: idiossincrasias que podem gastar tempo, pouco controle sob

112

113 \section{Como e onde usar o \LaTeX}

114

115   Existem muitos tutoriais de \LaTeX, mas basicamente, em 2024, ele é usado em dois ambiente

116   \begin{enumerate}

117   \item Na sua máquina, instalando uma versão completa como o Mik\TeX, típico do Windows, ou

118   \item Usar um ambiente na rede, como o Overleaf.

119   \end{enumerate}

120

121   Em todo caso, recomendo fortemente que, ao mesmo tempo, mantenha versões no Git e faça o b

122

123

124 \chapter{Algumas Regras da COPPE}

125

126   Todas abreviaturas e símbolos devem ser definida antes de utilizada. Isso é facilmente fei

127

128   É imprescindível definir os símbolos, tal como o

129   conjunto dos números reais $\mathbb{R}$ e o conjunto vazio $\emptyset$.

130   \symbl{$\mathbb{R}$}{Conjunto dos números reais}

131   \symbl{$\emptyset$}{Conjunto vazio}. Usamos esse exemplo aqui justamente para mostrar como

132

133   Para as listas de abreviaturas e símbolos funcionarem no Overleaf é necessário rodar o \ve

134

135   Como as listas de símbolos e de abreviaturas usamo o mesmo comando usado para criar índice

136

137 \section{Citações}

138

139  Citações curtas podem ser feitas \quote{o comando quote} ou direto com ''duas crases e dois

140

141   \begin{longquote}

142   Um exemplo de citação longa nas regras da ABNT (4cm de recuo e fonte menor)

143   feita com o ambiente  \verb=longquote= The primary objective of this
```

```
144    investigation was to determine the feasibility of detecting corrosion in
145    aluminum Naval aircraft components with neutron radiographic interrogation
146    and the use of standard corrosion penetrameters. Secondary objectives
147    included the determination of the effect of object thickness on image quality,
148    the defining of minimum levels of detectability and a preliminary investigation
149    of a means whereby the degree of corrosion could be quantified with neutron
150    radiographic data. \cite{article-example}
151    \end{longquote}
152
153    Citações devem apontar as referências. Para isso, está disponível o ótimo pacote \verb*|na
154
155    Em todo caso, \textbf{deve se tomar enorme atenção com as citações, para evitar ocorrer em
156
157 \chapter{Floats}
158
159 Grande parte dos problemas de iniciantes, e veteranos, em \LaTeX é da localização dos \texti
160
161 A regra geral de posicionamento é que uma figura ou quadro só pode aparecer a partir da mesm
162
163 \textbf{Segundo a norma da ABNT, as legendas} \verb|\caption| \textbf{das figuras e quadros
164
165 Quadros são opcionais. Quando usados, tabelas passam a só conter números, enquanto quadros c
166
167
168 \section{Tabelas e Figuras Padrão}
169
170 Vamos ver uma tabela padrão, como a \autoref{tab:exemplo_numeros}.
171
172 \begin{table}[ht]
173 \centering % Centraliza a tabela
174 \caption{Exemplo de Tabela de Números}
175 \label{tab:exemplo_numeros}
176 \begin{tabular}{ccc} % Define a quantidade de colunas
177 \hline % Linha superior
178 \textbf{Coluna 1} & \textbf{Coluna 2} & \textbf{Coluna 3} \\ % Cabeçalhos
179 \hline % Linha média
180 1 & 2 & 3 \\ % Primeira linha de dados
181 \hline
182 4 & 5 & 6 \\ % Segunda linha de dados
183 \hline
184 7 & 8 & 9 \\ % Terceira linha de dados
185 \hline
186 10 & 11 & 12 \\ % Quarta linha de dados
187 \hline % Linha inferior
188 \end{tabular}
189 \end{table}
190
191
192
193 Já a \autoref{fig:exemplo_figura} é uma figura padrão, com controle da largura.
194
195 \begin{figure}[ht]
196 \centering % Centraliza a figura
197 \includegraphics[width=0.5\textwidth]{coppe-logo.pdf} % Inclui a imagem com metade da largur
```

```latex
198 \caption{Exemplo de Figura com Legenda Abaixo} % Legenda da figura
199 \label{fig:exemplo_figura} % Etiqueta para referência cruzada
200 \end{figure}
201
202
203
204
205
206 \section{Tabelas mais elegantes}
207
208 Atualmente a tendência é usar tabelas mais leves, como \autoref{tab:exemplo_numerosbom}. Iss
209
210 \begin{table}[ht]
211 \centering % Centraliza a tabela
212 \caption{Exemplo de Tabela de Números mais elegantes}
213 \label{tab:exemplo_numerosbom}
214 \begin{tabular}{ccc} % Define a quantidade de colunas
215 \toprule % Linha superior
216 \textbf{Coluna 1} & \textbf{Coluna 2} & \textbf{Coluna 3} \\ % Cabeçalhos
217 \midrule % Linha média
218 1 & 2 & 3 \\ % Primeira linha de dados
219 4 & 5 & 6 \\ % Segunda linha de dados
220 7 & 8 & 9 \\ % Terceira linha de dados
221 10 & 11 & 12 \\ % Quarta linha de dados
222 \bottomrule % Linha inferior
223 \end{tabular}
224 \end{table}
225
226 \section{Tabelas Longas ou Largas}
227
228 Se sua tabela é muito longa ou larga, existem várias opções.
229 \begin{itemize}
230     \item alterar o tamanho da letra
231     \item Usar o longtable
232     \item rodar a tabela, fazendo ela em \textit{landscape}
233     \item fazer a tabela dentro de um minibox
234 \end{itemize}
235
236
237 \subsection{Tabelas largas demais}
238
239 É comum em teses que as tabelas sejam largas demais. Há várias formas de resolver isso.
240
241 A \autoref{tab:tabela_largafns} é larga demais, e nela isso é resolvido diminuindo a fonte p
242
243 \begin{table}[ht]
244 \centering % Centraliza a tabela
245 \caption{Exemplo de Tabela Larga com Fonte Menor}
246 \label{tab:tabela_largafns}
247 \footnotesize % Aplica uma fonte menor para a tabela
248 \begin{tabular}{cccccccc} % Aumente o número de colunas conforme necessário
249 \toprule
250 \textbf{Coluna 1} & \textbf{Coluna 2} & \textbf{Coluna 3} & \textbf{Coluna 4} & \textbf{Colu
251 \midrule
```

