

L^AT_EX class and style files for my own local use

Dominik Wujastyk

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This file started to look like this in about 2016-04-01

1 XeLaTeX stuff

Normalize any residual Unicode combining accents, and write out error messages, if any:

```
XeLaTeX internals
1 \XeTeXinputnormalization=1
2 \tracinglostchars=1
3 \tracingonline=1
4 \XeTeXgenerateactualtext=1
```

2 Used at different times

Commented out.

```
hyperref
pdfx 5%\usepackage[final=true]{hyperref}
      6%\usepackage[a-1b]{pdfx} % get an archival PDF
```

3 Multilingual macros

from: [Stackexchange](#).

```
etex Not used
7%\usepackage{etex}
8%\reserveinserts{28}
9%\usepackage{xcolor}
```

```
polyglossia Set up various fonts and languages.
10 \usepackage{polyglossia}
11 %% work around a bug in polyglossia
12 %% from https://github.com/reutenauer/polyglossia/issues/626
13 \%makeatletter
14 \%ExplSyntaxOn
15 \%pretocmd\xpg@set@alias@values{%
16 %   \prop_if_exist:cF { xpg@alias@keyvals@#1@#4 }
17 %   { \prop_new:c {xpg@alias@keyvals@#1@#4} }
18 %}{-}{-}
19 \%ExplSyntaxOff
```

```

20%\makeatother
21%% end of workaround
22
23\defaultfontfeatures{%
24  Mapping=tex-text,
25  %Color=red,
26  Numbers=OldStyle,
27}
28
29\setmainlanguage[variant=british]{english}

Main document font:
30% \setmainfont[AutoFakeBold=1.5]{EB Garamond 12}
31\setmainfont[BoldFont = * Bold] % t1pretest 2019
32% (See https://tug.org/pipermail/tex-live/2019-March/043211.html)
33% {Linux Libertine 0} % lovely, but use Libertinus
34% {fbb} % also lovely - Bembo, but no underdot
35% {Tinos} % a croscore font; good diacritics
36{TeX Gyre Pagella}
37% {IndUni-P}
38% {Lucida Sans Unicode}
39% {Libertinus Serif} % something funny with overlapping chars in bold 2019-05

```

4 Packages that Polyglossia now auto-loads

polyglossia automatically loads: fixltx2e, etex, xunicode, fontspec. But we still need metalogo for the definitions of logos like `\XeLaTeX`.

```

40\usepackage{metalogo}
41% \usepackage{xunicode} % get unicode encoding in PDF even when using
42% \= etc. Not needed at present.

```

Getting properly-hyphenated Sanskrit:

```

43\setotherlanguage{sanskrit} % for transliterated Sanskrit
44\newfontfamily\sanskritfont
45 [Script=Latin]
46% [Script=Devanagari]
47% {Linux Libertine 0} %Transliteration only in this font
48{TeX Gyre Pagella} %Transliteration only in this font
49% {IndUni-P} %Transliteration only in this font
50% {Brill} %Transliteration only in this font
51% {Sanskrit 2003} % Roman and Devanagari

```

Define `\sansk{}` which is the same as `\emph{}`, except that it causes appropriate hyphenation for Sanskrit words. Use `\sansk{}` for Sanskrit and

\emph{ } for English.

```
52 \newcommand{\sansk}[1]{\emph{\textsanskrit{#1}}}  
53 \let\iast=\sansk %better name for it  
54 \let\rsan=\sansk
```

Now define the Devanagari font: input using standard IAST transliteration

```
55 \newfontfamily\devanagarifont  
56 [Script=Devanagari,  
57 % FakeStretch=1.05,  
58 Mapping=RomDev, %prefer slightly to iast  
59 ]  
60 % {Sahadeva}  
61 % {Sanskrit 2003}  
62 {Tiro Devanagari Sanskrit}  
  
63 % \newcommand{\dev}[1]{\textdevanagari{#1}} % test this 2018-10  
64 \newcommand{\dev}[1]{\textsanskrit{\devanagarifont #1}} % test this 2020-01  
65 \let\dsan=\devanagarifont  
66 \let\dn=\devanagarifont  
67  
68 \setotherlanguage{bengali}  
69 \newfontfamily\bengalifont  
70 [Script=Bengali]  
71 % {Sahadeva}  
72 % {Noto Serif Bengali}  
73 {Tiro Bangla}
```

Use: \textbengali{ }

And other languages

```
74 \setotherlanguage{german}  
75 \setotherlanguage{french}
```

will call appropriate hyphenation.

