BibTeX Essentials

These are the essential steps for using *BibTeX*.

- One creates a file of bibliography references and gives it a name with the extension `.bib`; let's suppose for future reference you choose *myrefs*`.bib`. The format for this file, is straightforward. See `uwaxampl.bib` for an example that shows how to enter books, journal articles and just about every other type of reference. In fact, read ahead ... you may not need to create a file *myrefs*.bib at all!!
- In place of a **thebibliography** environment in your *LaTeX* source file (which for future reference we'll suppose is called *mydoc*`.tex`) one has two lines:

  `\bibliographystyle{`*style*`}`
  `\bibliography{`*myrefs*`}`

  where *style* is `uwa` (the author's favourite) or one of the many other `.bst` files on our system (but *without* the `.bst` extension), and *myrefs* is a (comma-separated list of) `.bib` file(s) (but *without* the `.bib` extension(s)) that either exist on our system, e.g.

  `mrabbrev`, `algebra`, `graphs`, `groups`

  or you can generate it or them yourself. If you generate your own `.bib` file, be sure to choose a name different to one on the system. If all your references happen to be in one of the files on the system then there's no work to do! ... you only have to remember to `\cite` using the **key** given as first entry of the appropriate bibitem in the appropriate `.bib` file. When you need to generate your own `.bib` file entries it is *strongly* recommended that you *check* that entry against (or *get it from*) the AMS's MathSciNet Search, e.g.
  - To search for an article by Greg Gamble, say, type:

    `Gamble, G*`

    in the `Author` field and hit the `Start Search` button.
  - Then follow the link to the unique number identifying the article you want. (It appears to the left of the author(s)), e.g. 95i:05031.
  - This gives a page with the line:

    `Retrieve` this document in `DVI` format.

    Change `DVI` to `BibTeX` by clicking and dragging and then hit the `Retrieve` button. Now you have a correctly formatted bibitem without having to compose it yourself!!
- Now, so long as there are appropriate `\cite` and/or `\nocite` commands in *mydoc*`.tex`, to generate a `.dvi` version of *mydoc*`.tex` complete with bibliography one types, in order, the following *UNIX* commands

  `latex` *mydoc*
  `bibtex` *mydoc*
  `latex` *mydoc*
  `latex` *mydoc*

> Yes ... in all, you have to `latex` *three*[*] times.

The above will get you started, and explains *exactly* what you will do for the first few[**] papers (or whatever) you do i.e. before you want to know some extra features of *BibTeX*.

Now look at an example to clarify anything that is not explained well enough above.

To check out the nuts and bolts of `.bib` file entries see `btxdoc.dvi`. The most important thing you will learn there is that in the `author` field separate multiple authors with the keyword **and** (do **not** use a comma).

As it saves you from having to write your own, you should get to know about the `.bib` files on our system. In particular, check out `algebra.bib` (by Eamonn O'Brien) and `groups.bib` (by Greg Gamble). If you know about other `.bib` files that you would like to see included on the system send Greg Gamble an email.

You may also like to look at *BibTeX* documentation in the *UNIX* `man` format.

Finally, the FAQ has an answer to the following question:

> I have used *BibTeX* to generated my bibliography and my publisher accepts *LaTeX* files, do I need to send my `.bib` database file?

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[*] The first `latex` *mydoc* command generates `.aux` file(s) that *BibTeX* needs. Then `bibtex` *mydoc* generates *mydoc*`.bbl` which is a file containing the **thebibliography** environment that you would have otherwise generated by hand.

On the second `latex` *mydoc* pass *LaTeX* sees *mydoc*`.bbl` and so has a chance to incorporate the citation keys (for your `\cites` and `\nocites`) into the `.aux` file(s) that `latex` generates.

On the third `latex` *mydoc* pass *LaTeX* replaces your `\cites` with things other than question marks.

If after the initial generation of *mydoc*`.bbl` you add no new `\cites` or `\nocites` to *mydoc*`.tex` (or other `.tex` files `\inputed` or `\included` by it) and don't change *myrefs*`.bib` then you will not have to regenerate *mydoc*`.bbl` again, i.e. most future changes to your *LaTeX* document will only require you to `latex` it at most twice (you won't have to go through the whole `latex latex bibtex latex` sequence *every* time).

[**] In fact, probably a lot more than a few!