

# A document class for theses for the School of Computer Science and Software Engineering Monash University

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## 1 Introduction

This file implements a document class suitable for theses presented to the School of Computer Science and Software Engineering. It may be suitable for publications at other universities with some modifications.

The `cssethesis` document class is based on `book` document class contained in the standard  $\text{\LaTeX}$ 2e distribution. The basic functionality of `book.cls` is retained. A few routines from `book` have been redefined. Note that the default layout is for two-sided printing. Use the class option `oneside` if you want margins, headers and footers for single-sided printing.

`cssethesis.dtx` requires an additional  $\text{\LaTeX}$ 2e package, `setspace`. Packages can be found on CTAN archive sites, and `setspace.sty` should have been included in this distribution (though you should probably leave it and use the version with your  $\text{\LaTeX}$ 2e distribution, which is most likely more recent). `setspace` defines four new environments: `singlespace`, `doublespace`, `onehalfspace`, and `spacing`. Please refer to its documentation for more information. `cssethesis.dtx` also makes use of the standard  $\text{\LaTeX}$ 2e packages `geometry` and `graphicx`.

Also included with this distribution are the files for the `harvard` package, which provides a powerful citation scheme, and some associated bibliography style files. The combination of the `harvard` package and the `dcu` bibliography style is recommended (see `example.tex`). Note that the `natbib` package supports similar functionality, and is preferred by many.

`cssethesis.dtx` was originally based on `utthesis.cls` written by Dinesh Das. It also has origins in the `wuthesis.dtx` by Kevin S. Ruland of Sever Institute.

## 2 Docstrip Commands

This section of code is for docstrip. If  $\text{\LaTeX}$  is run with this file, `cssethesis.dtx`, as input, documented source code will be produced.

```
1 \*driver
2 \documentclass{ltxdoc}
3 \usepackage{doc}                % use the doc package
4 \IndexPrologue{}               % remove default index prologue
```

```

5 \setcounter{IndexColumns}{2}      % two column index
6 \EnableCrossrefs                  % make the command index
7 \CodelineIndex                    % by code line
8 \CodelineNumbered                 % number the code lines
9 % I really want the changelog to be one column. So
10 % theglossary is redefined.
11 \makeatletter
12 \renewenvironment{theglossary}{%
13 \smallskip
14 \GlossaryParms
15 \let\item\@idxitem
16 \ignorespaces{}}
17 \makeatother
18 \RecordChanges                    % make the changelog
19 \begin{document}
20 \DocInput{cssethesis.dtx}
21 \end{document}
22 \</driver>

```

### 3 Identification

Identify this package, and its contents to the user and latex.

```

23 % Actually not much of this code remains, but the copyright
24 % remains.
25 %*****
26 %** UT Austin Thesis Style File, version 2.0, January 1995
27 %**
28 %** Copyright (c) 1995 Dinesh Das. All rights reserved.
29 %** This file is free and can be modified or distributed as
30 %**
31 %** (1) This copyright notice is kept intact on all modified
32 %** copies.
33 %** (2) If this file is modified, the original file name must
34 %** not be used.
35 %*****
36
37 \NeedsTeXFormat{LaTeX2e}
38 \ProvidesClass{cssethesis}[2004/02/06 v1.6 Monash School of Computer Science and Software Engi

```

### 4 Declaration of Options

The `pdflatex` option allows the user to specify that they wish to compile their document using `pdflatex`. This means that the Adobe PDF file format must be used for included graphics, rather than Postscript. We need to know this so that we can pass the right option to the `graphicx` package.

```

39 \newif\if@pdflatex \@pdflatexfalse % Default is false
40 \DeclareOption{pdflatex}{\@pdflatextrue}

```

Intercept the `openright` and `openany` options. We want to be able to override them in the frontmatter.

```

41 \newif\if@wasopenright \@wasopenrighttrue % true is the default
42 \DeclareOption{openright}{\@wasopenrighttrue}

```

```
43 \DeclareOption{openany}{\@wasopenrightfalse}
```

The `thesisdraft` option is useful for printing draft copies of the thesis. It will print a time stamp in the header of every page.

```
44 \DeclareOption{thesisdraft}{%
45   \AtEndOfClass{% So it will override the definition given below
46   \let\ps@plain\@empty
47   \def\ps@plain{%
48     \let\@oddfoot\@empty\let\@evenfoot\@empty
49     \def\@oddhead{\textsl{Draft of \timestamp}\hfil\thepage}%
50     \def\@evenhead{\thepage\hfil\textsl{Draft of \timestamp}}%
51     \let\@mkboth\@gobbletwo
52     \let\chaptermark\@gobble
53     \let\sectionmark\@gobble}
54   }
55 }
```