Chinese, Japanese, Korean

```
76 \newfontfamily\cjkkfont{Noto Sans CJK SC} %  
77 % [Script=CJK,Mapping=tex-text,Scale=MatchLowercase]  
78 % {IPAexMincho}  
79 % {TakaoPGothic}  
80 \let\cjk\cjkkfont
```

<https://tex.stackexchange.com/questions/376420/>

[include-chinese-characters-into-article-in-xelatex](#)

Classical Greek:

```
81 \setotherlanguage{greek}
```

```

82 \newfontfamily\greekfont[Script=Greek,Mapping=tex-text]{GFS Didot}
83 % {GFS Porson}
84 % {GFS Philostratos}

```

End of polyglossia stuff.

5 Sanskrit hyphenation

hyphenations A cumulative hyphenation exception file, `sanskrit-hyphenations.tex`, adds numerous hand-tuned hyphenation points to the default Polyglossia hyphenation rules for Sanskrit. This file needs to be `\input` after the start of the document. Normally, we'd do this with `\AtBeginDocument`, but for obscure reasons, that doesn't work. So we have to add the `\input` statement by hand at the start of every document, immediately after `\begin{document}`.

```

85 % \AtBeginDocument{\input{sanskrit-hyphenations.tex}} % this doesn't work :- (

```

6 Misc.

```

csquotes
graphicx 86 \usepackage[style=british]{csquotes} % error in log if not included
          87 \usepackage{graphicx}

```

7 Marginal note hacks

Not used:

```

88 % \usepackage{marginfix}
      simple marginal query, now superseded:
89 % \newcommand{\q}[1]{%
90 %     \marginpar{%
91 %         \rlap{%
92 %             \fbox{\vtop{\hsize 0.2\textwidth\raggedright\tiny#1}}}}
93 %     %}

```

Actually, `todonotes` makes nicer marginal comments:

```

todonotes
94 \usepackage{colorinlistoftodos,
95 %     disable,
96 textsize=tiny,
97 obeyDraft,

```

```

98 textwidth=.11\textwidth,
99 loadshadowlibrary,
100 shadow,
101 backgroundcolor=yellow
102 ]{todonotes}
103     \setuptodonotes{fancyline}
104
105 % Now renew the \q command to use \todo:
106 \newcommand{\q}[1]{\todo{#1}}
107 % \AtEndDocument{\newpage\listoftodos } %print the todo list
108 % at the end,
109 % when in draft mode

```

8 Stacked diacritics

\diatop \diatop, by Christina Thiele, used for r underdot overbar (ṛ, F6, 246) See *TeXniques: Conference Proceedings* 1987, no.5, p.11. (<https://tug.org/texniques/>)

```

110 \def\diatop[#1|#2]{\leavevmode{\setbox1=\hbox{#1}}\setbox2=\hbox{#2}}}%
111     \dimen0=\ifdim\wd1>\wd2\wd1\else\wd2\fi%
112     \dimen1=\ht2\advance\dimen1by-1ex%
113     \setbox1=\hbox to1\dimen0{\hss#1\hss}%
114     \rlap{\raise1\dimen1\box1}%
115     \hbox to1\dimen0{\hss#2\hss}}}%

```

E.g. of use: \diatop[\ 'ō] gives u macron acute

9 Private abbreviations

```

\AD
etc. 116 \newcommand{\AD}{\textsc{ce}{}}
117 \newcommand{\BC}{\textsc{bce}{}}
118 \newcommand{\BCE}{\textsc{bce}{}}
119 \newcommand{\CE}{\textsc{ce}{}}
120 \providecommand{\Cs}{\emph{Caraka\ -saṃ\ -hitā}}
121 \providecommand{\Ss}{\emph{Suśruta\ -saṃ\ -hitā}}
122 \let\CS\Cs
123 \let\SS\Ss
124 \providecommand{\AH}{\emph{Aṣṭāṅga\ -hṛdaya\ -saṃ\ -hitā}}
125 % \newcommand{\saneng}[2]{#2 (\sansk{#1})} % now in
126 % xelatex-indexing-xindex.sty
127 \newcommand{\PYS}{PYŚ} % {Pātañjala\ -yoga\ -śāstra}
128 \newcommand{\YSV}{\sansk{Yogasūtravivaraṇa}}