```
252 Dado 1.1 & Dado 1.2 & Dado 1.3 & Dado 1.4 & Dado 1.5 & Dado 1.6 & Dado 1.7 & Dado 1.8 \\
253 Dado 2.1 & Dado 2.2 & Dado 2.3 & Dado 2.4 & Dado 2.5 & Dado 2.6 & Dado 2.7 & Dado 2.8 \\
254 Dado 3.1 & Dado 3.2 & Dado 3.3 & Dado 3.4 & Dado 3.5 & Dado 3.6 & Dado 3.7 & Dado 3.8 \\
255 \bottomrule
256 \end{tabular}
257 \end{table}
258
259 O comando \verb|\resizebox{width}{height}{content}| permite ajustar o tamanho de qualquer co
260
261 \begin{table}[ht]
262 \centering
263 \caption{Exemplo de Tabela Redimensionada}
264 \label{tab:examplerb}
265 \resizebox{\textwidth}{!}{%
266 \begin{tabular}{llll}
267 \toprule
268 Coluna 1 & Coluna 2 & Coluna 3 & Coluna 4 \\
269 \midrule
270 Dados 1 & Dados 2 & Dados 3 & Dados 4 \\
271 Dados 5 & Dados 6 & Dados 7 & Dados 8 \\
272 \bottomrule
273 \end{tabular}%
274 }
275 \end{table}
276
277
278 Para rodar uma tabela muito larga em 90 graus no LaTeX, você pode usar o pacote \verb*|rotat
279
280 Aqui está um exemplo de como usar o ambiente \verb*|sidewaystable| para girar uma tabela. Pr
281
282 \begin{sidewaystable}
283 \centering
284 \caption{Sua Legenda Aqui}
285 \label{tab:sua_tabela}
286 \begin{tabular}{lll}
287 \toprule
288 Coluna 1 & Coluna 2 & Coluna 3 \\
289 \midrule
290 Item 1 & Item 2 & Item 3 \\
291 Item 4 & Item 5 & Item 6 \\
292 \bottomrule
293 \end{tabular}
294 \end{sidewaystable}
295
296 Se a tabela for muito longa, o ambiente \verb|longtable| é o ideal. Ele fornece comandos par
297
298 % Exemplo de tabela longa que se estende por várias páginas
299 \begin{longtable}{|c|c|c|}
300 % primeiro cabeçalho (é o caption)
301 \caption{Exemplo de Tabela Longa}\label{tab:longa} \\
302 \hline \textbf{Coluna 1} & \textbf{Coluna 2} & \textbf{Coluna 3} \\ \hline
303 \endfirsthead
304 % cabeçalho normal
305 \multicolumn{3}{c}%
```

```latex
306 {{\tablename\ \thetable{} -- continuação da página anterior}} \\
307 \hline \textbf{Coluna 1} & \textbf{Coluna 2} & \textbf{Coluna 3} \\ \hline
308 \endhead
309 % pé normal
310 \hline \multicolumn{3}{|r|}{{Continua na próxima página}} \\ \hline
311 \endfoot
312 \hline
313 % último pé
314 \multicolumn{3}{|r|}{{Continua na próxima página}}\\
315 \hline \hline
316 \endlastfoot
317
318 % Conteúdo da tabela
319 1 & 2 & 3 \\
320 4 & 5 & 6 \\
321 1 & 2 & 3 \\
322 4 & 5 & 6 \\
323 1 & 2 & 3 \\
324 4 & 5 & 6 \\
325 1 & 2 & 3 \\
326 4 & 5 & 6 \\
327 1 & 2 & 3 \\
328 4 & 5 & 6 \\
329 1 & 2 & 3 \\
330 4 & 5 & 6 \\
331 1 & 2 & 3 \\
332 4 & 5 & 6 \\
333 1 & 2 & 3 \\
334 4 & 5 & 6 \\
335 1 & 2 & 3 \\
336 1 & 2 & 3 \\
337 4 & 5 & 6 \\
338 1 & 2 & 3 \\
339 4 & 5 & 6 \\
340 1 & 2 & 3 \\
341 4 & 5 & 6 \\
342 1 & 2 & 3 \\
343 4 & 5 & 6 \\
344 1 & 2 & 3 \\
345 4 & 5 & 6 \\
346 1 & 2 & 3 \\
347 4 & 5 & 6 \\
348 1 & 2 & 3 \\
349 4 & 5 & 6 \\
350 1 & 2 & 3 \\
351 4 & 5 & 6 \\
352 1 & 2 & 3 \\
353 4 & 5 & 6 \\
354 1 & 2 & 3 \\
355 4 & 5 & 6 \\
356 1 & 2 & 3 \\
357 4 & 5 & 6 \\
358 1 & 2 & 3 \\
359 4 & 5 & 6 \\1 & 2 & 3 \\
```

```
360 4 & 5 & 6 \\
361 1 & 2 & 3 \\
362 4 & 5 & 6 \\
363 1 & 2 & 3 \\
364 1 & 2 & 3 \\
365 4 & 5 & 6 \\
366 1 & 2 & 3 \\
367 4 & 5 & 6 \\
368 1 & 2 & 3 \\
369 4 & 5 & 6 \\
370 1 & 2 & 3 \\
371 4 & 5 & 6 \\
372 1 & 2 & 3 \\
373 4 & 5 & 6 \\
374 1 & 2 & 3 \\
375 4 & 5 & 6 \\
376 1 & 2 & 3 \\
377 4 & 5 & 6 \\
378 1 & 2 & 3 \\
379 4 & 5 & 6 \\
380 1 & 2 & 3 \\
381 4 & 5 & 6 \\
382 1 & 2 & 3 \\
383 4 & 5 & 6 \\
384 1 & 2 & 3 \\
385 4 & 5 & 6 \\
386 1 & 2 & 3 \\
387 4 & 5 & 6 \\
388 1 & 2 & 3 \\
389 4 & 5 & 6 \\
390 1 & 2 & 3 \\
391 4 & 5 & 6 \\
392 1 & 2 & 3 \\
393 4 & 5 & 6 \\
394 1 & 2 & 3 \\
395 4 & 5 & 6 \\
396 1 & 2 & 3 \\
397 4 & 5 & 6 \\
398 1 & 2 & 3 \\
399 4 & 5 & 6 \\
400 1 & 2 & 3 \\
401 4 & 5 & 6 \\
402 1 & 2 & 3 \\
403 4 & 5 & 6 \\
404 1 & 2 & 3 \\
405 4 & 5 & 6 \\
406 1 & 2 & 3 \\
407 4 & 5 & 6 \\
408 1 & 2 & 3 \\
409 4 & 5 & 6 \\
410 1 & 2 & 3 \\
411 4 & 5 & 6 \\
412 1 & 2 & 3 \\
413 4 & 5 & 6 \\
```

```
414 1 & 2 & 3 \\
415 4 & 5 & 6 \\
416 1 & 2 & 3 \\
417 4 & 5 & 6 \\
418 1 & 2 & 3 \\
419 4 & 5 & 6 \\
420 1 & 2 & 3 \\
421 4 & 5 & 6 \\
422 1 & 2 & 3 \\
423 4 & 5 & 6 \\
424 1 & 2 & 3 \\
425 4 & 5 & 6 \\
426
427 % Repetir linhas semelhantes conforme necessário para estender a tabela por 3 páginas
428 \end{longtable}
429
430   \chapter{Revis\~ao Bibliogr\'afica}
431
432   Para ilustrar a completa ades\~ao ao estilo de cita{\c c}\~oes e listagem de
433   refer\^encias bibliogr\'aficas, a Tabela~\ref{tab:citation} apresenta cita{\c
434   c}\~oes de alguns dos trabalhos contidos na norma fornecida pela CPGP da
435   COPPE, utilizando o estilo numérico. Tirando do comando inicial o parâmetro opcional numér
436
437   \begin{table}[h]
438   \caption{Exemplos de cita{\c c}\~oes utilizando o comando padr\~ao
439     \texttt{\textbackslash cite} do \LaTeX\ e
440     o comando \texttt{\textbackslash citet},
441     fornecido pelo pacote \texttt{natbib}.}
442   \label{tab:citation}
443   \centering
444   {\footnotesize
445   \begin{tabular}{|c|c|c|}
446     \hline
447     Tipo da Publicação & \verb|\cite| & \verb|\citet|\\
448     \hline
449     Livro & \cite{book-example} & \citet{book-example}\\
450     Artigo & \cite{article-example} & \citet{article-example}\\
451     Relatório & \cite{techreport-example} & \citet{techreport-example}\\
452     Relatório & \cite{techreport-exampleIn} & \citet{techreport-exampleIn}\\
453     Anais de Congresso & \cite{inproceedings-example} &
454       \citet{inproceedings-example}\\
455     Séries & \cite{incollection-example} & \citet{incollection-example}\\
456     Em Livro & \cite{inbook-example} & \citet{inbook-example}\\
457     Dissertação de mestrado & \cite{mastersthesis-example} &
458       \citet{mastersthesis-example}\\
459     Tese de doutorado & \cite{phdthesis-example} & \citet{phdthesis-example}\\
460     \hline
461   \end{tabular}}
462   \end{table}
463
464 \begin{table}[h]
465   \caption{Exemplos de cita{\c c}\~oes utilizando o comando padr\~ao
466     \texttt{\textbackslash cite} do \LaTeX\ e
467     o comando \texttt{\textbackslash citet},
```

