

bookdb.bst — A Personal Book Catalogue

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1 Introduction

For many years I have been collecting books. They are located in five rooms, as well as two bookcases in my printing and binding workshop. But recently I found that I was buying books that I already had. I decided that the best way to save money was to catalogue all the books that I owned and where they were kept.

I searched on the web for free database programs that would be appropriate. There were only a few that would run under Linux, which is the operating system I am most comfortable with. Of those, some I could not install, and the one that I could I couldn't get to work for me.

I contacted several booksellers that I dealt with and asked them what they used for cataloguing their stock. They all replied but most used propriety and expensive software that included things like preparing invoices that were irrelevant as far as I was concerned. The two responses that grabbed my attention were 'use a card index' (but I needed space for books, not card indexes) and 'try BibTeX', which immediately appealed as I had used it for many years; why I hadn't thought of it myself I'll never know.

2 Usage

The standard BibTeX entries did not meet my needs so I looked at `biblatex` [3] but its entries also didn't match my requirements so I decided to tweak BibTeX. To that end I used Patrick Daly's `makebst` program [1] for generating a `*.bst` file that went somewhat towards meeting my needs. This required some hand-coded additions later; I read the articles by Oren Patashnik [5], the creator of BibTeX, and Nicolas Markey [4] which helped me on my way. In the end I had a BibTeX file called `bookdb.bst` that included all the regular entries but a greatly expanded `book` entry, as follows:

<code>book</code>	A book with a publisher <i>Required:</i> <code>author</code> or <code>editor</code> , <code>title</code> , <code>publisher</code> , <code>year</code> <i>Optional:</i> <code>volume</code> or <code>number</code> , <code>series</code> , <code>address</code> , <code>edition</code> , <code>month</code> , <code>note</code> , <code>collator</code> , <code>foreword</code> , <code>preface</code> , <code>introduction</code> , <code>volumes</code> , <code>pages</code> , <code>illustrations</code> , <code>binding</code> , <code>size</code> , <code>condition</code> , <code>copy</code> , <code>location</code> , <code>category</code> , <code>value</code>
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And also I created a new entry called `heading`, as follows:

<code>heading</code>	A heading in the bibliography <i>Required:</i> <code>key</code> <i>Optional:</i> <code>note</code>
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The additional fields in the `book` entry are:

- `binding`: Information about the book's binding. Output as:
Binding: 'binding.'
- `category`: The general theme of the book. Output as:
Category: '**category**.'
- `collator`: The name(s) of those who collated the book contents. Output as:
'collator' (collator(s))
- `condition`: The book's condition. Output as:
Condition: 'condition.'

- copy:** For a limited edition, the particular copy. Output as:
Copy: ‘copy.’
- foreword:** The name(s) of the author(s) of the Foreword, if not written by the author(s) of the main text. Output as:
foreword by ‘foreword’
- illustrations:**
Information about the number and kind of any illustrations and possibly who created them.
Output as:
Illustrations: ‘illustrations.’
- introduction:**
The name(s) of the author(s) of the book’s Introduction, if not written by the author(s) of the main text. Output as:
introduction by ‘introduction’
- location:** Where the book is located. Output as:
Location: ‘location.’
- pages:** The total number of pages. Output as:
‘pages’ pp.,
- preface:** The name(s) of the author(s) of the Preface, if not written by the author(s) of the main text. Output as:
preface by ‘preface’
- size:** The book’s physical dimensions. Output as:
Size: ‘size.’
- value:** The book’s value. Output as:
Value: ‘**value**.’
- volumes:** The number of volumes. Output as:
Volumes: ‘volumes.’

I use the **heading** entry for putting a heading or division marker into a bibliography. The **key** is required so that the **heading** is sorted into the correct position in the bibliography (normally sorting is based on the author or editor). The contents of the **note** form the printed heading. For instance if you wanted a heading before each alphabetical group of authors you could do something like:

```
@heading{A1,
  key = {A1},
  note = {\ahead{AAAAAAAAA...}}
}
@heading{B1,
  key = {B1},
  note = {\ahead{BBBBBBBBB...}}
}
etc
```

where `\ahead` might be defined as:

```
\providecommand{\ahead}[1]{%
  \textbf{\large #1}}
```

