Writing references by bibtex

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BibTeX is both a program and a file format for managing your literature references automatically.

1 Idea

- You collect a database of bibtex records (*bibtex entries*) for all sources you may refer in your document. It can contain also extra entries, because the bibtex selects only those references which are actually referred.

- The bibtex entries look like the following:

```
@article{Gettys90,
        author = "J. Gettys and P. Karlton and S. McGregor",
        title = "The X Window System, Version 11",
        journal = "Software Practice and Experience",
        volume = "20",
        number = "2",
        year = "1990",
}
```

- Each bibtex entry should have a unique label (above `Gettys90`). The labels are referred in the text normally by `\cite{label}`.

- The resulting database is a common text file, and only the reocrds have a special format. The file should be called <file name>**.bib**. For example, `dbase.bib`.

- You include the database into your document by commands

```
\bibliographystyle{alpha}
\bibliography{dbase}
```

(The first command defines just the style.)

- When you compile the latex document, you have to run `bibtex` too.

```
latex document.tex
bibtex document
latex document
```

The first command is a normal latex compilation. Command `bibtex` generates a file called `document.bbl`. It is similar to a latex bibliography list, but it contains only those sources which are actually referred in your document. The last command includes the references into your document and the resulting `document.dvi` file is ready.

2 Bibtex entries

Often you can found the bibtex entries ready typed in the net. However, sometimes they are erroneous and you should be able to check that they are correct. Sometimes you have to write the bibtex entries yourself.

2.1 Searching bibtex entries

- Bibtex entries can be find in many digital libraries (e.g. ACM, citeseer) with the article.

- DBLP Computer Science bibliography (`http://www.informatik.uni-trier.de/~ley/db/index.html`) contains a large collection of bibtex entries!

- You can make a google search using the authors, paper name and word "bibtex" as keywords.

2.2 Writing bibtex entries

2.2.1 Type

When you write the bibtex entries, you should first decide what type of source you have. The most common types are:

- a journal paper → @article

- a conference paper → @inproceedings

- a book → @book

Other types:

- a chapter or a section in a book by one author → @inbook

- a chapter in a book (a collection) which is written by several authors → @incollection

- a master thesis → @mastersthesis

- a dosctoral thesis → @phdthesis

- a technical report → @techreport

- other: see `http://www.ecst.csuchico.edu/~jacobsd/bib/formats/bibtex.html`

2.2.2 Fields

When the type is fixed, you should define all required fields. The most often needed fields are:

- author

- title (the title of a paper or book)

- journal (the journal name)

- booktitle (if the paper belongs to a book or collection, and already has a title of its own. Especially, the name of the conference proceedings.)

- year (the publication year)

- pages

- volume (in journals, also if a book has several volumes, and the volumes in LNCS series)

- number (the issue number of a journal or the number of a technical report)

- editor (if a book or a collection has editors)

- publisher (the publisher's name)

- address (the publisher's address, not necessary, or the address of an institution. Notice. just the city + country.)

- institution (the sponsoring institution of a technical report, often a department + university)

- Other fields: see standard fields in `http://www.ecst.csuchico.edu/~jacobsd/bib/formats/bibtex.html`

2.2.3   Notes:

- By default, Bibtex capitalizes only the first letter of the first word in the titles. If you need other capital letters, you have two choices:

  1. Put the letter or letters to be capitalized into braces, e.g.

     ```
     title=''Using {B}ayesian student models in intelligent
     tutoring systems''
     ```

  2. Put the whole field value into braces. Now you don't need the quotation marks at all:

     ```
     title={Using Bayesian student models in intelligent
     tutoring systems}
     ```

  Notice that journal and book names are usually written such that the first letter of each word is capitalized!

- Remember all the commas and quotation marks! Otherwise bibtex cannot parse the entry. The most common error is a missing quotation mark or a comma in the end of field.

- In DBLP the entry is often in two separate records: one for the whole proceeding and one for the article. The article entry does not contain all fields alone, but it refers to the collection by field `crossref` and inherits all fields from it. → copy both entries into your database or add the missing fields to the article entry.

3   Exercise

Search or write the bibtex entries for the following literature sources. Test that the bibtex can generate all references! (Now it is important that you also refer to your sources in the text.)

- Cover and Van Campenhout: On the possible orderings in the measurement selection problem.

- "T. Winters and T. Payne: What do students know? An outcomes-based assessment system.

- Dash and Cooper: Model Averaging for Prediction with Discrete Bayesian Networks.

- Aggarwal et al.: On the surprising behavior of distance metrics in high dimensional space, LNCS 1973.

- A.K. Dey and G.D. Abowd: Towards a better understanding of context and context-awareness.

- B. du Boulay: Can We Learn from ITSs?