```latex
468    fornecido pelo pacote \texttt{natbib}. Além disso, usando o booktabs.}
469    \label{tab:citation1}
470    \centering
471    {\footnotesize
472    \begin{tabular}{ccc}
473      \toprule
474      Tipo da Publicação & \verb|\cite| & \verb|\citet|\\
475      \midrule
476      Livro & \cite{book-example} & \citet{book-example}\\
477      Artigo & \cite{article-example} & \citet{article-example}\\
478      Relatório & \cite{techreport-example} & \citet{techreport-example}\\
479      Relatório & \cite{techreport-exampleIn} & \citet{techreport-exampleIn}\\
480      Anais de Congresso & \cite{inproceedings-example} &
481        \citet{inproceedings-example}\\
482      Séries & \cite{incollection-example} & \citet{incollection-example}\\
483      Em Livro & \cite{inbook-example} & \citet{inbook-example}\\
484      Dissertação de mestrado & \cite{mastersthesis-example} &
485        \citet{mastersthesis-example}\\
486      Tese de doutorado & \cite{phdthesis-example} & \citet{phdthesis-example}\\
487      \bottomrule
488    \end{tabular}}
489    \end{table}
490
491 \chapter{Alguns outros exemplo úteis}
492
493 \begin{tcolorbox}[title=Meu Textbox]
494 Este é o conteúdo do meu textbox. Você pode adicionar qualquer texto aqui, bem como incluir
495 \end{tcolorbox}
496
497 \begin{tcolorbox}
498 Este é o conteúdo do meu textbox sem título. Você pode adicionar qualquer texto aqui, bem co
499 \end{tcolorbox}
500
501 \begin{figure}[ht]
502     \centering
503     \begin{tikzpicture}
504         \node[anchor=south west,inner sep=0] (image) at (0,0) {\includegraphics[width=0.5\te
505         \begin{scope}[x={(image.south east)},y={(image.north west)}]
506             % Definindo o textbox dentro da figura
507             \node[anchor=north west, text width=0.3\textwidth, fill=white, opacity=0.7, text
508                 \begin{tcolorbox}[colback=red!5!white,colframe=red!75!black,title=Textbox de
509                     Este textbox fala sobre como inserir um textbox dentro de uma figura usa
510                 \end{tcolorbox}
511             };
512         \end{scope}
513     \end{tikzpicture}
514     \caption{Figura com Textbox}
515     \label{fig:figura_com_textbox1}
516 \end{figure}
517
518
519 \begin{figure}[ht]
520     \centering
521  \begin{tcolorbox}
```

```
522 Este é o conteúdo do meu textbox sem título. Você pode adicionar qualquer texto aqui, bem co
523 \end{tcolorbox}
524     \caption{Figura com Textbox simples}
525     \label{fig:figura_com_textbox}
526 \end{figure}
527
528    \chapter{Método Proposto}
529    \chapter{Resultados e Discuss\~oes}
530
531    \section{Algumas Demonstra{\c c}\~oes}
532
533    A  Lista de Símbolos precisa usar comandos específicos. Aqui vamos usar os símbolos $\alph
534    \symbl[beta]{Beta}{A palavra Beta more e corrigida}
535    \symbl[zzbeta]{$\beta$}{A letra $\beta$ corrigida}
536    \symbl{beta}{A palavra beta}
537    \symbl{alpha}{A palavra alpha}
538    \symbl[alpha]{Alpha}{A palavra Alpha}
539    \symbl[zzalpha]{$\alpha$}{A letra $\alpha$ corrigida}
540    \symbl[marco]{Marco}{A palavra Marco corrigida}
541
542    A Lista de Abreviações segue, a partir de 2024, a mesma regra, e aqui seguem alguns exempl
543    \abbrev{GoT}{Game of Thrones}
544    \abbrev[GOT]{GoT}{Game of Thrones ordenado como GOT}
545    \abbrev[iot]{IoT}{IoT ordenado como iot}
546    \abbrev[IoT]{IoT}{IoT ordenado como IoT}
547    \abbrev[IOT]{IoT}{IoT ordenado como IOT}
548    \abbrev{IoT}{IoT com ordenação default}
549    \abbrev[ITU]{ITU}{ITU mesmo}
550
551
552
553
554    \chapter{Conclus\~oes}
555
556    \backmatter
557    \bibliographystyle{coppe-unsrt}
558    \bibliography{example}
559
560
561
562 \appendix
563
564 \chapter{Um apêndice}
565
566 Segundo a norma da ABNT (Associação Brasileira de Normas Técnicas), a definição e utilização
567
568 Apêndice: O apêndice é um texto ou documento elaborado pelo autor do trabalho com o objetivo
569
570
571 \renewcommand{\appendixname}{Anexo}
572 \appendix
573
574
575
```

```
576 \chapter{Um Anexo}
577 Segundo a norma da ABNT (Associação Brasileira de Normas Técnicas), a definição e utilizaçã
578
579
580
581 Anexo: O anexo, por sua vez, consiste em um texto ou documento não elaborado pelo autor, que
582 \end{document}
583
584 ⟨/example⟩
```

8 Implementation

8.1 The 'coppe.cls' file

```
585 ⟨*class⟩
586 \def\filename{coppe.dtx}
587 \def\fileversion{v3.4}
588 \def\filedate{2024/01/24}
589 \NeedsTeXFormat{LaTeX2e}[1995/12/01]
590 \ProvidesClass{coppe}[\filedate\ \fileversion\ COPPE Dissertations and Thesis]
591 \LoadClass[12pt,a4paper,oneside]{book}
592 \RequirePackage[sort&compress]{natbib}
593 \RequirePackage{hyphenat}
594 \RequirePackage{lastpage}
595 \RequirePackage{ifthen}
596 \RequirePackage{graphicx}
597 \RequirePackage{setspace}
598 \RequirePackage{tabularx}
599 \RequirePackage{etoolbox}
600 \RequirePackage{eqparbox}
601 \RequirePackage{ltxcmds}
602 \RequirePackage[T1]{fontenc}
603 \RequirePackage[a4paper,bindingoffset=0.0cm,vcentering=true,%
604 top=2.5cm,bottom=2.5cm,left=3.0cm,right=3.0cm]{geometry}
605 \def\CoppeTeX{{\rm C\kern-.05em{\sc o\kern-.025em p\kern-.025em
606 p\kern-.025em e}}\kern-.08em
607 T\kern-.1667em\lower.5ex\hbox{E}\kern-.125emX\spacefactor1000}
608 \newboolean{maledoc}
609 \setboolean{maledoc}{false}
610 %
611 % Class options.
612 % If you are writing a text in English, you must turn ''English'' on.
613 % Otherwise, Portuguese is considered the main language.
614 \newif\if@english\@englishfalse
615 \DeclareOption{english}{\@englishtrue}
616 \DeclareOption{msc}{%
617   \newcommand{\@degree}{M.Sc.}
618   \newcommand{\@degreename}{Mestrado}
619   \newcommand{\local@degname}{Mestre}
620   \newcommand{\foreign@degname}{Master}
621   \newcommand\local@doctype{Disserta\c c}{\~ a}o}
622   \newcommand\foreign@doctype{Dissertation}
623 }
624 \DeclareOption{dscexam}{%
```