If printing on a PostScript printer `thesispsdraft` can be used to add a PostScript special draft message across the page. `dr`

```
56 \DeclareOption{thesispsdraft}{%
57   \AtEndOfClass{% So it will override the definition given below
58   \let\ps@plain\@empty
59   \def\ps@plain{%
60   \special{!userdict begin /bop-hook{gsave 90 270 translate
61     90 rotate /Times-Roman findfont 100 scalefont setfont
62     0 0 moveto 0.9 setgray (DRAFT) show grestore}def end}
63   \let\@oddfoot\@empty\let\@evenfoot\@empty
64   \def\@oddhead{\textsl{Draft of \timestamp}\hfil\thepage}%
65   \def\@evenhead{\thepage\hfil\textsl{Draft of \timestamp}}%
66   \let\@mkboth\@gobbletwo
67   \let\chaptermark\@gobble
68   \let\sectionmark\@gobble}
69   }
70   }
```

Either a phd thesis, masters, masters (minor) or honours thesis. Default is phd thesis. Note the different options for honours and degrees in Computing, Computer Science, Digital Systems, Software Engineering and Science. There are also options for different kinds of Masters theses.

```
71 \DeclareOption{phdthesis}{%
72   \ifx\undefined\thesistype
73   \newcommand{\thesisfulfillment}{for fulfillment}
74   \newcommand{\thesistype}{Thesis}
75   \newcommand{\thesisdegree}{Doctor of Philosophy}
76   \newcommand{\thesisdegreeabbreviation}{PhD}
77   \newcommand{\thesiscoursecode}{0190}
78   \else
79   \ClassError{csstheesis}{only one thesis type option may be
80   specified}{}
81   \fi
82   }
83 \DeclareOption{mitthesis}{%
84   \ifx\undefined\thesistype
85   \newcommand{\thesisfulfillment}{for fulfillment}
86   \newcommand{\thesistype}{Thesis}
```

```

87 \newcommand{\thesisdegree}{Master of Information Technology (Research)}
88 \newcommand{\thesisdegreeabbreviation}{MIT}
89 \newcommand{\thesiscoursecode}{1895}
90 \else
91 \ClassError{cssethesis}{only one thesis type option may be
92 specified}{}
93 \fi
94 }
95 \DeclareOption{mitminorthesis}{%
96 \ifx\undefined\thesistype
97 \newcommand{\thesisfulfillment}{in partial fulfillment}
98 \newcommand{\thesistype}{Minor Thesis}
99 \newcommand{\thesisdegree}{Master of Information Technology (Minor Thesis)}
100 \newcommand{\thesisdegreeabbreviation}{MIT}
101 \newcommand{\thesiscoursecode}{3316}
102 \else
103 \ClassError{cssethesis}{only one thesis type option may be
104 specified}{}
105 \fi
106 }
107 % This one is for people doing an MIT (Coursework) with a minor thesis
108 \DeclareOption{mitcourseworkthesis}{%
109 \ifx\undefined\thesistype
110 \newcommand{\thesisfulfillment}{in partial fulfillment}
111 \newcommand{\thesistype}{Minor Thesis}
112 \newcommand{\thesisdegree}{Master of Information Technology (Coursework)}
113 \newcommand{\thesisdegreeabbreviation}{MIT}
114 \newcommand{\thesiscoursecode}{2402}
115 \else
116 \ClassError{cssethesis}{only one thesis type option may be
117 specified}{}
118 \fi
119 }
120 \DeclareOption{mcsminorthesis}{%
121 \ifx\undefined\thesistype
122 \newcommand{\thesisfulfillment}{in partial fulfillment}
123 \newcommand{\thesistype}{Minor Thesis}
124 \newcommand{\thesisdegree}{Master of Computer Science (Minor Thesis)}
125 \newcommand{\thesisdegreeabbreviation}{MCS}
126 \newcommand{\thesiscoursecode}{3328}
127 \else
128 \ClassError{cssethesis}{only one thesis type option may be
129 specified}{}
130 \fi
131 }
132 \DeclareOption{mdcthesis}{%
133 \ifx\undefined\thesistype
134 \newcommand{\thesisfulfillment}{for fulfillment}
135 \newcommand{\thesistype}{Thesis}
136 \newcommand{\thesisdegree}{Master of Digital Communications}
137 \newcommand{\thesisdegreeabbreviation}{MDC}
138 \newcommand{\thesiscoursecode}{2406}
139 \else
140 \ClassError{cssethesis}{only one thesis type option may be

