



bibcop: L^AT_EX Package for Style Checking of .bib Files*

Yegor Bugayenko
yegor256@gmail.com

2022-12-12, 0.0.2

NB! You must run T_EX processor with `--shell-escape` option and you must have [Perl](#) installed. This package doesn't work on Windows.

1 Introduction

This package scans your .bib files for style errors and emits warning messages if any issues are found (make sure you use it before all other bibliography related packages):

```
\documentclass{article}
\usepackage{bibcop}
\begin{document}
\bibliographystyle{plain}
\bibliography{main}
\end{document}
```

You may see warnings in the T_EXlog. Fix the issues in the main.bib file and the warnings will disappear.

If you use the .sty file (without installing it into the T_EX tree), don't forget to also copy the bibcop.pl file — it is the Perl script that does all the work of checking your .bib files. The .sty is just a simple wrapper around it.

Make sure `\usepackage{bibcop}` stays before all other `\usepackage` commands, otherwise you won't see any warnings from bibcop.

2 The Rules

This is a more or less complete list of rules we enforce on a .bib file:

types Only @article, @book, @inproceedings, and @misc types of bib items are allowed. Everything else, like @manual, @phdthesis, and many others are simply prohibited. The mentioned four should be enough for everything.

*The sources are in GitHub at [yegor256/bibcop](https://github.com/yegor256/bibcop)

keys There are pretty limited lists of allowed keys for each type of bib item. The keys that are not in the list are prohibited to use.

doi Every bib item must have the doi key, which is a unique [Digital Object Identifier](#) of the material that you reference. It seems to be a good practice, in order to avoid ambiguity, to always mention the DOI.

caps In title, booktitle, and journal keys, all major words must be capitalized, as it is [recommended by APA](#):

```
title = {A Preliminary Architecture for a Basic Data-Flow Processor}
```

Here, the leading “A” is capital because it opens the title. The word “for” and the article “a” are minor words, that’s why they are in lower case. Both parts of the composite word “Data-Flow” are capitalized.

author The author must contain a list of authors separated by “and”. Each author must have two parts separated by a comma. The first part is the last name of the author, the second part is a list of their first names separated by a space, for example:

```
author = {Knuth, Donald E. and Duane, Bibby}
```

When the list of authors is too long, it’s possible to say “and others”:

```
author = {Knuth, Donald E. and others}
```

When first names are shortened to a single letter, it has to have a tailing dot.

shorts It is not allowed to shorten any words, for example this is illegal:

```
journal = {J. Log. Comput.}
```

This must be replaced with the following:

```
journal = {Journal of Logic and Computation}
```

brackets The title, booktitle, and journal must be wrapped with double brackets, for example:

```
title = {{A Survey of Symbolic Execution Techniques}}
```

This is necessary in order to prevent down-casing of capitalized words, which is done by some bibliography styles.

year It is not allowed to mention the year inside the title of a conference or a journal, for example, this would be illegal:

```
booktitle = {{1994 IEEE International Conference on Computer Languages}},
```

The year should only be mentioned in the year key, nowhere else. In the year key only numbers are allowed:

```
year = {1994},
```

month The month may contain only a number:

```
month = {12},
```

volume The volume may contain only a number:

```
volume = {32},
```

pages The pages may contain either a number or two numbers separated by a double dash:

```
pages = {145--163},
```

proceedings The booktitle in the @inproceedings bib item must always start with “Proceedings of the”, as in this example:

```
booktitle = {{Proceedings of the International
Conference on Computer Languages}},
```

3 Implementation

First, we include a few packages. We need [iexec](#) for executing Perl scripts:

```
1 \RequirePackage{iexec}
```

bibcop.pl Then, we copy the Perl script using \VerbatimCopy from [verbatimcopy](#):

```
2 \RequirePackage{verbatimcopy}
3 \VerbatimCopy{bibcop.pl}{bibcop.tmp.pl}
4 \message{bibcop: File with Perl script 'bibcop.pl' copied^^J}%
```

\bibliography Then, we re-define the \bibliography command:

```
5 \makeatletter
6 \ifdefined\bibliography\else\gdef\bibliography#1{}\fi
7 \let\bibcop@oldbibliography\bibliography
8 \renewcommand\bibliography[1]{%
9   \iexec{perl "./bibcop.tmp.pl" --latex '#1.bib'}%
10  \bibcop@oldbibliography{#1}%
11 }
12 \makeatother
```

\addbibresource Then, we re-define the \addbibresource command:

```
13 \makeatletter
14 \ifdefined\addbibresource\else\gdef\addbibresource#1{}\fi
15 \let\bibcop@oldaddbibresource\addbibresource
16 \renewcommand\addbibresource[1]{%
17   \iexec{perl "./bibcop.tmp.pl" --latex '#1'}%
18   \bibcop@oldaddbibresource{#1}%
19 }
20 \makeatother
```

Change History

0.0.1	0.0.2
General: First draft. 3	General: Documentation extended, more rules added. 3

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.

A		G		\message 4	
\addbibresource	<u>13</u>	\gdef	6, 14		
B		I		R	
\bibcop.pl	<u>2</u>	\iexec	9, 17	\renewcommand	8, 16
\bibcop@oldaddbibresource	15, 18	\ifdefined	6, 14	\RequirePackage . . .	1, 2
\bibcop@oldbibliography	7, 10	M		V	
\bibliography	<u>5</u>	\makeatletter	5, 13	\VerbatimCopy	3
		\makeatother	12, 20		