```

```
129 \newcommand{\sutra}[1]{\textbf{\large #1}\par}
```

10 Nice hanging-indent footnotes

`\hangfootnotes` LaTeX Companion, p.73. Not used.

```
130 % \def\hangfootnotes{%
131 % \renewcommand{\@makefnmark}[1]{\setlength{\parindent}{0pt}%
132 % \begin{list}{}{\setlength{\labelwidth}{1.5em}%
133 % \setlength{\leftmargin}{\labelwidth}%
134 % \setlength{\labelsep}{3pt}\setlength{\itemsep}{0pt}%
135 % \setlength{\parsep}{0pt}\setlength{\topsep}{0pt}%
136 % \footnotesize\item[\hfill\@makefnmark]##1%
137 % \end{list}}%
138 %}
```

But the above is broken by bigfoot (too much vertical space)

Footnotes with hanging indents adapted from <http://www.ceus-now.com/raggedright-in-footnotes-with-hanging-indent/>

```
139 \newcommand\hangfootnotes{%
140 \long\def\@makefnmark##1{\leftskip=1.8em\hskip-1.8em\hb@xt@1.8em
141 {\@thefnmark\hss}##1}}
```

11 Normal LaTeX settings now

```
142 \setcounter{secnumdepth}{0}
```

`enumitem`

```
143 \usepackage[inline]{enumitem} % supersedes mdwlist: does it globally
144 \setlist{itemsep=.5em,
145 %labelindent=\parindent,
146 %leftmargin=*,
147 }
```

```
148 % \usepackage{makeidx} % leave this to xelatex-indexing.sty
```

`multicol (env.)`

`longtable (env.)` 149 \usepackage{multicol}

`array (env.)` 150 % \multicolsep = 12pt plus 4pt minus 3pt % default

```
151 \multicolsep = 1pt plus .25ex % like the starred environments
```

```
152 \usepackage{longtable}
```

```
153 \usepackage{array}
```

```
154 % \usepackage{index} % multiple indexes. Doesn't play well with Beamer
```

```
155 \widowpenalty 4000
```



```

156 \clubpenalty 300
157 \brokenpenalty 5000
158 \interfootnotelinepenalty 10 % lets notes break more easily
159 \vfuzz2pt % Don't report over-full v-boxes if over-edge is small
160 \hfuzz2pt % Don't report over-full h-boxes if over-edge is small
161 \emergencystretch .1\textwidth

162 \hyphenation{dharam-pal wuj-as-tyk never-the-less nutri-tive
163 asoka kerala Aristotle Alex-ander Majno manu-script manu-scripts}

```

Command to draw a box where the pictures will go:

```

164 \newcommand{\pretendpicture}
165 { {\centering \fbox{\vrule width0pt height 2.5in depth0pt
166 \vrule width 4in height0pt depth0pt }\par }}

```

use as follows:

```

\begin{figure}[htp]
\begin{center}
\pretendpicture
\end{center}
\caption{}
\label{fig: }
\end{figure}

```

12 From article.cls

This isn't used.

```

167% \typeout{Wujastyk: NB: Modified maketitle command, flush
168% left and no array for authors.}

169% \providecommand\@maketitle{%
170% \newpage
171% \null
172% \vskip 2em%
173%% \begin{center}%
174% \let \footnote \thanks
175% \noindent{\LARGE \@title \par}%
176% \vskip 1.5em%
177% \noindent {\large
178% \lineskip .5em%
179%% \noindent
180%% \begin{tabular}[t]{l} %DW
181% \@author
182%% \end{tabular}\par %DW

```

```

183%    }%
184%    \vskip 1em%
185%    \noindent {\large \@date}%
186%%    \end{center}%
187%    \par
188%    \vskip 3em} %DW was 1.5em

```

sloka See <http://cs.wlu.edu/~necaise/refs/latex2e/env-list.4.html> Not used:

```

189% \newenvironment{sloka} % based on {verse}, from book.cls
190%     {\let\\\@centercr
191%      \list{}\itemsep \z@
192%      \topsep .1\baselineskip
193%      \parsep .25\baselineskip
194%      \itemindent -1.5em%
195%      \listparindent\itemindent
196%      \rightmargin \z@
197%      \leftmargin 3pc % = CUP's \SFB@indent
198%      \advance\leftmargin 1.5em}%
199%      \item\itshape\relax}
200%      {\endlist}

