Bibliography with the BIBTEX Program

The **thebibliography** environment discussed in Hour 14 cannot differentiate the types of references, i.e., whether an article or a book. Moreover, even if not cited, all the references inserted in the environment are printed in the output of a document. It has a drawback, particularly when references are to be included from a separate database file (refer Table 14.2 on page 139). A separate bibliographic database file is usually prepared so that it can be used in more than one document. However, all the references, stored in a database file, may not be required in a particular document. In that case, the environment fails to print only the selective references from such a database file.

The above drawbacks of the **thebibliography** environment can be overcome in the BIBTEX program, which prints a reference only if it is cited somewhere in the document. Moreover, the BIBTEX program follows certain structures for different types of references. It is stated in §14.1 that the **thebibliography** environment processes the entry of a reference without any formatting provision, which is to be set manually by a user. In fact, the BIBTEX program also internally prepares the list of references in the **thebibliography** environment only, but automatically follows some predefined structures according to the chosen bibliography style discussed in §15.2 on page 146.

15.1 Preparation of BIBTEX Compatible Reference Database

The entry of a reference in the BIBTEX program consists of three mandatory parts – (1) type of the reference, (2) a user-defined citation key which can be used for citing the reference, and (3) detail of the reference.

As shown in Table 15.1 on the next page, there are around 14 types of defined references, which are **article** (articles in journals or magazines), **book** (books), **booklet** (booklet type references), **inbook** (chapters or parts of books), **incollection** (parts of a book with separate titles), **inproceedings** (articles in conference proceedings), **conference** (articles in conference proceedings), **manual** (technical documentations), **mastersthesis** (Master degree theses), **phdthesis** (Ph.D theses),

Table 15.1 Types and fields of references under the BIBTEX program

	article	book	booklet	inbook	incollection	inproceedings, conference	manual	mastersthesis, phdthesis	misc	proceedings	techreport	unpublished
address	×	O	O	O	O	O	O	O	×	O	O	×
author	M	M_1	O	M_1	M	M	O	M	O	×	M	M
booktitle	×	×	×	×	M	M	×	×	×	×	×	×
chapter	×	×	×	M_2	O	×	×	×	×	×	×	×
edition	×	O	×	O	O	×	O	×	×	×	×	×
editor	×	M_1	×	M_1	O	O	×	×	×	O	×	×
howpublished	×	×	O	×	×	×	×	×	O	×	×	×
institution	×	×	×	×	×	×	×	×	×	×	M	×
journal	M	×	×	×	×	×	×	×	×	×	×	×
month	O	O	O	O	O	O	O	O	O	O	O	O
note	O	O	O	O	O	O	O	O	O	O	O	M
number	O	O_1	×	O_1	O_1	O_1	×	×	×	O_1	O	×
organization	×	×	×	×	×	O	O	×	×	O	×	×
pages	O	×	×	M_2	O	O	×	×	×	×	×	×
publisher	×	M	×	M	M	O	×	×	×	O	×	×
school	×	×	×	×	×	×	×	M	×	×	×	×
series	×	O	×	O	O	O	×	×	×	O	×	×
title	M	M	M	M	M	M	M	M	O	M	M	M
type	×	×	×	O	O	×	×	O	×	×	O	×
volume	O	O_1	×	O_1	O_1	O_1	×	×	×	O_1	×	×
year	M	M	O	M	M	M	O	M	O	M	M	O

M → mandatory field M_1 → one of them is mandatory M_2 → either one or both are mandatory
O → optional field O_1 → one of them (optional)   × → not required

misc (uncommon references), **proceedings** (proceedings of an event), **techreport** (technical reports or working papers), and **unpublished** (unpublished references). The reference-type commands are preceded by **@** and they take a mandatory argument, e.g., **@article{**ckey,rf1,rf2,...**}**, where ckey is the citation key of a reference, and rf1, rf2, etc., are some mandatory and optional fields detailing the reference.

As shown in Table 15.1, a reference-type command takes some fields (out of around 21 commonly used reference fields), which are **address**, **author**, **booktitle**, **chapter**, **edition**, **editor**, **howpublished**, **institution**, **journal**, **month**, **note**, **number**, **organization**, **pages**, **publisher**, **school**, **series**, **title**, **type**, **volume**, and **year**. These fields can be entered in any order, which will be arranged automatically according to the chosen bibliography style as stated in §15.2 on page 146. There is no harm if an extra field is inserted or an acceptable field is left blank. A redundant field or a field with no data is automatically skipped by the BIBTEX program[1].