```
625    \newcommand{\@degree}{D.Sc.}
626    \newcommand{\@degreename}{Doutorado}
627    \newcommand{\local@degname}{Doutor}
628    \newcommand{\foreign@degname}{Doctor}
629    \setboolean{maledoc}{true}
630    \newcommand\local@doctype{Exame de Qualifica{\c c}{\~ a}o}
631    \newcommand\foreign@doctype{Qualifying Exam}
632 }
633 \DeclareOption{mscexam}{%
634    \newcommand{\@degree}{M.Sc.}
635    \newcommand{\@degreename}{Mestrado}
636    \newcommand{\local@degname}{Mestre}
637    \newcommand{\foreign@degname}{Master}
638    \setboolean{maledoc}{true}
639    \newcommand\local@doctype{Exame de Qualifica{\c c}{\~ a}o}
640    \newcommand\foreign@doctype{Qualifying Exam}
641 }
642 \DeclareOption{dsc}{%
643    \newcommand{\@degree}{D.Sc.}
644    \newcommand{\@degreename}{Doutorado}
645    \newcommand{\local@degname}{Doutor}
646    \newcommand{\foreign@degname}{Doctor}
647    \newcommand\local@doctype{Tese}
648    \newcommand\foreign@doctype{Thesis}
649 }
650 \DeclareOption{numbers}{%
651    \PassOptionsToPackage{numbers}{natbib}
652 }
```

Here is the default one-and-a-half line spacing. Users can change to double spacing by passing the `doublespacing` option.

```
653 \onehalfspacing
654 \DeclareOption{doublespacing}{%
655    \doublespacing
656 }
657 \ProcessOptions\relax
658 \if@english
659    \RequirePackage[brazilian,english]{babel}
660 \else
661    \RequirePackage[english,brazilian]{babel}
662 \fi
663 \addto{\captionsenglish}{%
664    \renewcommand{\bibname}{References}
665 }
```

\department This macro is used to set the author's affiliation. There are twelve options which correspond to all academic units at COPPE/UFRJ. It defines the current and the foreign names of these units.

```
666 \newcommand\department[1]{%
667    \ifthenelse{\equal{#1}{PEB}}
668      {\global\def\local@deptname{Engenharia Biom{\' e}dica}
669       \global\def\foreign@deptname{Biomedical Engineering}}{}
670    \ifthenelse{\equal{#1}{PEC}}
671      {\global\def\local@deptname{Engenharia Civil}
```

```
672        \global\def\foreign@deptname{Civil Engineering}}{}
673    \ifthenelse{\equal{#1}{PEE}}
674      {\global\def\local@deptname{Engenharia El{\' e}trica}
675        \global\def\foreign@deptname{Electrical Engineering}}{}
676    \ifthenelse{\equal{#1}{PEM}}
677      {\global\def\local@deptname{Engenharia Mec{\^ a}nica}
678        \global\def\foreign@deptname{Mechanical Engineering}}{}
679    \ifthenelse{\equal{#1}{PEMM}}
680      {\global\def\local@deptname{Engenharia Metal{\' u}rgica e de Materiais}
681 \global\def\foreign@deptname{Metallurgical and Materials Engineering}}{}
682    \ifthenelse{\equal{#1}{PEN}}
683      {\global\def\local@deptname{Engenharia Nuclear}
684        \global\def\foreign@deptname{Nuclear Engineering}}{}
685    \ifthenelse{\equal{#1}{PENO}}
686      {\global\def\local@deptname{Engenharia Oce{\^ a}nica}
687        \global\def\foreign@deptname{Ocean Engineering}}{}
688    \ifthenelse{\equal{#1}{PPE}}
689      {\global\def\local@deptname{Planejamento Energ{\' e}tico}
690        \global\def\foreign@deptname{Energy Planning}}{}
691    \ifthenelse{\equal{#1}{PEP}}
692      {\global\def\local@deptname{Engenharia de Produ{\c c}{\~ a}o}
693        \global\def\foreign@deptname{Production Engineering}}{}
694    \ifthenelse{\equal{#1}{PEQ}}
695      {\global\def\local@deptname{Engenharia Qu{\' i}mica}
696        \global\def\foreign@deptname{Chemical Engineering}}{}
697    \ifthenelse{\equal{#1}{PESC}}
698      {\global\def\local@deptname{Engenharia de Sistemas e Computa{\c c}{\~ a}o}
699        \global\def\foreign@deptname{Systems Engineering and Computer Science}}{}
700    \ifthenelse{\equal{#1}{PET}}
701      {\global\def\local@deptname{Engenharia de Transportes}
702        \global\def\foreign@deptname{Transportation Engineering}}{}
703    \ifthenelse{\equal{#1}{PENT}}
704      {\global\def\local@deptname{Engenharia de Nanotecnologia}
705        \global\def\foreign@deptname{Nanotechnology Engineering}}{}
706 }
```

\title Used to enter the title in Brazilian Portuguese.

```
707 \renewcommand\title[1]{%
708   \global\def\local@title{#1}%
709 }
```

\foreigntitle Used to enter the foreign title.

```
710 \newcommand\foreigntitle[1]{%
711   \global\def\foreign@title{#1}%
712 }
```

\advisor Defines globally the title, name and academic degree of the advisors.

```
713 \newcount\@advisor\@advisor0
714 \newcommand\advisor[4]{%
715   \global\@namedef{CoppeAdvisorTitle:\expandafter\the\@advisor}{#1}
716   \global\@namedef{CoppeAdvisorName:\expandafter\the\@advisor}{#2}
717   \global\@namedef{CoppeAdvisorSurname:\expandafter\the\@advisor}{#3}
718   \global\@namedef{CoppeAdvisorDegree:\expandafter\the\@advisor}{#4}
719   \global\advance\@advisor by 1
```

```
        \ifnum\@advisor>1
720
721         \renewcommand\local@advisorstring{Orientadores}
722         \renewcommand\foreign@advisorstring{Advisors}
723       \fi
724 }
```

\examiner

```
725 \newcount\@examiner\@examiner0
726 \newcommand\examiner[3]{%
727   \global\@namedef{CoppeExaminer:\expandafter\the\@examiner}{#1\ #2}
728   \global\advance\@examiner by 1
729 }
```

\author It was redefined to allow the identification of the author's first names and surname.

```
730 \renewcommand\author[2]{%
731   \global\def\@authname{#1}
732   \global\def\@authsurn{#2}
733 }
```

\date This code makes easy to switch from dates in different languages.

