bibcop: LaTeX Package
for Style Checking of `.bib` Files*

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NB! You must run TEX 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 TEX log — fix the issues in the `main.bib` file and the warnings will disappear.

If you use the `.sty` file (without installing it into the TEX 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 right after `\usepackage{biblatex}` (if you use it), 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.

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*The sources are in GitHub at 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. I would also recommend to use [doi](#) package, in order to make all "`doi`" fields turned into hyper links.

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. Sometimes you need to violate this rule and use custom capitalization, as it is done by the author of the paper. In order to do this, wrap the words with custom capitalization in curled brackets, for example:

```
title = {Structured Programming {with} Go {To} Statements}
```

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},
```

number	The `number` may contain only a number:

```
number = {132},
```

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
7 \let\bibcop@oldbibliography\bibliography
8 \renewcommand\bibliography[1]{%
9   \iexec{perl "./bibcop.tmp.pl" --latex '#1.bib'}%
10    \message{bibcop: style checking finished^^J}%
11  \bibcop@oldbibliography{#1}%
12 }
13 \fi
14 \makeatother
```

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

```
15 \makeatletter
16 \ifdefined\addbibresource
17 \let\bibcop@oldaddbibresource\addbibresource
18 \renewcommand\addbibresource[1]{%
19   \iexec{perl "./bibcop.tmp.pl" --latex '#1'}%
20    \message{bibcop: style checking finished^^J}%
21  \bibcop@oldaddbibresource{#1}%
22 }
23 \fi
24 \makeatother
```

Change History

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