Data of all the fields of a reference-type command are processed in text-mode. Hence, accented and special characters are to be put in proper way,

---

[1] A redundant or empty field, as well as listing of non-cited documents, is automatically skipped by BIBTEX.

e.g., 'Jos\'e' for producing 'José' or 'Hungerl**$\ddot{\mathrm{**a}}**$**nder' for producing 'Hungerländer'. Data of a field can be inserted either in a pair of quotes or curly braces, e.g., **title="**A Practical Guide to **\LaTeX"** or **title={**A Practical Guide to **\LaTeX}**. Further processes for entering data in the argument of a reference-type command are explained below:

▷ *Citation key*: There is no format for a citation key, it can be a combination of any number of alphabets and numerals as well as some signs (like '$+$', '$-$', and ':') without any gap between two characters, e.g., Even-etal-1976 or Even+:1976.

▷ **address**: It could be the city or country of a publisher, venue of a conference, address of an institution or school, or URL of a webpage. A URL may be inserted through the **\url{}** command defined in the **url** package.

▷ **author**: The exact printing format of authors is decided by the chosen bibliography style as discussed in §15.2 on page 146 and §15.3 on page 147. In the reference database file, however, the names of all the authors may be inserted consistently or exactly as they appeared in the original individual documents to be referred. BIBTEX processes the name of an author in two parts only, the given name (first name) and the surname (family name). Hence, the following points may be noted:

1. In the case of all words capitalized, the last word is treated as the surname and rest as the given name, e.g., in 'Krishna Prasad Rama Murthy', 'Murthy' will be treated as the surname and 'Krishna Prasad Rama' as the given name.

2. In the presence of any noncapitalized word, however, all the remaining words starting from the first noncapitalized one are treated as the surname and rest as the first name, e.g., in 'Robert von der Smith', 'von der Smith' will be treated as the surname and 'Robert' as the given name. Similarly, the entire name 'von der Smith Robert' will be treated as the surname without a given name.

3. If a surname contains multiple words, those may be inserted either in curly braces or at the starting with a comma, e.g., 'Pedro Jose **{**Steiner Neto**}**' or 'Steiner Neto, Pedro Jose' so as to treat 'Steiner Neto' as the surname and 'Pedro Jose' as the given name.

4. Some names contain words, like 'Jr.' or 'Junior', at the end preceded by comma, e.g., 'John Morton, Jr.' or 'Osiris Detro, Junior'. Such names also may be produced as having multi-word surnames stated above, e.g., 'Osiris **{**Detro, Junior**}**' or 'Detro, Junior, Osiris' to represent 'Osiris Detro, Junior'.

5. Some references may not contain name of any person, but the name of a company or an agency, e.g., 'John Wiley & Sons, Inc.' or 'Brahmaputra Pvt. Ltd.'. Such names may be produced by inserting them in curly braces, e.g., '**{**John Wiley ****& Sons, Inc.**}**' or '**{**Brahmaputra Pvt. Ltd.**}**'.

6. In the case of a multi-author reference, the names of every two authors are to be separated by the word 'and' without enclosing it in curly braces in any case stated above, e.g., two authors as 'Dilip Datta and Pankaj

Kumar Nath', three authors as 'Dilip Datta and Pankaj Kumar Nath and Saptarshi Dutta', and so on. Note that the names of two authors should not be separated by a comma (as generally done). In that case, instead of two authors, they will be treated as a single author with the first author as the surname and the second author as the given name, e.g., 'Dilip Datta, Pankaj Kumar Nath' will be treated as a single author with 'Dilip Datta' as the surname and 'Pankaj Kumar Nath' as the given name.

7. If a long list is to be truncated with the name(s) of the first or few author(s), 'and others', may be added after that(those) name(s), which will be converted to 'et al.'.

▷ **booktitle**: Title of the book or proceedings, in which the referred article was published.

▷ **chapter**: Serial number of the referred unit, like chapter, section, or part of a book.

▷ **edition**: Edition of a book or a manual, e.g., 'Second' or '2nd'.

▷ **editor**: Names of the editors, to be inserted in the same way as **author**.

▷ **howpublished**: Type of publication in the case of a manual or miscellaneous reference.

▷ **institution**: Name of the Institute, which published the referred report.

▷ **journal**: Name of the journal, in which the referred article was published.

▷ **month**: Month of publication, e.g., 'Jan.' or 'January'.

▷ **note**: A short note on the referred document, e.g., the abstract of an article.

▷ **number**: Serial number of the journal, magazine, proceedings, or technical report.

▷ **organization**: Name of the organization, which organized or sponsored the event.

▷ **pages** : Serial numbers of the referred pages, e.g., a single page as '70', a range of pages as '24**--**35', selective nonconsecutive pages as '18,25,32', or not very clear pages as '57+'.

▷ **publisher**: Name of the publisher.

▷ **school**: Name of the Institute, in which the referred thesis was submitted.

▷ **series**: Name of the series of a book or a proceedings (in addition to the **title** of the referred article), e.g., 'Studies in Computational Intelligence' or 'Lecture Notes in Computer Science'.