```

Here's another version from book.cls, based on the quote environment

```

201 \newenvironment{sloka}
202 {\list{}\rightmargin\leftmargin}%
203 \item\itshape\relax}
204 {\endlist}

```

\PreliminaryNote Preliminary numberless "footnote" for abbreviations, grant references, and other general initial statements.

```

205 \newcommand{\PreliminaryNote}[1]{%
206 {\def\thefootnote{\relax }%
207 \footnotetext{\hspace*{-2.3em} %only if not using \hangfootnotes
208 #1}}}

209 \newcommand{\doublespacing}{%
210 \renewcommand{\baselinestretch}{1.5}
211 \addtolength{\footnotesep}{0.5\footnotesep}}

```

The following not used.

```

212% \usepackage{ccllicenses}
213% \let\DWolddate\date
214% \renewcommand{\date}[1]{\DWolddate{#1\\ \cc \ccby \ccnc \ccsa }}

```

13 BibLaTeX

BibLaTeX Load the BibLaTeX package and the oxyear style, and set the various options.

```
215 \usepackage[%
216 backend=biber,
217 %style=authoryear-icomp,
218 % Make idem and ibidem behave appropriately:
219 \url{https://tex.stackexchange.com/questions/61717/biblatex-strictly-identical-footnote-c
220 % (and see \newbibmacro*{cite:ibid} below).
221 %ibidpage,
222 %idemtracker=false,
223 %style=authoryear,
224 %uniquename=false,
225 % oxref:
226 style=oxyear,
227 dashed=true,
228 % end oxref
229 %bibstyle=publist,
230 %marginyear=true,
231 %style=verbose-trad1,
232 %
233 % I finally worked out how to sort cites by year and bibliography by name
234 %
235 \url{https://cikitsa.blogspot.ca/2017/07/biblatex-citations-and-bibliography.html}
236 sorting=ynt, %ynt for the citations in date order; nyt otherwise
237 sortcites=true,
238 %sortlocale=en-GB,
239 backref=false,
240 date=comp,
241 datecirca=true,
242 dateuncertain=true,
243 bibencoding=auto,
244 hyperref=auto,
245 isbn=true,
246 doi=true,
247 language=auto,
248 natbib=true,
249 texencoding=auto,
250 url=true,
251 urldate=short,
252 usetranslator=true,
253 useprefix=true,% van Nooten
254 giveninits=false, % Give first names in the bibliography. See
255 \url{https://github.com/alex-ball/biblatex-oxref/issues/17#issuecomment-843383550}
```

```

256 %maxnames=1, % before "et al."
257 %uniquelist=false,
258 %refsection=section,
259 ]{biblatex}
260
261 \ExecuteBibliographyOptions[% for biblatex-oxyear
262 article,
263 book,
264 mvbook,
265 mvcollection,
266 inbook,
267 incollection,
268 inreference,
269 collection,
270 reference,
271 mvreference]{useeditor=true,
272   usetranslator=true,
273 %   uniquename=full
274 }

```

compyear Patch so that date-abbreviations aren't just one digit. Kindly supplied by Alex Ball, <https://github.com/alex-ball/biblatex-oxref/issues/19>

```

275 \renewcommand{\blx@ox@compyear}[2]{%
276   \def\num@one{#1}%
277   \def\num@two{#2}%
278   \StrLen{\num@one}[\num@one@len]%
279   \StrLen{\num@two}[\num@two@len]%
280   \ifboolexpr{
281     test {\ifnumequal{\num@one@len}{\num@two@len}}
282     and
283     test {\ifnumless{\num@one}{\num@two}}
284   }{%
285     \StrCompare{\num@one}{\num@two}[\Result]%
286     \ifnum\num@two@len>3%
287     \IfStrEq{\Result}{2}{\def\Result{1}}{}%
288     \fi
289     %% Extend the legal date compression behaviour to all entries
290     \IfStrEq{\Result}{4}{\def\Result{3}}{}%
291     %% End of changes
292     \StrGobbleLeft{0\num@two}{\Result}%
293   }{\num@two}}