```
734 \renewcommand\date[2]{%
735   \month=#1
736   \year=#2
737 }
```

\local@monthname

```
738 \newcommand\local@monthname{\ifcase\month\or
739   Janeiro\or Fevereiro\or Mar{\c c}o\or Abril\or Maio\or Junho\or
740   Julho\or Agosto\or Setembro\or Outubro\or Novembro\or Dezembro\fi}
```

\foreign@monthname

```
741 \newcommand\foreign@monthname{\ifcase\month\or
742   January\or February\or March\or April\or May\or June\or
743   July\or August\or September\or October\or November\or December\fi}
```

\keyword

```
744 \newcounter{keywords}
745 \newcommand\keyword[1]{%
746   \global\@namedef{CoppeKeyword:\expandafter\the\c@keywords}{#1}
747   \global\addtocounter{keywords}{1}
748 }
```

\freeconfig This command allows easy changing of core class parameters.

```
749 \newcommand\freeconfig[6]{%
750   \providecommand\@degree{}
751   \renewcommand\@degree{#1}
752   \providecommand\@degreename{}
753   \renewcommand\@degreename{#2}
754   \providecommand\local@degname{}
755   \renewcommand\local@degname{#3}
756   \providecommand\foreign@degname{}
757   \renewcommand\foreign@degname{#4}
758   \providecommand\local@doctype{}
```

```
759  \renewcommand\local@doctype{#5}
760  \providecommand\foreign@doctype{}
761  \renewcommand\foreign@doctype{#6}%
762 }
763 %    \end{macrocode}
764 % \end{macro}
765 %
766 % \begin{macro}{\frontmatter}
767 % The number of pages for both frontmatter and mainmatter printed
768 % in the cataloging details page is computed by means of simple
769 % \LaTeX\ labels.
770 %    \begin{macrocode}
771 \renewcommand\frontmatter{%
772   \cleardoublepage
773   \@mainmatterfalse
774   \pagenumbering{roman}
775   \thispagestyle{empty}
776   \setcounter{page}{2}
777   \makefrontpage
778   \clearpage
779   \pagestyle{plain}
780   \ifthenelse{\boolean{maledoc}}{}{\makecatalog}%
781 }
```

`\mainmatter`

```
782 \renewcommand\mainmatter{%
783   \coppe@mainBegin
784   \cleardoublepage
785   \@mainmattertrue
786   \pagestyle{plain}
787   \pagenumbering{arabic}}
```

`\backmatter`

```
788 \renewcommand\backmatter{%
789   \if@openright
790     \cleardoublepage
791   \else
792     \clearpage
793   \fi}
794 %
```

`\maketitle`

```
795 \renewcommand\maketitle{%
796   \pagenumbering{alph}
797   \ltx@ifpackageloaded{hyperref}{\coppe@hypersetup}{}%
798   \begin{titlepage}
799   \begin{flushleft}
800   \vspace*{1.5mm}
801   \setlength\baselineskip{0pt}
802   \setlength\parskip{1mm}
803   \makebox[20mm][c]{\hspace{4.8cm}\includegraphics{coppe-logo}}
804   \end{flushleft}
805   \vspace{1.05cm}
806   \begin{center}
```

```
807    \nohyphens{%
808      \if@english
809        \MakeUppercase\foreign@title
810      \else
811        \MakeUppercase\local@title
812      \fi}\par
813    \vspace*{3cm}
814    \nohyphens{\@authname\ \@authsurn}\par
815    \end{center}
816    \vspace*{2.1cm}
817    \begin{flushright}
818    \begin{minipage}{8.45cm}
819    \frontcover@maintext
820    \end{minipage}\par
821    \vspace*{7.5mm}
822    \nohyphens{%
823    \begin{tabularx}{8.45cm}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
824      \local@advisorstring: &
825      \count1=0
826      \toks@={}
827      \@whilenum \count1<\@advisor \do{%
828      \ifcase\count1 % same as \ifnum0=\count1
829        \toks@=\expandafter{\csname CoppeAdvisorName:\the\count1%
830          \expandafter\endcsname\expandafter\space%
831          \csname CoppeAdvisorSurname:\the\count1\endcsname\\}
832      \else
833        \toks@=\expandafter\expandafter\expandafter{%
834          \expandafter\the\expandafter\toks@%
835          \expandafter&\expandafter\space%
836          \csname CoppeAdvisorName:\the\count1\expandafter\endcsname%
837          \expandafter\space\csname CoppeAdvisorSurname:\the\count1\endcsname\\
838        }%
839      \fi
840      \advance\count1 by 1}
841      \the\toks@
842    \end{tabularx}}\par
843    \end{flushright}
844    \vspace*{\fill}
845    \begin{center}
846    \local@cityname\par
847    \local@monthname\ de \number\year
848    \end{center}
849    \end{titlepage}
850    \global\let\maketitle\relax%
851    \global\let\and\relax}

852 \newcommand\makefrontpage{%
853    \begin{center}
854      \sloppy\nohyphens{
855        \if@english
856          \MakeUppercase\foreign@title
857        \else
858          \MakeUppercase\local@title
859        \fi}\par
```

```
860    \vspace*{7mm}
861    {\@authname\ \@authsurn}\par
862  \end{center}\par
863  \vspace*{4mm}
864  \frontpage@maintext
865  \vspace*{16mm}
866  \nohyphens{%
867  \noindent\begin{tabularx}{\textwidth}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
868    \local@advisorstring: &
869    \count1=0
870    \toks@={}
871    \@whilenum \count1<\@advisor \do{%
872    \ifcase\count1 % same as \ifnum0=\count1
873      \toks@=\expandafter{\csname CoppeAdvisorName:\the\count1%
874        \expandafter\endcsname\expandafter\space%
875        \csname CoppeAdvisorSurname:\the\count1\endcsname\\}
876    \else
877      \toks@=\expandafter\expandafter\expandafter{%
878        \expandafter\the\expandafter\toks@%
879        \expandafter&\expandafter\space%
880        \csname CoppeAdvisorName:\the\count1\expandafter\endcsname%
881        \expandafter\space\csname CoppeAdvisorSurname:\the\count1\endcsname\\
882      }%
883    \fi
884    \advance\count1 by 1}
885    \the\toks@
886  \end{tabularx}\par
887  \vspace*{20mm}
888  \noindent\begin{tabularx}{\textwidth}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
889    Aprovada por: &
890    \count1=0
891    \toks@={}
892    \@whilenum \count1<\@examiner \do{%
893    \ifcase\count1 % same as \ifnum0=\count1
894      \toks@=\expandafter{\csname CoppeExaminer:\the\count1%
895        \expandafter\endcsname\expandafter\\}
896    \else
897      \toks@=\expandafter\expandafter\expandafter{%
898        \expandafter\the\expandafter\toks@%
899        \expandafter&\expandafter\space%
900        \csname CoppeExaminer:\the\count1\expandafter\endcsname%
901        \expandafter\space\\
902      }%
903    \fi
904    \advance\count1 by 1}
905    \the\toks@
906    \end{tabularx}}\par
907  \vspace*{\fill}
908    \frontpage@bottomtext}

909 \newcommand\coppe@hypersetup{%
910 \begingroup
911   % changes to \toks@ and \count@ are kept local;
912   % it's not necessary for them, but it is usually the case
```

```
913    % for \count1, because the first ten counters are written
914    % to the DVI file, thus you got lucky because of PDF output
915    \toks@={}% in this special case not necessary
916    \count@=0 %
917    \@whilenum\count@<\value{keywords}\do{%
918      % * a keyword separator is not necessary,
919      %    if there is just one keyword
920      % * \csname CoppeKeyword:\the\count@\endcsname must be expanded
921      %    at least once, to get rid of the loop depended \count@
922      \ifcase\count@ % same as \ifnum0=\count@
923        \toks@=\expandafter{\csname CoppeKeyword:\the\count@\endcsname}%
924      \else
925        \toks@=\expandafter\expandafter\expandafter{%
926          \expandafter\the\expandafter\toks@
927          \expandafter;\expandafter\space
928          \csname CoppeKeyword:\the\count@\endcsname
929        }%
930      \fi
931      \advance\count@ by 1 %
932    }%
933    \edef\x{\endgroup
934      \noexpand\hypersetup{%
935        pdfkeywords={\the\toks@}%
936      }%
937    }%
938 \x
939 \hypersetup{%
940    pdfauthor={\@authname\ \@authsurn},
941    pdftitle={\local@title},
942    pdfsubject={\local@doctype\ de \@degreename\ em \local@deptname\ da COPPE/UFRJ},
943    pdfcreator={LaTeX with CoppeTeX toolkit},
944    breaklinks={true},
945    raiselinks={true},
946    pageanchor={true},
947 }}
```

\makecatalog When the document has illustrations, it is required to insert ": il.;" between the
number of pages of the textual part and the page dimension. We have created a
label to flag the existence of lists of figures. It is checked to be undefined using
the plain TEX command \@isundefined [7].