▷ **title**: Title of the reference. In **title**, all the intermediate alphabets in the title of a reference are printed in lowercase. In order to protect, intermediate uppercase alphabets of a title, or the entire title, may be put in a separate pair of curly braces, e.g., **title={**A {P}ractical {G}uide to **\LaTeX}**, **title={{**A Practical Guide to **\LaTeX}}**, **title="**A {P}ractical {G}uide to **\LaTeX"**, or **title="{**A Practical Guide to **\LaTeX}"**.

▷ **type**: Type of the reference, e.g., 'Ph.D thesis', or 'Chapter' or 'Section' in the case of a book, and 'Research work' in the case of a Technical report.

▷ **volume**: Volume number of the journal, proceedings, or multi-volume book.

▷ **year**: Year of publication, e.g., 2016.

According to above, an illustrative bibliographic reference database file is shown in Table 15.2. Note that the first entry in the argument of a reference-type

Table 15.2 BIBTEX program compatible bibliographic reference database

```
% mybib2.bib
@article{Datta-Figueira-2013,
  author = {Dilip Datta and Jos\'e Rui Figueira},
  title = {{A real-integer-discrete-coded differential evolution}},
  journal = {Applied Soft Computing},
  volume = {13},
  number = {9},
  pages = {3884--3893},
  year = {2013}
}

@book{Deb-2001,
  author = {Kalyanmoy Deb},
  title = {{Multi-Objective Optimization using Evolutionary Algorithms}},
  publisher = {John Wiley \& Sons Ltd.},
  address = {Chichester, England},
  year = {2001}
}

@inproceedings{Burke-etal-1996,
  author = {Edmund Burke and Dave Elliman and Peter Ford Rupert Weare},
  title = {{Examination Timetabling in British Universities - A Survey}},
  booktitle = {Proceedings of Practice and Theory of Automated Timetabling},
  publisher = {Springer},
  series = {Lecture Notes in Computer Science (LNCS)},
  editor = {Edmund K. Burke and Peter Ross},
  year = {1996},
  volume = {1153},
  pages = {76--90}
}

@mastersthesis{Datta-1998,
  author = {Dilip Datta},
  title = {{Optimal Shape Design System for Plates under Dynamic Loads}},
  school = {Indian Institute of Technology, Delhi},
  month = {December},
  year = {1998},
  note = {Master thesis}
}

@techreport{Colorni-etal-1992,
  author = {Alberto Colorni and Marco Dorigo and Vittorio Maniezzo},
  title = {{A Genetic Algorithm to Solve the Timetable Problem}},
  number = {90-060 revised},
  institution = {Politecnico di Milano, Italy},
  year = {1992}
}
```

command is the mandatory citation key of a reference (e.g., `Datta-Figueira-2013` or `Deb-2001`), followed by the reference-specific mandatory and optional fields detailing the reference (like **author**, **title**, and **year**). In a reference-type command, two fields including the citation key are separated by a comma.

15.2   Standard Bibliographic Styles of LATEX

The formatting of the list of bibliographic references in the BIBTEX program is controlled by an associated bibliographic style. There exist a number of standard and alternative bibliographic styles of LATEX, some of which are shown in Table 15.3.

Table 15.3 Some standard bibliographic styles of LATEX

LATEX style	Function
plain	References are listed in alphabetic order of the surnames (last or family names) of authors, and labeled by Arabic numerals in `[]`, e.g., the first two references of Table 15.2 will be produced as follows: [1] Dilip Datta and José Rui Figueira. A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893, 2013. [2] Kalyanmoy Deb. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001.
unsrt	Same with **plain**, except that the references are listed in order of their citations in the document.
alpha	A reference is labeled by an identifier generated from the surnames of the authors and the year of publication, and the references are listed in alphabetic order of their identifiers, e.g., the first two references of Table 15.2 will be produced as follows: [Deb01] Kalyanmoy Deb. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001. [DF13] Dilip Datta and José Rui Figueira. A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893, 2013.
abbrv	Same with **plain**, except that a reference is made compact by abbreviating the given (or first and middle) names of authors, e.g., the first two references of Table 15.2 will be produced as follows: [1] D. Datta and J. R. Figueira. A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893, 2013. [2] K. Deb. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001.
acm	Same with **plain**, but the surname of an author is printed first in small capital letters, followed by the abbreviated given name, e.g., the first two references of Table 15.2 will be produced as follows: [1] DATTA, D., AND FIGUEIRA, J. R. A real-integer-discrete-coded differential evolution. *Applied Soft Computing 13*, 9 (2013), 3884–3893. [2] DEB, K. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001.
apalike	The surname of an author is printed first, followed by the abbreviated given name, and a reference is labeled by an identifier generated from the surnames of authors and the year of publication, e.g., the first two references of Table 15.2 will be produced as follows: [Datta and Figueira, 2013] Datta, D. and Figueira, J. R. (2013). A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893. [Deb, 2001] Deb, K. (2001). *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England.