```

bookeditor I don't use this, now. patch of Sept 2019
<https://mail.google.com/mail/u/0/#inbox/>

```

FMfcgxwDrHpMnGSkkqjMqHwCCdJqBLkC
294 %\makeatletter
295 %\xpatchbibmacro{bookeditor}{\global\undef\bbx@lasthash}{\}{\}{%
296 %    \wlog{INFO: oxyyear fix no longer needed!}}
297 %\makeatother

assignrefcontextentries I finally discovered how to sort citations by year and bibliography entries
by name (and see sorting, above).
https://cikitsa.blogspot.ca/2017/07/
biblatex-citations-and-bibliography.html
298 \AtBeginDocument{\assignrefcontextentries[]{*}}
But this isn't working 2021-05 :-()

comma Following sections 3.10 and 4.7.5 of the BibLATEX manual, put the comma
inside the quotation marks of the title.
299 \DefineBibliographyExtras{british}{\DeclareQuotePunctuation{.,}}

printbibliography To avoid saying \newrefcontext[sorting=nyt] before
\printbibliography in every document redefine \printbibliography
(from biblatex.sty):
300 \renewrobustcmd*{\printbibliography}{%
301 \newrefcontext[sorting=nyt] % added this line
302 \begingroup
303 \delimcontext{bib}%
304 \edef\on@line{\on@line}%
305 \@ifnextchar[%]
306 {\blx@printbibliography}
307 {\blx@printbibliography[]}}

volcite no "p." or "pp." in, for example, \volcite:
308 \DefineBibliographyStrings{english}{%
309 page = {},
310 pages = {},
311 volume = {},
312 }

addbibresource This isn't used, because we load different bibliographies in different docu-
ments.
313 % \addbibresource
314 %% [datatype=bibtex]
315 % {biblio4-utf8.bib}

```

urls biblatex documentation 4.11.2 and macros from biblatex.def Enable hot
URLs for PDFs at Archive.org and Academia.edu

```
316 \newif\ifBibHiddenURLs
317 %
318 \ifBibHiddenURLs
319   \relax
320 \else
321 %
322 \DeclareFieldFormat{url}{%
323   \ifhyperref
324     {\textsc{url: }}\href{#1}{#1}} % added a newline to help with long URLs in PDFs
325   {\textsc{url: }}\nolinkurl{#1}} %DW bug here
326 %
327 % Buddhist Digital Resource Center:
328 \DeclareFieldFormat{eprint:tbrc}{%
329   \textsc{TBRC}\space
330   \ifhyperref
331     {\href{https://www.tbrc.org/\#!rid=#1}{\nolinkurl{#1}}}
332     {\nolinkurl{#1}}}
333 %
334 \DeclareFieldFormat{eprint:ark}{%
335   \textsc{ark:}\space
336   \ifhyperref
337     {\href{https://n2t.net/#1}{\nolinkurl{#1}}}
338     {\nolinkurl{#1}}}
339 %
340 \DeclareFieldFormat{eprint:archive}{%
341 %   Internet Archive\addcolon\space
342   \ifhyperref
343 %     {\href{http://archive.org/details/#1}{\nolinkurl{#1}}}
344     {\href{http://archive.org/details/#1}{\small Internet Archive}}
345     {\nolinkurl{#1}}}
346 \DeclareFieldAlias{eprint:archive.org}{eprint:archive}
347 \DeclareFieldAlias{eprint:Archive.org}{eprint:archive}
348
349 \DeclareFieldFormat{eprint:academia}{%
350 %   Academia.edu\addcolon\space
351   \ifhyperref
352     {\href{http://www.academia.edu/#1}{\small Academia.edu}}
353     {\nolinkurl{#1}}}
354 \DeclareFieldAlias{eprint:academia.edu}{eprint:academia}
355
356 \DeclareFieldFormat{eprint:dli}{%
357 %   DLI\addcolon\space
```

```

358 \ifhyperref
359 {\href{http://www.dli.gov.in/cgi-bin/DBscripts/allmetainfo.cgi?barcode=#1/}{\small
360 Digital Library of India}}
361 {\nolinkurl{#1}}}
362 \DeclareFieldAlias{eprint:DLI}{eprint:dli}
363 \DeclareFieldFormat{eprint:jstor}{%
364 \ifhyperref
365 {\href{http://www.jstor.org/stable/#1}{\small JSTOR}}}
366 {\nolinkurl{#1}}}
367
368 \DeclareFieldFormat{eprint:google}{%
369 \ifhyperref
370 {\href{http://books.google.com/books?id=#1}{\small Google books}}}
371 {\nolinkurl{#1}}}
372 %
373 \DeclareFieldFormat{doi}{%
374 \textsc{doi}\addcolon\space
375 \ifhyperref
376 {\href{https://doi.org/#1}{\nolinkurl{#1}}}
377 {\nolinkurl{#1}}}
378 %
379 \fi
380 \BibHiddenURLsfalse