```

```

141 specified}{%
142 \fi
143 }
144 \DeclareOption{bcomphonoursthesis}{%
145 \ifx\undefined\thesistype
146 \newcommand{\thesisfulfillment}{in partial fulfillment}
147 \newcommand{\thesistype}{Thesis}
148 \newcommand{\thesisdegree}{Bachelor of Computing with Honours}
149 \newcommand{\thesisdegreeabbreviation}{BComp(Hons)}
150 \newcommand{\thesiscoursecode}{0194}
151 \else
152 \ClassError{cssethesis}{only one thesis type option may be
153 specified}{%
154 \fi
155 }
156 \DeclareOption{bcshonoursthesis}{%
157 \ifx\undefined\thesistype
158 \newcommand{\thesisfulfillment}{in partial fulfillment}
159 \newcommand{\thesistype}{Thesis}
160 \newcommand{\thesisdegree}{Bachelor of Computer Science with Honours}
161 \newcommand{\thesisdegreeabbreviation}{BCompSc(Hons)}
162 \newcommand{\thesiscoursecode}{1608}
163 \else
164 \ClassError{cssethesis}{only one thesis type option may be
165 specified}{%
166 \fi
167 }
168 \DeclareOption{bdshonoursthesis}{%
169 \ifx\undefined\thesistype
170 \newcommand{\thesisfulfillment}{in partial fulfillment}
171 \newcommand{\thesistype}{Thesis}
172 \newcommand{\thesisdegree}{Bachelor of Digital Systems with Honours}
173 \newcommand{\thesisdegreeabbreviation}{BDigSys(Hons)}
174 \newcommand{\thesiscoursecode}{1200}
175 \else
176 \ClassError{cssethesis}{only one thesis type option may be
177 specified}{%
178 \fi
179 }
180 \DeclareOption{bshonoursthesis}{%
181 \ifx\undefined\thesistype
182 \newcommand{\thesisfulfillment}{in partial fulfillment}
183 \newcommand{\thesistype}{Thesis}
184 \newcommand{\thesisdegree}{Bachelor of Science (Computer Science) with
185 Honours}
186 \newcommand{\thesisdegreeabbreviation}{BSc(Hons)}
187 \newcommand{\thesiscoursecode}{0051}
188 \else
189 \ClassError{cssethesis}{only one thesis type option may be
190 specified}{%
191 \fi
192 }
193 \DeclareOption{bsehonoursthesis}{%
194 \ifx\undefined\thesistype

```

```

195 \newcommand{\thesisfulfillment}{in partial fulfillment}
196 \newcommand{\thesistype}{Thesis}
197 \newcommand{\thesisdegree}{Bachelor of Software Engineering with
198 Honours}
199 \newcommand{\thesisdegreeabbreviation}{BSE(Hons)}
200 \newcommand{\thesiscoursecode}{2150}
201 \else
202 \ClassError{cssethesis}{only one thesis type option may be
203 specified}{}
204 \fi
205 }
206 %

```

The following two Masters degree types are being phased out. They are retained for historical accuracy.

```

207 %
208 \DeclareOption{mcompthesis}{%
209 \ifx\undefined\thesistype
210 \newcommand{\thesisfulfillment}{for fulfillment}
211 \newcommand{\thesistype}{Thesis}
212 \newcommand{\thesisdegree}{Master of Computing}
213 \newcommand{\thesisdegreeabbreviation}{MComp}
214 \newcommand{\thesiscoursecode}{}
215 \else
216 \ClassError{cssethesis}{only one thesis type option may be
217 specified}{}
218 \fi
219 }
220 \DeclareOption{mcompminorthesis}{%
221 \ifx\undefined\thesistype
222 \newcommand{\thesisfulfillment}{in partial fulfillment}
223 \newcommand{\thesistype}{Thesis}
224 \newcommand{\thesisdegree}{Master of Computing (Minor)}
225 \newcommand{\thesisdegreeabbreviation}{MComp}
226 \newcommand{\thesiscoursecode}{}
227 \else
228 \ClassError{cssethesis}{only one thesis type option may be
229 specified}{}
230 \fi
231 }

```

The `nocoursecode` option is used to suppress the printing of the course code after the name of the course.

```

232 %
233 \DeclareOption{nocoursecode}{%
234 \let\thesiscoursecode\undefined
235 }
236 %

```

The `litreview` option is used to indicate that this is a literature review for the thesis, rather than the thesis itself. This changes the title, and also causes information such as the student ID, supervisors and email addresses to be shown. This is not yet fully supported.

```

237 %

```

```

238 \newif\if@litreview \@litreviewfalse
239 \DeclareOption{litreview}{%
240 \@litreviewtrue
241 \renewcommand{\thesistype}{Literature Review}
242 }
243 %

```

These do the obvious, that is switch spacing in the main body of text. Monash University requires either `oneandhalfspace` or `doublespace`. `singlespace` is useful for drafts and doesn't kill as many trees. If none is selected, the body will be set with `singlespace` spacing.