```
948 \newcommand\makecatalog{%
949    \vspace*{\fill}
950    \begin{center}
951      \setlength{\fboxsep}{5mm}
952      \framebox[120mm][c]{\makebox[5mm][c]{}%
953        \begin{minipage}[c]{105mm}
954        \setlength{\parindent}{5mm}
955        \noindent\sloppy\nohyphens\@authsurn,
956        \nohyphens\@authname\par
957        \nohyphens{%
958          \if@english
959            \foreign@title%
960          \else
961            \local@title%
```

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```
962        \fi/\@authname\ \@authsurn. -- \local@cityname:
963     UFRJ/COPPE, \number\year.}\par
964     \pageref{front:pageno},
965     \pageref{LastPage}
966     p.\@ifundefined{r@cat:lofflag}{}{\pageref{cat:lofflag}} $29,7$cm.\par
967     % There is an issue here. When the last entry must be split between lines,
968     % the spacing between it and the next paragraph becomes smaller.
969     % Should we manually introduce a fixed space? But how could we know that
970     % a name was split? Is this happening yet?
971     \nohyphens{%
972     \begin{tabularx}{100mm}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
973       \local@advisorstring: &
974       \count1=0
975       \toks@={}
976       \@whilenum \count1<\@advisor \do{%
977       \ifcase\count1 % same as \ifnum0=\count1
978         \toks@=\expandafter{\csname CoppeAdvisorName:\the\count1%
979         \expandafter\endcsname\expandafter\space%
980         \csname CoppeAdvisorSurname:\the\count1\endcsname\\}
981       \else
982         \toks@=\expandafter\expandafter\expandafter{%
983           \expandafter\the\expandafter\toks@
984           \expandafter&\expandafter\space
985           \csname CoppeAdvisorName:\the\count1\expandafter\endcsname%
986           \expandafter\space\csname CoppeAdvisorSurname:\the\count1\endcsname\\
987         }%
988       \fi
989       \advance\count1 by 1}
990       \the\toks@
991     \end{tabularx}}\par
992     \nohyphens{\local@doctype\ ({\MakeLowercase\@degreename}) --
993     UFRJ/COPPE/Programa de \local@deptname, \number\year.}\par
994     Refer{\^ e}ncias Bibliogr{\' a}ficas: p. \pageref{bib:begin} -- \pageref{bib:end}.\par
995     \count1=0
996     \count2=1
997     \nohyphens{\@whilenum \count1<\value{keywords} \do {%
998       \number\count2. \csname CoppeKeyword:\the\count1 \endcsname.
999       \advance\count1 by 1
1000      \advance\count2 by 1}
1001    I. \csname CoppeAdvisorSurname:0\endcsname,%
1002    \ \csname CoppeAdvisorName:0\endcsname%
1003    \ifthenelse{\@advisor>1}{\ \emph{et~al.}}{}.
1004    II. \local@universityname, COPPE, Programa de \local@deptname.
1005    III. T{\' i}tulo.}
1006    \end{minipage}}
1007  \end{center}
1008  \vspace*{\fill}}
```

\dedication

```
1009 \newcommand\dedication[1]{
1010    \gdef\@dedic{#1}
1011    \cleardoublepage
1012    \vspace*{\fill}
1013    \begin{flushright}
```

```
1014        \begin{minipage}{60mm}
1015          \raggedleft \it \normalsize \@dedic
1016        \end{minipage}
1017      \end{flushright}}
```

abstract (*env.*) This is a specialization of the abstract in the article standard class.

```
1018 \newenvironment{abstract}{%
1019   \clearpage
1020   \thispagestyle{plain}
1021   \abstract@toptext\par
1022   \vspace*{8.6mm}
1023   \begin{center}
1024     \sloppy\nohyphens{\MakeUppercase\local@title}\par
1025     \vspace*{13.2mm}
1026     \@authname\ \@authsurn \par
1027     \vspace*{7mm}
1028     \local@monthname/\number\year
1029   \end{center}\par
1030   \vspace*{\fill}
1031   \noindent%
1032   \begin{tabularx}{\textwidth}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
1033     \local@advisorstring: &
1034     \count1=0
1035     \toks@={}
1036     \@whilenum \count1<\@advisor \do{%
1037     \ifcase\count1 % same as \ifnum0=\count1
1038       \toks@=\expandafter{\csname CoppeAdvisorName:\the\count1%
1039       \expandafter\endcsname\expandafter\space%
1040       \csname CoppeAdvisorSurname:\the\count1\endcsname\\}
1041     \else
1042       \toks@=\expandafter\expandafter\expandafter{%
1043         \expandafter\the\expandafter\toks@
1044         \expandafter&\expandafter\space
1045         \csname CoppeAdvisorName:\the\count1\expandafter\endcsname%
1046         \expandafter\space\csname CoppeAdvisorSurname:\the\count1\endcsname\\
1047       }%
1048     \fi
1049     \advance\count1 by 1}
1050     \the\toks@
1051   \end{tabularx}\par
1052   \vspace*{2mm}
1053   \noindent\local@deptstring: \local@deptname\par
1054   \vspace*{7mm}}{\vspace*{\fill}}
```

foreignabstract (*env.*)

```
1055 \newenvironment{foreignabstract}{%
1056   \clearpage
1057   \thispagestyle{plain}
1058   \begin{otherlanguage}{english}
1059   \foreignabstract@toptext\par
1060   \vspace*{8.6mm}
1061   \begin{center}
1062     \sloppy\nohyphens{\MakeUppercase\foreign@title}\par
1063     \vspace*{13.2mm}
```

```
1064      \@authname\ \@authsurn \par
1065      \vspace*{7mm}
1066      \foreign@monthname/\number\year
1067    \end{center}\par
1068    \vspace*{\fill}
1069    \noindent%
1070    \begin{tabularx}{\textwidth}[b]{@{}l@{ }>{\raggedright\arraybackslash}X@{}}
1071      \foreign@advisorstring: &
1072      \count1=0
1073      \toks@={}
1074      \@whilenum \count1<\@advisor \do{%
1075      \ifcase\count1 % same as \ifnum0=\count1
1076        \toks@=\expandafter{\csname CoppeAdvisorName:\the\count1%
1077        \expandafter\endcsname\expandafter\space%
1078        \csname CoppeAdvisorSurname:\the\count1\endcsname\\}
1079      \else
1080        \toks@=\expandafter\expandafter\expandafter{%
1081          \expandafter\the\expandafter\toks@
1082          \expandafter&\expandafter\space
1083          \csname CoppeAdvisorName:\the\count1\expandafter\endcsname%
1084          \expandafter\space\csname CoppeAdvisorSurname:\the\count1\endcsname\\
1085        }%
1086      \fi
1087      \advance\count1 by 1}
1088      \the\toks@
1089    \end{tabularx}\par
1090    \vspace*{2mm}
1091    \noindent\foreign@deptstring: \foreign@deptname\par
1092    \vspace*{7mm}}{%
1093    \end{otherlanguage}
1094    \vspace*{\fill}
1095    \global\let\@author\@empty
1096    \global\let\@date\@empty
1097    \global\let\foreign@title\@empty
1098    \global\let\foreign@title\relax
1099    \global\let\local@title\@empty
1100    \global\let\local@title\relax
1101    \global\let\author\relax
1102    \global\let\author\relax
1103    \global\let\date\relax}
```