```

citealias Not used. Better done in individual documents.

```

381 %\defcitealias{meul-hist}{HIML}
382 %\defcitealias{ncc}{NCC}
383 %\defcitealias{bisw-bibl}{BSIMC}

```

note To make Bib_{La}T_EX notes print last, like addendums
from [http://tex.stackexchange.com/questions/138913/
how-to-move-the-field-note-at-the-end-of-the-reference](http://tex.stackexchange.com/questions/138913/how-to-move-the-field-note-at-the-end-of-the-reference)

```

384 \DeclareSourcemap{
385 \maps[datatype=bibtex]{
386 \map{
387 \step[fieldsource=note, final]
388 \step[fieldset=addendum, origfieldval, final]
389 \step[fieldset=note, null]
390 }
391 }
392 }

```

DeclareFieldFormat Tweaks to make the citation form:- Author date: page

```

393 \DeclareFieldFormat{postnote}{#1}

```

```

394 \renewcommand{\postnotedelim}{:\,}
395 \renewcommand{\nameyear delim}{ }

clearfield Suppress shorthands: http://tex.stackexchange.com/questions/57041/
    Once again, I don't use this at present.
396 % \AtEveryCitekey{\clearfield{shorthand}}

csquotes
397 \usepackage{csquotes}
398 \setquotestyle{american} % american = double quotes

DeclareLabeldate BibLaTEX hacks to get pubstate (?forthcoming? etc.) behaving as it should
BibLaTEX manual 4.5.10
399 \DeclareLabeldate{%
400   \field{date}
401   \field{year}
402   \field{pubstate}
403   \field{eventdate}
404   \field{origdate}
405   \field{urldate}
406   \literal{nodate}
407 }

shorthandwidth Some magic from "moewe" at https://tex.stackexchange.com/questions/442749/biblatex-have-hyperref-links-point-to-the-shorthand-list that
makes hyperlinks work from citations to a list of abbreviations.
408 \DeclareFieldFormat{shorthandwidth}{%
409   \bibhypertarget{shorthand:\thefield{entrykey}}
410   {#1}}
411
412 \DeclareFieldFormat{bibhyperref}{%
413   \iffieldundef{shorthand}
414   {\bibhyperref{#1}}
415   {\bibhyperlink{shorthand:\thefield{entrykey}}{#1}}}

penalties Penalty settings to make URLs format better. From xurl documentation.
    Currently not used.
416 %\usepackage{xurl}
417 %\setcounter{biburllcpenalty}{1}
418 %\setcounter{biburlucpenalty}{1}
419 %\setcounter{biburlnumpenalty}{1}
420 %% but BibLaTEX has this built in to it.

```


literal Create a new data type in bibtex, @literal, which just prints the content of the title field.

Thanks to emilianoehyans at <https://forums.zotero.org/discussion/110863/biblatex-both-langid-and-language-are-needed>

```
421 \DeclareBibliographyDriver{literal}{%
422     \newunit\newblock
423     \printfield{title}%
424     \finentry}
```

DeclareSourcemap It turns out that it's the langid field that controls language-switching in bibliography entries, not language. Since I've always used language, this code will just write the content of the language field to the langid field, on the fly.

```
425 \DeclareSourcemap{
426     \maps[datatype=bibtex]{
427         \map{
428             \step[fieldsource=language,fieldtarget=langid]
429         }
430     }
431 }
```

That's all, folks!

14 Glossaries

Official documentation of LaTeX glossaries is found in the TeXlive distribution:

- glossaries.pdf
- glossaries-extra.pdf
- bib2gls.pdf
- glossariesbegin.pdf

See

- <https://ctan.org/pkg/glossaries>
- <https://ctan.org/pkg/glossaries-extra>
- <https://ctan.org/pkg/bib2gls>

The Glossaries packages are complex and the documentation is voluminous and written from the point of view of an insider programmer. See also <https://en.wikibooks.org/wiki/LaTeX/Glossary>

I cannot pretend to understand the package overall, but the code below works.