Each option executes the corresponding command from `setspace` at the `\begin{document}` command. Their execution must be delayed because `setspace` requires the macro `\@normalsize` to be defined. But the definition of `\@normalsize` (in `book`) is delayed until after the entire class is loaded.

```

244 \DeclareOption{singlespace}{\AtBeginDocument{\singlespacing}}
245 \DeclareOption{oneandhalfspace}{\AtBeginDocument{\onehalfspacing}}
246 \DeclareOption{doublespace}{\AtBeginDocument{\doublespacing}}

```

This option forces the first paragraph after section headings to be indented.

```

247 \DeclareOption{indentfirst}{\let\@afterindentfalse\@afterindenttrue
248 \@afterindenttrue}

```

Pass all other options to `book.cls`

```

249 \DeclareOption*{\PassOptionsToClass{\CurrentOption}{book}}

```

The default options are

```

250 \ExecuteOptions{oneandhalfspace}
251 \ProcessOptions

```

We need to load the base class `book`

```

252 \LoadClass{book}[1994/12/01]

```

Make sure that one of `phdthesis`, `mitthesis`, etc. is selected.

```

253 \ifx\undefined\thesistype
254 \ClassError{cssethesis}
255 {thesis type not specified. Please give a class option to specify the
256 thesis type}%
257 {Use, for example, \protect\documentclass[phdthesis]{cssethesis}.
258 Possibilities are: phdthesis, mitthesis, mitminorthesis,
259 mitcourseworkthesis, mcsminorthesis, mdcthesis, bcomphonoursthesis,
260 bcshonoursthesis, bdshonoursthesis, bshonoursthesis, bsehonoursthesis}
261 \fi

```

Load in the `geometry` package, setting up the page layout. This simplifies things greatly compared to trying to set all the lengths manually.

```

262 \RequirePackage[paper=a4paper,left=30mm,width=150mm,top=25mm,bottom=25mm]{geometry}

```

Load in the `graphicx` package. This package is used to load the image for the Monash Crest. Note that the default is to pass the `dvips` option—the user must give the `pdflatex` option to `\documentclass` if they want to use PDF figures.

```

263 \if@pdflatex
264 \RequirePackage[pdftex]{graphicx}
265 \else
266 \RequirePackage[dvips]{graphicx}
267 \fi

```

Load in `setspace` to control baseline spacing  
268 `\RequirePackage{setspace}`

## 5 User Customization

This section shows the default settings for a multitude of user changeable commands. These are used in setting the various pages of the thesis.

### 5.1 Should be set by the author

Each of the following should be customized by the author using commands of the form `\thesisauthor{Ima B. Student}`. The default values may be O.K. for some things.

```

269 \newcommand*{\thesisauthor}[1]{\gdef\@thesisauthor{#1}}
270 \newcommand*{\thesisauthorlastname}[1]{\gdef\@thesisauthorlastname{#1}}
271 \newcommand*{\thesisauthorpreviousdegrees}[1]{\gdef\@thesisauthorpreviousdegrees{#1}}
272 \newcommand*{\thesisauthorstudentid}[1]{\gdef\@thesisauthorstudentid{#1}}
273 \newcommand*{\thesisauthoremail}[1]{\gdef\@thesisauthoremail{#1}}
274 \newcommand*{\thesismonth}[1]{\gdef\@thesismonth{#1}}
275 \def\@thesismonth{\ifcase%
276 \month\or January%
277 \or February%
278 \or March%
279 \or April%
280 \or May%
281 \or June%
282 \or July%
283 \or August%
284 \or September%
285 \or October%
286 \or November%
287 \or December\fi} % use current month as default
288 \newcommand*{\thesisyear}[1]{\gdef\@thesisyear{#1}}
289 \def\@thesisyear{\number\year} % use current year as default
290 \newcommand*{\thesistitle}[1]{\gdef\@thesistitle{#1}}
291 \newcommand*{\thesissupervisor}[1]{\gdef\@thesissupervisor{#1}}
292 \newcommand*{\thesissupervisoremail}[1]{\gdef\@thesissupervisoremail{#1}}
293 \newcommand*{\thesisassoc-supervisor}[1]{\gdef\@thesisassoc-supervisor{#1}}
294 \newcommand*{\thesisassoc-supervisoremail}[1]{\gdef\@thesisassoc-supervisoremail{#1}}
295 \newcommand*{\thesisdepartment}[1]{\gdef\@thesisdepartment{#1}}
296 \def\@thesisdepartment{Computer Science and Software Engineering}
297 \newcommand*{\thesisuniversity}[1]{\gdef\@thesisuniversity{#1}}
298 \def\@thesisuniversity{Monash University}
299 \newcommand*{\thesisauthoraddress}[1]{\gdef\@thesisauthoraddress{#1}}
300 \def\@thesisauthoraddress{School of Computer Science and Software Engineering\Monash University}
301 \newcommand*{\thesistypist}[1]{\gdef\@thesistypist{#1}}
302 \def\@thesistypist{the author}
303 \newcommand*{\thesisdedication}[1]{\gdef\@thesisdedication{#1}}