\listoffigures

```
1104 \renewcommand\listoffigures{%
1105     \coppe@hasLof
1106     \if@twocolumn
1107       \@restonecoltrue\onecolumn
1108     \else
1109       \@restonecolfalse
1110     \fi
1111     \chapter*{\listfigurename}%
1112       \addcontentsline{toc}{chapter}{\listfigurename}%
1113       \@mkboth{\MakeUppercase\listfigurename}%
1114               {\MakeUppercase\listfigurename}%
1115     \@starttoc{lof}%
```

```
1116        \if@restonecol\twocolumn\fi
1117        }
```

\listoftables

```
1118 \renewcommand\listoftables{%
1119        \if@twocolumn
1120          \@restonecoltrue\onecolumn
1121        \else
1122          \@restonecolfalse
1123        \fi
1124        \chapter*{\listtablename}%
1125          \addcontentsline{toc}{chapter}{\listtablename}%
1126          \@mkboth{%
1127              \MakeUppercase\listtablename}%
1128            {\MakeUppercase\listtablename}%
1129        \@starttoc{lot}%
1130        \if@restonecol\twocolumn\fi
1131        }
```

\printlosymbols

```
1132 \newcommand\printlosymbols{%
1133 \renewcommand\glossaryname{\listsymbolname}%
1134 \@input@{\jobname.los}}
```

\makelosymbols

```
1135 \def\makelosymbols{%
1136    \newwrite\@losfile
1137    \immediate\openout\@losfile=\jobname.syx
1138    \newcommand\symbl[3][]{\@bsphack\begingroup
1139    \ifstrempty{##1}{\def\@tempsymbl{##2=}}{\def\@tempsymbl{##1=}}%
1140              \@sanitize%
1141              \@wrlos{\@tempsymbl}{##2}{##3}}\typeout%
1142    {Writing index of symbols file \jobname.syx}%
1143    \let\makelosymbols\@empty%
1144 }%
1145 \@onlypreamble\makelosymbols
```

```
1146 \AtBeginDocument{%
1147 \@ifpackageloaded{hyperref}{%
1148    \newcommand\@wrlos[3]{%
1149      \protected@write\@losfile{}%
1150        {\string\indexentry{#1[#2] #3|hyperpage}{\thepage}}%
1151      \endgroup%
1152      \@esphack}}{%
1153    \newcommand\@wrlos[3]{%
1154      \protected@write\@losfile{}%
1155        {\string\indexentry{#1[#2] #3}{\thepage}}%
1156      \endgroup%
1157      \@esphack}}%
```

\printloabbreviations

```
1158 \newcommand\printloabbreviations{%
1159 \renewcommand\glossaryname{\listabbreviationname}%
1160 \@input@{\jobname.lab}}
```

\makeloabbreviations

```
1161 \def\makeloabbreviations{%
1162   \newwrite\@labfile
1163   \immediate\openout\@labfile=\jobname.abx
1164    \newcommand\abbrev[3][]{\@bsphack\begingroup
1165             \ifstrempty{##1}{\def\@tempsymbl{##2=}}{\def\@tempsymbl{##1=}}
1166             \@sanitize
1167             \@wrlab{\@tempsymbl}{##2}{##3}}\typeout
1168   {Writing index of abbreviations file \jobname.abx}%
1169   \let\makeloabbreviations\@empty
1170 }
1171 \@onlypreamble\makeloabbreviations

1172 \AtBeginDocument{%
1173 \@ifpackageloaded{hyperref}{%
1174   \newcommand\@wrlab[3]{%
1175     \protected@write\@labfile{}%
1176      {\string\indexentry{#1[#2] #3|hyperpage}{\thepage}}%
1177     \endgroup%
1178     \@esphack}}{%
1179   \newcommand\@wrlab[3]{%
1180     \protected@write\@labfile{}%
1181      {\string\indexentry{#1[#2] #3}{\thepage}}%
1182     \endgroup%
1183     \@esphack}}}%

1184 %%%% \AtBeginDocument{%
1185 %%%% \@ifpackageloaded{hyperref}{%
1186 %%%%   \def\@wrlab#1#2{%
1187 %%%% \protected@write\@labfile{}%
1188 %%%%      {\string\indexentry{[#1] #2|hyperpage}{\thepage}}%
1189 %%%%     \endgroup
1190 %%%%     \@esphack}}{%
1191 %%%%   \def\@wrlab#1#2{%
1192 %%%%     \protected@write\@labfile{}%
1193 %%%%      {\string\indexentry{[#1] #2}{\arabic{page}}}%
1194 %%%%     \endgroup
1195 %%%%     \@esphack}}}
1196 % Some macros used to generate cataloging information.
1197 \AtBeginDocument{%
1198   \ltx@ifpackageloaded{hyperref}{
1199     \def\coppe@bibEnd{%
1200       \immediate\write\@auxout{%
1201         \string\newlabel{bib:end}{{}{\arabic{page}}{}{page.\arabic{page}}{}}}}%
1202     \def\coppe@bibBegin{%
1203       \immediate\write\@auxout{%
1204         \string\newlabel{bib:begin}{{}{\arabic{page}}{}{page.\arabic{page}}{}}}}%
1205     \def\coppe@mainBegin{%
1206       \immediate\write\@auxout{%
1207         \string\newlabel{front:pageno}{{}{\Roman{page}}{}{page.\roman{page}}{}}}}%
1208     \def\coppe@hasLof{%
1209       \immediate\write\@auxout{%
1210         \string\newlabel{cat:lofflag}{{}{:~il.;}{}{page.\roman{page}}{}}}}%
1211   }{%
```

```latex
1212     \def\coppe@bibEnd{%
1213       \immediate\write\@auxout{%
1214       \string\newlabel{bib:end}{{}{\arabic{page}}{}}}}%
1215     \def\coppe@bibBegin{%
1216       \immediate\write\@auxout{%
1217       \string\newlabel{bib:begin}{{}{\arabic{page}}{}}}}%
1218     \def\coppe@mainBegin{%
1219       \immediate\write\@auxout{%
1220        \string\newlabel{front:pageno}{{}{\Roman{page}}{}}}}%
1221     \def\coppe@hasLof{%
1222       \immediate\write\@auxout{%
1223       \string\newlabel{cat:lofflag}{{}{:~il.;}{}}}}%
1224   }%
1225 }
1226 \newdimen\bibindent%
1227 \setlength\bibindent{1.5em}%
1228 \renewenvironment{thebibliography}[1]%
1229     {\onehalfspacing%
1230      \chapter*{\bibname}%
1231      \addcontentsline{toc}{chapter}{\bibname}%
1232      \coppe@bibBegin
1233      \list{\@biblabel{\@arabic\c@enumiv}}%
1234          {\setlength{\labelwidth}{0ex}%
1235            \setlength{\leftmargin}{9.0ex}%
1236            \setlength{\itemindent}{-9.0ex}%
1237            \advance\leftmargin\labelsep%
1238            \@openbib@code%
1239            \usecounter{enumiv}%
1240            \let\p@enumiv\@empty%
1241            \renewcommand\theenumiv{\@arabic\c@enumiv}}%
1242      \sloppy%
1243      \clubpenalty4000%
1244      \@clubpenalty \clubpenalty%
1245      \widowpenalty4000%
1246      \sfcode`\.\@m}%
1247     {\def\@noitemerr%
1248      {\@latex@warning{Empty `thebibliography' environment}}%
1249      \coppe@bibEnd
1250      \endlist}
```