14.1 Glossaries of plants and animals

The macros below initialize two glossaries, plants and animals. These glossaries draw their content from the databases `plants.bib` and `animals.bib`, using the `bib2gls` feature of Glossaries. These two databases are in simple bibtex format. E.g.,

```
@Entry{māṃsī,
citationkey = {māṃsī},
description = {Nardostachys grandiflora, DC. See
               \volcite{1}[\#1691]{NK}},
name        = {spikenard},
}
```

Note the use of Bib_{La}T_EX citations in the description field.

The citation keys in the databases, e.g., `māṃsī`, is used as the argument of the macro `\gls{}` in your document. It may contain diacritical marks. For example, you write “The plant is `\gls{māṃsī}`” and your out put PDF will

print “The plant is spikenard”. The macro `\gls` has looked up “māṃsī” in `plants.bib` and replaced it with the name “spikenard”. At the same time, the entry “spikenard” is written to the glossary at the end of your document, giving the name “māṃsī” and then the contents of the description field from `plants.bib`.

14.1.1 Singular, plural, capitalized

The command `\glspl{}` produces the plural (“spikenards”). The command `\Gls{}` capitalizes the output (“Spikenard”). `\Glspl{}` ... (“Spikenards”). If the plural isn’t composed with suffix *s*, you can add a field “plural = ” to the `plants.bib` database giving the plural form. (with `plural=mongeese`, `\Glspl{nakula}` prints “Mongeese”).

The glossaries at the end of your document are produced by the commands

- `\printunsrtglossary[type=plants]`
- `\printunsrtglossary[type=animals]`

Load `glossaries-extra`

```
432 \usepackage[record={only}, % see bib2gls manual, option summary
433 nostyles, % don't load things you don't need
434 style=bookindex, % load this style
435 stylemods=bookindex, % load the updates for this style
436 postpunc={\,: \ }, % after description, before page numbers
437 automake, % run bib2gls automatically; bib2gls manual
438 section]{glossaries-extra}
```

Define two glossaries Give names to the database types and to the default headings that will print when the glossaries are printed. Filename extensions etc. are handled silently.

```
439 \newglossary*{plants}{Flora}
440 \newglossary*{animals}{Fauna}
```

15 Format of the glossary entries

This controls the format of the text printed in the glossaries.
See `glossaries-extra.pdf` manual, section 8.7.1, p.443

`\glstrbookindexname`

```

441 \renewcommand*\glsxtrbookindexname}[1]{%
442   \glossentryname{#1}%
443   \space (\emph{\the\glslabeltok{#1}})%
444   \ifglshasdesc{#1}{\space \glossentrydesc{#1}\glspostdescription}{}%
445 }

```

Get rid of that pesky pre-comma. (glossaries-extra.pdf manual, section 8.7.1, p.446):

```

446 \renewcommand*\glsxtrbookindexprelocation[1]{\empty }

```

Glossary preamble Tell the reader that a colon (postpunc above) is what separates the glossary text from the page numbers. It can be a bit visually confusing. (glossaries-extra.pdf manual, section 8.7.1, p.443):

```

447 %\renewcommand{\glossaryname}{Materia Medica} % can do that later
448 \setglossarypreamble{\emph{\footnotesize
449   Numbers after the final colon refer to
450   pages in this book.}\bigskip}

```

16 Load up the databases

Instructions to bib2gls, telling it the location of the databases and what type of data is in each.

The type= parameter tells bib2gls what kind of data is in this database. So you can use the same \gls{} command whether you are referring to a plant or an animal. bib2gls will look through both databases and send the plant identities to the plants glossary and the animals to the animals glossary.

I don't understand why the field-aliases parameter is necessary, but it seems to be.

16.1 Plants

\GlsXtrLoadResources

```

451 \GlsXtrLoadResources[
452 src={~/Dropbox/localtexmf/bibtex/bib/plants},
453 type=plants,
454 %selection=all, % select this if you want all the contents of the database
455 field-aliases={identifier=citationkey},
456 sort={en-GB},
457 ]

```

16.2 Animals

```
458 \GlsXtrLoadResources[  
459 src={~/Dropbox/localtexmf/bibtex/bib/animals},  
460 type=animals,  
461 %selection=all, % select this if you want all the contents of the database  
462 field-aliases={identifier=citationkey},  
463 sort={en-GB},  
464 ]
```

17 Print the glossaries

As mentioned above, produce the actual glossaries with

- `\printunsrtglossary[type=plants]`
- `\printunsrtglossary[type=animals]`

at the end of your document.

That's all folks!

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