```



## 5.2 Need not be redefined

These commands are usually fine as is. They may be changed using `\renewcommand` if desired.

```

304 \newcommand{\thesisdefaultbaselinestretch}{1.5}
305 \newcommand{\thesisotypetypesize}{\large}
306 \newcommand{\thesisititletypesize}{\Large}
307 \newcommand{\thesisititlebold}{\textbf{\thesisititletypesize\@thesisititle}}
308 \newcommand{\thesisstudenttypesize}{\large}
309 \newcommand{\thesisstudentbold}{\textbf{\thesisstudenttypesize \thesisstudent}}
310 \newcommand{\thesisdegreetypesize}{\large}
311 \newcommand{\thesisitlepagefont}{\fontsize{14}{14}\selectfont}
312 \newcommand{\thesiscopyrightholder}{\@thesisauthor}
313 % Set this to School, Department or whatever is appropriate at your
314 % institution
315 \newcommand{\thesisdepartmentname}{School}
316 \newcommand{\thesiscommittee}{Supervising Committee:}
317 \newcommand{\thesiscommitteesize}{5}
318 \newcommand{\thesisvitahead}{Vita}
319 \newcommand{\thesisvitaheadtypesize}{\huge\bfseries}
320 \newcommand{\thesisacknowledgmenthead}{Acknowledgments}
321 \newcommand{\thesisacknowledgmentsiname}{\@thesisauthor}
322 \newcommand{\thesisacknowledgmentsinametype}{\large}
323 \newcommand{\thesisacknowledgmentsigplace}{%
324     {\slshape
325         \@thesisuniversity \\\
326         \@thesismonth\ \@thesisyear}}
327 \newcommand{\thesisstudent}{\%
328 \ifx\undefined\@thesisauthorpreviousdegrees
329 \@thesisauthor
330 \else
331 \@thesisauthor, \@thesisauthorpreviousdegrees
332 \fi
333 }
```

These penalties eliminate widows, orphans (clubs), and pages ending in hyphens.

```

334 \widowpenalty =10000
335 \clubpenalty =10000
336 \brokenpenalty=10000
```

## 6 Page styles and chapter openings

We like to use different page styles for the front matter and main text of the document. For the front matter, the page numbers should be at the bottom so we use the `plain` page style. For the main matter, we use the default `headings` style from `book.cls`. We also want “chapters” to be able to start on any page in the front matter, but only on righthand pages in the main matter (unless the user specifies the option `openany`).

```

\frontmatter
337 \renewcommand{\frontmatter}{\%
338 \cleardoublepage
```

```

339 \@mainmatterfalse
340 \pagenumbering{roman}
341 % These line added (not in book.cls):
342 \@openrightfalse
343 \pagestyle{plain}}

\mainmatter

344 \renewcommand{\mainmatter}{%
345 \cleardoublepage
346 \@mainmattertrue
347 \pagenumbering{arabic}
348 % These lines added:
349 \if@wasopenright
350 \@openrighttrue % restore previous setting
351 \else
352 \@openrightfalse
353 \fi
354 \pagestyle{headings}}

```

## 7 Frontmatter

These commands typeset various pages in the front matter. Their order in this file is not the order in which they should appear in a thesis. Please refer to the sample document for proper order.

`\thesisdedicationpage` This is a simple command.

```

355 \newcommand{\thesisdedicationpage}{%
356 \strut \vfill
357 \begin{spacing}{1.5}
358 \begin{center}
359 \@thesisdedication
360 \end{center}
361 \end{spacing}
362 \vfill \strut
363 \newpage}

```

`thesisacknowledgments` Currently it sets the contents in single spacing, but in the future may be changeable.

```

364 \newenvironment{thesisacknowledgments}
365 {%
366 \chapter*{\thesisacknowledgmenthead
367 \@mkboth{\thesisacknowledgmenthead}
368 {\thesisacknowledgmenthead}}
369 \addcontentsline{toc}{chapter}{\thesisacknowledgmenthead}
370 \begin{spacing}{1.1}}
371 {\nopagebreak\end{spacing} \par\nopagebreak
372 \raggedleft
373 {\thesisacknowledgmentsignametype\thesisacknowledgmentsigname}
374 \\*[10mm]
375 \raggedright
376 \thesisacknowledgmentsigplace
377 \newpage}