longquote (*env.*)

```latex
1251 \newlength{\recuolongquote}%
1252 \setlength{\recuolongquote}{4cm}%
1253 \newenvironment*{longquote}[1][default]{%
1254 \list{}%
1255 \footnotesize%
1256 \addtolength{\leftskip}{\recuolongquote}%
1257 \item[]%
1258 \singlespacing%
1259 \ifthenelse{\not\equal{#1}{default}}{\itshape\selectlanguage{#1}}{}%
1260 }{\endlist}%

1261 \newenvironment{theglossary}{%
1262   \if@twocolumn%
```

```
1263      \@restonecoltrue\onecolumn%
1264   \else%
1265      \@restonecolfalse%
1266   \fi%
1267   \@mkboth{\MakeUppercase\glossaryname}%
1268   {\MakeUppercase\glossaryname}%
1269   \chapter*{\glossaryname}%
1270   \addcontentsline{toc}{chapter}{\glossaryname}
1271   \list{}
1272   {\setlength{\listparindent}{0in}%
1273    \setlength{\labelwidth}{1.0in}%
1274    \setlength{\leftmargin}{1.5in}%
1275    \setlength{\labelsep}{0.5in}%
1276    \setlength{\itemindent}{0in}}%
1277    \sloppy}%
1278   {\if@restonecol\twocolumn\fi%
1279 \endlist}
1280 %
1281 \renewenvironment{theindex}{%
1282   \if@twocolumn
1283      \@restonecolfalse
1284   \else
1285      \@restonecoltrue
1286   \fi
1287   \twocolumn[\@makeschapterhead{\indexname}]%
1288   \@mkboth{\MakeUppercase\indexname}%
1289   {\MakeUppercase\indexname}%
1290   \thispagestyle{plain}\parindent\z@
1291   \addcontentsline{toc}{chapter}{\indexname}
1292   \parskip\z@ \@plus .3\p@\relax
1293   \columnseprule \z@
1294   \columnsep 35\p@
1295   \let\item\@idxitem}
1296   {\if@restonecol\onecolumn\else\clearpage\fi}
1297 \if@english
1298   \newcommand\listabbreviationname{List of Abbreviations}
1299   \newcommand\listsymbolname{List of Symbols}
1300   \newcommand\glossaryname{Glossary}
1301 \else
1302   \newcommand\listabbreviationname{Lista de Abreviaturas}
1303   \newcommand\listsymbolname{Lista de S{\' i}mbolos}
1304   \newcommand\glossaryname{Gloss{\' a}rio}
1305 \fi
1306 %
1307 \newcommand\local@advisorstring{Orientador}
1308 \newcommand\foreign@advisorstring{Advisor}
1309 \ifthenelse{\boolean{maledoc}}{%
1310   \newcommand\local@approvedname{Examinado por}%
1311 }{%
1312   \newcommand\local@approvedname{Examinada por}%
1313 }
1314 \newcommand\local@universityname{Universidade Federal do Rio de Janeiro}
1315 \newcommand\local@deptstring{Programa}
1316 \newcommand\foreign@deptstring{Department}
```

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```
1317 \newcommand\local@cityname{Rio de Janeiro}
1318 \newcommand\local@statename{RJ}
1319 \newcommand\local@countryname{Brasil}
1320 %
1321 \newcommand\frontcover@maintext{
1322   \sloppy\nohyphens{\local@doctype\ de \@degreename\
1323   \ifthenelse{\boolean{maledoc}}{apresentado}{apresentada}
1324   ao Programa de P{\' o}s-gradua{\c c}{\~ a}o em \local@deptname,
1325   COPPE, da \local@universityname, como parte dos requisitos
1326   necess{\' a}rios {\` a} obten{\c c}{\~ a}o do t{\' i}tulo de
1327   \local@degname\ em \local@deptname.}
1328 }
1329 %
1330 \newcommand\frontpage@maintext{
1331   \noindent {\MakeUppercase\local@doctype}
1332   \ifthenelse{\boolean{maledoc}}{SUBMETIDO}{SUBMETIDA}
1333   \sloppy\nohyphens{AO CORPO DOCENTE DO INSTITUTO ALBERTO LUIZ COIMBRA
1334   DE P{\' O}S-GRADUA{\c C}{\~ A}O E PESQUISA DE ENGENHARIA DA
1335   UNIVERSIDADE FEDERAL DO RIO DE JANEIRO COMO PARTE DOS REQUISITOS
1336   NECESS{\' A}RIOS PARA A OBTEN{\c C}{\~ A}O DO GRAU DE
1337   {\MakeUppercase\local@degname} EM CI{\^E}NCIAS EM
1338   {\MakeUppercase\local@deptname.\par}}%
1339 }
1340 %
1341 \newcommand\frontpage@bottomtext{%
1342   \begin{center}
1343   {\MakeUppercase{\local@cityname, \local@statename\ -- \local@countryname}}\par
1344   {\MakeUppercase\local@monthname\ DE \number\year}
1345   \end{center}%
1346 }
1347 %
1348 \newcommand\abstract@toptext{%
1349   \noindent Resumo \ifthenelse{\boolean{maledoc}}{do}{da}
1350   \local@doctype\ \ifthenelse{\boolean{maledoc}}{apresentado}{apresentada}
1351   \sloppy\nohyphens{{\` a} COPPE/UFRJ como parte dos requisitos
1352   necess{\' a}rios para a obten{\c c}{\~ a}o do grau de
1353   \local@degname\ em Ci{\^ e}ncias (\@degree)}
1354 }
1355 \newcommand\foreignabstract@toptext{%
1356   \noindent \sloppy\nohyphens{Abstract of \foreign@doctype\ presented to
1357   COPPE/UFRJ as a partial fulfillment of the requirements for the
1358   degree of \foreign@degname\ of Science (\@degree)}
1359 }
1360 %
1361 ⟨/class⟩

1362 ⟨∗glossary⟩
1363 actual '='
1364 quote '!'
1365 level '>'
1366 %%%% delim_0   ", p. "
1367 delim_0 "\\dotfill "
1368 lethead_flag  0
1369 headings_flag 0
```

```
1370 preamble
1371 "\n\\begin{theglossary}\n  \\makeatletter"
1372 postamble
1373 "\n  \\end{theglossary}\n"
1374 ⟨/glossary⟩
```

Acknowledgments

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[6] William Strunk, Jr. and E. B. White. *The Elements of Style*. Macmillan, 3 edition, 1979.

[7] TeX Frequently Asked Questions.

Index

Numbers written in italic refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in roman refer to the code lines where the entry is used.

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Change History