To help clarify matters Figure 1 shows a possible entry in a `*.bib` file. The output after processing in a document using `bookdb.bst` is illustrated in Figure 2.

```

@book{ABOOK,
  author = {A. N. Author and A. Nother},
  title = {A Book Entry},
  editor = {Smith and Jones},
  collator = {Jane and Tim},
  translator = {Jo and Mary},
  foreword = {Alpha},
  preface = {Zoe},
  introduction = {Bloggs and Friend},
  volume = 7,
  publisher = {Herries Press},
  year = 2020,
  pages = {xii + 278 + vi},
  edition = {Third},
  isbn = {0-201-36299-8},
  volumes = 9,
  illustrations = {11 wood engravings},
  binding = {full red leather},
  size = {11 by 17 inches},
  note = {This is a note},
  condition = {Hot off the press},
  copy = {23 of 125},
  location = {my study},
  category = {private press},
  value = {\$270}
}

```

Figure 1: An example entry for bookdb processing

A. N. Author and A. Nother. *A Book Entry*, Smith and Jones (eds.), Jane and Tim (collators), Jo and Mary (translators), foreword by Alpha, preface by Zoe, introduction by Bloggs and Friend, volume 7 (Herries Press, 2020), xii + 278 + vi pp., third edition. ISBN 0-201-36299-8. Volumes: 9. Illustrations: 11 wood engravings. Binding: full red leather. Size: 11 by 17 inches. This is a note. Condition: Hot off the press. Copy: 23 of 125. Location: my study. Category: **private press**. Value: **\$270**.

Figure 2: The example's output

As an example this is a file that I use for printing a catalogue of my books, where the book details are in file `mybooks.bib`. Note that using `bookdb` requires the use of the `natbib` package [2].

```
% books.tex a catalogue of my books
\documentclass[11pt,a4paper]{memoir}
\usepackage[T1]{fontenc}
\usepackage{natbib}
\pagestyle{empty}
\begin{document}
\nocite{*}
\bibliographystyle{bookdb}
\bibliography{mybooks}
\end{document}
```

3 My book database

The `*.bib` for my book catalogue looks somewhat like this:

```
%%% mybooks.bib 2015/04/22

%%% for formatting headings
@preamble{ "\providecommand{\ahead}[1]{%
  \textbf{\large #1}}" }

%%% publishers
@string{CUP =
  "Cambridge University Press"}
% etc
%%% categories
@string{science =
  "science, mathematics, computers"}
% etc

@heading{A1,
  key = {A},
  note = {\ahead{AAAAAAAAAAAAA...}}
}

@book{A1KEY,
author = {First A. Author},
% etc
}

@book{A2KEY,
author = {Second A. Author},
% etc
}

% etc
```

I used the BibTeX `@preamble` command to provide a definition of the `\ahead` macro. This, if required, can be overridden by an existing definition in the document used to print the bibliography.

I added various `@string` commands to provide shorthands for many of the fields in the `.bib` file, such as publisher, location, category, that would have the same value. This meant that I could have a shortened field entry that looked like:

```
publisher = CUP,
```

instead of:

```
publisher = {Cambridge University Press},
```

4 Infelicities

BibTeX uses a stack-based language which I find hard to understand.

My basic approach was to take an existing `*.bst` file, try and see what it did, then copy and modify what seemed relevant to my needs.

I did have a couple of infelicities that I did not manage to resolve.

The first was that no matter what I tried I could not stop the `heading` from outputting its `key`, so it should be made as short and unobtrusive as possible.

The second was that I couldn't stop the warning message issued by BibTeX if both an `author` and `editor` were supplied although the output was printed including both.

In spite of these, if you are a collector then you may want to consider tweaking a `*.bst` file to meet your particular needs.

References

- [1] Patrick W. Daly. Customizing bibliographic style files, August 2003. <http://mirror.ctan.org/macros/latex/contrib/custom-bib/makebst.pdf>.
- [2] Patrick W. Daly. Natural sciences citations and references, September 2010. <http://mirror.ctan.org/macros/latex/contrib/natbib/natbib.pdf>.
- [3] Philipp Lehman. The biblatex package, July 2009. <http://mirror.ctan.org/macros/latex/contrib/biblatex/doc/biblatex.pdf>.
- [4] Nicolas Markey. Tame the beast, October 2009. http://mirror.ctan.org/info/bibtex/tamethebeast/ttb_en.pdf.
- [5] Oren Patashnik. Designing bibtex styles, February 1988. <http://mirror.ctan.org/biblio/bibtex/base/btxhak.pdf>.