```

`\thesistitlepage` Sets the title page.

```
378 \newcommand{\thesistitlepage}{%
379 \thispagestyle{empty}
380 \begin{spacing}{1.5}
381 \begin{center}
382 \thesistitlebold \\\[4mm]
383 by \\\[4mm]
384 \thesisstudentbold \\\
385 \ifx\undefined\@thesisauthoremail
386 \relax
387 \else
388 \if@litreview
389 \vspace{-8pt}
390 \texttt{\@thesisauthoremail}\\
391 \fi
392 \fi
393 \vspace{8mm}
394 \begin{center}
395 \includegraphics[width=5cm]{MonashCrest}
396 \end{center}
397 \textbf{\thesistypetypesize \thesistype} \\\
398 \if@litreview
399 \relax
400 \else
401 Submitted by \@thesisauthor \\\
402 \thesisfulfillment\ of the Requirements %\\
403 for the Degree of \\\
404 \fi
405 \ifx\undefined\thesiscoursecode
406 \textbf{\thesisdegreetypesize \thesisdegree} \\\
407 \else
408 \textbf{\thesisdegreetypesize \thesisdegree\ (\thesiscoursecode)} \\\
409 \fi
410 \vspace{12mm}
411 \ifx\undefined\@thesisadvisor
412 \ClassError{csstheiss}{a thesisadvisor must be defined when
413 the litreview option is used}{\}
414 \else
415 Supervisor: \@thesisadvisor\\
416 \fi
417 \ifx\undefined\@thesisassocadvisor
418 \relax
419 \else
420 Associate Supervisor: \@thesisassocadvisor\\
421 \fi
422 \strut \vfill
423 \textbf{\Large \thesisdepartmentname\ of \@thesisdepartment} \\\
424 \textbf{\Large \@thesisuniversity} \\\[4mm]
425 \@thesismonth, \@thesisyear
426 \end{center}
427 \end{spacing}
428 \newpage}
```

`\thesiscopyrightpage` Creates the copyright page.

```

429 \newcommand{\thesiscopyrightpage}{%
430     \thispagestyle{empty}
431     \strut \vfill
432     \begin{center}
433         \begin{spacing}{2}
434             \copyright\ Copyright \\\ by \\\ \thesiscopyrightholder \\\ \@thesisyear
435         \end{spacing}
436     \end{center}
437     \vfill \strut
438     \newpage}

```

**thesisabstract** The abstract environment. Will only typeset the abstract using 1.5 spacing.

```

439 \newenvironment{thesisabstract}{%
440     \newpage
441     \addcontentsline{toc}{chapter}{Abstract}
442     \setlength{\unitlength}{1mm}
443     \begin{center}
444         \begin{spacing}{1.5}
445             \thesistitlebold \\\[7mm]
446         \end{spacing}
447         \begin{spacing}{1}
448             \@thesisauthor
449 \ifx\undefined\@thesisauthorpreviousdegrees
450 \\\
451 \else
452     , \@thesisauthorpreviousdegrees \\\
453 \fi
454 \ifx\undefined\@thesisauthoremail
455 \relax
456 \else
457 \texttt{\@thesisauthoremail}\\\
458 \fi
459     \@thesisuniversity, \@thesisyear \\\[7mm]
460     Supervisor: \@thesissupervisor \\\
461 \ifx\undefined\@thesissupervisoremail
462 \relax
463 \else
464 \texttt{\@thesissupervisoremail}\\\
465 \fi
466 \ifx\undefined\@thesisassocsupervisor
467 \relax
468 \else
469 Associate Supervisor: \@thesisassocsupervisor\\
470 \ifx\undefined\@thesisassocsupervisoremail
471 \relax
472 \else
473 \texttt{\@thesisassocsupervisoremail}\\\
474 \fi
475 \fi
476 \vspace*{7mm}
477     \textbf{Abstract} \\\
478     \end{spacing}
479     \end{center}
480     \vspace{5mm}

```

```

481 \noindent}
482 \newpage

```

`\thesisdeclarationpage` Sets the declaration page.

```

483 \newcommand{\thesisdeclarationpage}{%
484 \begin{center}
485 \begin{spacing}{1.5}
486 \thesisistitlebold
487 \end{spacing}
488 \end{center}
489 \vspace{20mm}
490 \begin{center}
491 {\bf Declaration}
492 \end{center}
493 \begin{spacing}{1}
494 I declare that this thesis is my own work and has not been
495 submitted in any form for another degree or diploma at any university
496 or other institute of tertiary education. Information derived from
497 the published and unpublished work of others has been acknowledged in
498 the text and a list of references is given.
499 \end{spacing}
500 \vspace{15mm}
501 \hfill \begin{minipage}{67mm}
502 \begin{spacing}{1}
503 \vspace{10mm}
504 \setlength{\unitlength}{1mm}
505 \begin{picture}(67,1)(0,0)
506 \line(1,0){67}
507 \end{picture} \\
508 \@thesisauthor \\
509 \today
510 \end{spacing}
511 \end{minipage}
512 \newpage}

```

`\thesissignaturepage` Sets the signature page.

```

513 \newcommand{\thesissignaturepage}{%
514 \begin{center}
515 \begin{spacing}{1.5}
516 \thesisistitlebold
517 \end{spacing}
518 \end{center}
519 \vspace{20mm}
520 \begin{center}
521 {\bf \thesistype\ Acceptance}
522 \end{center}
523 \begin{spacing}{1}
524 This student's \thesistype, entitled
525 \textbf{\@thesisistitle}
526 has been examined by the undersigned committee of
527 examiners and has received full approval for acceptance \thesisfulfillment\
528 of the requirements for the degree of \thesisdegree.
529 \end{spacing}
530

```

```

531 \vspace{15mm}
532 \hbox to \hsize{\hfill APPROVAL: \begin{minipage}[b]{67mm}
533 \setlength{\unitlength}{1mm}
534 \begin{picture}(67,-70)
535 \multiput(0,-2)(0,-10)
536 {\thesiscommitteesize}{\line(1,0){67}}
537 \end{picture}
538 \end{minipage} Chief Examiner}
539 \newpage}

```

`\thesisshorttitlepage` Sets the short title page

```

540 \newcommand{\thesisshorttitlepage}{%
541 \vbox to 4.1in{\vfil
542 \hbox to \hsize {Short Title: \thesisshorttitle \hfill
543 \@thesisauthorlastname, \thesisdegreeabbreviation\ \@thesisyear
544 % This little hack is to make it centered on the page.
545 \hspace{0.5in}}}
546 \newpage}

```

These are modified from `LATEX2e book.cls` so they make table of contents entries. They are also simplified by removing the two column and heading settings.

`\listoffigures`

```

547 \renewcommand{\listoffigures}{%
548 \chapter*{\listfigurename}%
549 \addcontentsline{toc}{chapter}{\listfigurename}%
550 \@starttoc{lof}
551 }

```

`\listoftables`

```

552 \renewcommand{\listoftables}{%
553 \chapter*{\listtablename}%
554 \addcontentsline{toc}{chapter}{\listtablename}%
555 \@starttoc{lot}
556 }

```

## 8 Mainmatter

We need to modify the listing of appendices in the `toc`. This does require a new conditional and changes to `\appendix` and `\@chapter`.

`\if@appendix`

```

557 \newif\if@appendix\@appendixfalse

```

`\appendix`

```

558 \renewcommand{\appendix}{\par
559 \setcounter{chapter}{0}%
560 \setcounter{section}{0}%
561 \renewcommand{\@chapapp}{\appendixname}%
562 \renewcommand{\thechapter}{\Alph{chapter}}
563 \@appendixtrue}

```

`\@chapter`

```

564 \def\@chapter[#1]#2{\ifnum \c@secnumdepth >\m@ne
565     \if@mainmatter
566         \refstepcounter{chapter}%
567         \typeout{\@chapapp\space\thechapter.}%
568         \if@appendix
569             \addcontentsline{toc}{chapter}%
570                 {\appendixname\ \thechapter\ #1}%
571         \else
572             \addcontentsline{toc}{chapter}%
573                 {\protect\numberline{\thechapter}\#1}%
574         \fi
575     \else
576         \addcontentsline{toc}{chapter}{\#1}%
577     \fi
578 \else
579     \addcontentsline{toc}{chapter}{\#1}%
580 \fi
581 \chaptermark{#1}%
582 \addtocontents{lof}{\protect\addvspace{10\p@}}%
583 \addtocontents{lot}{\protect\addvspace{10\p@}}%
584 \if@twocolumn
585     \@topnewpage[\@makechapterhead{#2}]%
586 \else
587     \@makechapterhead{#2}%
588     \@afterheading
589 \fi}

```

`\l@chapter` Some changes to the toc entries are required. Every entry should be followed by a dot leader. In the `book.cls`, chapter entries are not followed by a dot leader. This code corrects that.

```

590 \renewcommand{\l@chapter}[2]{%
591 % Some older versions of LaTeX2e (older than Dec. 1994) define \l@chapter
592 % using \newcommand instead of \newcommand*. If you have an error
593 % at this line, try removing the *.
594 \ifnum \c@tocdepth >\m@ne
595     \addpenalty{-\@highpenalty}%
596     \vskip 1.0em \@plus\p@
597     \setlength\@tempdima{1.5em}%
598     \begingroup
599         \parindent \z@ \rightskip \@pnumwidth
600         \parfillskip -\@pnumwidth
601         \leavevmode \bfseries
602         \advance\leftskip\@tempdima
603         \hskip -\leftskip
604         #1\nobreak%
605 % This line changed from \hfil
606         \leaders\hbox{$\m@th \mkern \@dotsep mu.\mkern \@dotsep mu$}\hfill
607         \nobreak\hbox to\@pnumwidth{\hss #2}\par
608         \penalty\@highpenalty
609     \endgroup
610 \fi}

```

## 9 Backmatter

`thesisauthorvita` This is really a stupid environment. All it does is enter a contents line, place the heading, and enter single spacing. The author must do all formatting for the page.

```

611 \newenvironment{thesisauthorvita}{%
612     \clearpage
613     \chapter*{\thesisvitahead
614         \@mkboth{\uppercase{\thesisvitahead}}
615             {\uppercase{\thesisvitahead}}}
616     \addcontentsline{toc}{chapter}{\thesisvitahead}
617     \begin{spacing}{\thesisdefaultbaselinestretch}
618     {\end{spacing} \par \vspace{20mm}
619     \noindent Permanent Address:
620     \begin{minipage}[t]{90mm}
621     \@thesisauthoraddress
622     \end{minipage}
623     \par \vspace{15mm}
624     \lowercase\expandafter{\thesistype} was
625     typeset with \LaTeXe\footnote{\LaTeXe} is an extension of \LaTeX.
626     \LaTeX{} is a collection of macros for \TeX. \TeX{} is a
627     trademark of the American Mathematical Society. The macros used in
628     formatting this \lowercase\expandafter{\thesistype} were written
629     by Glenn Maughan and modified by Dean Thompson and David Squire of Monash University.
630 } by \@thesistypist.}

```

`thebibliography` This hasn't been changed much from `book.cls`. Only the addition of the `\addcontentsline`. In addition, the `\bibname` is changed to "References".

```

631 \renewcommand{\bibname}{References}
632 % Updated in v1.5 using more recent code from book.cls, 2000/05/19 v1.4b.
633 \renewenvironment{thebibliography}[1]
634     {\chapter*{\bibname%
635 % This line added.
636     \addcontentsline{toc}{chapter}{\bibname}
637     \@mkboth{\MakeUppercase\bibname}{\MakeUppercase\bibname}}%
638     \list{\@biblabel{\@arabic\c@enumiv}}%
639         {\settowidth\labelwidth{\@biblabel{#1}}%
640         \leftmargin\labelwidth
641         \advance\leftmargin\labelsep
642         \@openbib@code
643         \usecounter{enumiv}%
644         \let\p@enumiv\@empty
645         \renewcommand\theenumiv{\@arabic\c@enumiv}}%
646     \sloppy
647     \clubpenalty4000
648     \@clubpenalty \clubpenalty
649     \widowpenalty4000%
650     \sfcode'\.\@m}
651 {\def\@noitemerr
652     {\@latex@warning{Empty 'thebibliography' environment}}%
653     \endlist}

```



## 10 Utility Functions

`\thesistime` This one computes the current time for the `thesisdraft` option.

```
654 \newcount\hour \newcount\minute
655 \hour=\time \divide \hour by 60
656 \minute=\time
657 \loop \ifnum \minute > 59 \advance \minute by -60 \repeat
658 \def\thesistime{\ifnum \hour<13 \number\hour:%
659                 \ifnum \minute<10 0\fi
660                 \number\minute
661                 \ifnum \hour<12 \ am\else \ pm\fi
662 \else \advance \hour by -12 \number\hour:%
663                 \ifnum \minute<10 0\fi
664                 \number\minute \ pm\fi}
```

`\timestamp`

```
665 \def\timestamp{\thesistime, \today}
```

`\@uppercase` `\@uppercase` is simply short hand to convert the contents of a macro to uppercase. It may not work under all circumstances, but does it's job for this style

```
666 \newcommand{\@uppercase}[1]{\expandafter\uppercase\expandafter{#1}}
```

`\@separator` `\@separator` will draw the rule used on both the title and abstract pages.

```
667 \newcommand\@separator{\vrule height.4pt depth0pt width3.5in}
```

`\@numberword`

```
668 \newcommand\@numberword[1]{\ifcase#1 zero\or one\or two\or three\or four\or five\or six\or seven\or eight\or nine\fi}
```