The style of bibliography is defined through the **\bibliographystyle{**`astyle`**}** command, where `astyle` is a bibliography style as given in Table 15.3. It is followed

by the **\bibliography{**dbib**}** command, where dbib is the name of the bibliography database file without its .bib extension (multiple database files can also be loaded as **\bibliography{**dbib1,dbib2,...**}**). For example, following are the required commands to load the bibliography database file 'mybib2.bib' of Table 15.2 in **plain** style:

> **\bibliographystyle{plain}**
> **\bibliography{**mybib2**}**

Under all the bibliography styles given in Table 15.3, a reference is cited through the **\cite{**ckey**}** command, where ckey is the citation key of the reference. Multiple references can also be cited through a single **\cite{}** command separating two citation keys by a comma[2], e.g., **\cite{**Datta-1998, Even-etal-1976**}**. Citations are marked in the contents of a document by the identifiers of the cited references, e.g., [1], [2], ..., or [Deb01], [DF13], ..., or [Datta and Figueira, 2013], [Deb, 2001], ..., as shown in Table 15.3.

Only those references, cited in the document, are printed in the bibliographic reference list under the heading 'References'. If a reference is to be printed in the bibliography list without citing it in the document, the **\nocite{}** command may be used somewhere in the document, e.g., **\nocite{**Datta-1998**}** for printing the reference under the citation key 'Datta-1998' without citing it in the document. On the other hand, the **\nocite{*}** command may be used for listing all the references of a database file without citing even a single one.

15.3   Use of the **natbib** Package

It maybe noticed in §15.2 that each reference under the standard LaTeX bibliographic styles is listed and cited with an identifier, like [1], [DF13], or [Deb, 2001]. In many applications, however, it may be preferred to cite a reference in author-year mode, like 'Datta and Figueira (2013)' or '(Deb, 2001)'. In such cases, the **natbib** package may be used, so as to list the references without any identifier and cite them in author-year mode. For this purpose, the **natbib** package provides its own bibliographic styles, such as **plainnat**, **unsrtnat** and **abbrvnat**, which are **natbib**-compatible versions of the standard LaTeX styles **plain**, **unsrt**, and **abbrv**, respectively. The functions of the bibliographic styles, defined in the **natbib** package, are explained in Table 15.4 on the next page.

Note that the **abbrvnat** style lists an author as the abbreviated given name, followed by the surname. Some applications, however, may prefer to print the surname first, followed by the abbreviated given name, as done by the standard LaTeX style **apalike**. For such output, the **apalike** style maybe used under the **natbib** package, in which case the references will be listed as shown in Table 15.3 but without any identifier.

---

[2]Multiple references can be cited through a single **\cite{}** separating two citation keys by a comma.

Table 15.4 Some bibliographic styles defined in the **natbib** package

natbib style	Function
plainnat	References are listed in alphabetic order of the surnames of authors, e.g., the first two references of Table 15.2 will be produced as follows:
	Dilip Datta and José Rui Figueira. A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893, 2013.
	Kalyanmoy Deb. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001.
unsrtnat	Same with **plainnat**, except that the references are listed in order of their citations in the document.
abbrvnat	Same with **plainnat**, except that references are made compact by abbreviating the given names of authors, e.g., the first two references of Table 15.2 will be produced as follows:
	D. Datta and J. R. Figueira. A real-integer-discrete-coded differential evolution. *Applied Soft Computing*, 13(9):3884–3893, 2013.
	K. Deb. *Multi-Objective Optimization using Evolutionary Algorithms*. John Wiley & Sons Ltd., Chichester, England, 2001.

Not only own bibliographic styles, the **natbib** package provides its own citation commands also for marking citations in different formats, such as **\citet{}**, **\citep{}**, **\citeauthor{}**, **\citeyear{}**, **\citeyearpar{}**, **\citealt{}**, and **\citealp{}** (the **\cite{}** command is still applicable, which would be equivalent to **\citet{}**). Upon loading the package with the **round** option as **\usepackage[round]{natbib}**, the behaviors of these citation commands are shown in Table 15.5 with self-explanatory applications. It is to be

Table 15.5 Citation commands provided under the **natbib** package

Command	Function	Type of output
\citet{ddf08}	Truncated author list (i.e., the first surname with et al. for more than two authors) with year in parentheses	Datta et al. (2008)
\citet*{ddf08}	Full author list with year in parentheses	Datta, Deb, and Fonseca (2008)
\citep{ddf08}	Truncated author list and year, both in parentheses	(Datta et al., 2008)
\citep*{ddf08}	Full author list and year, both in parentheses	(Datta, Deb, and Fonseca, 2008)
\citeauthor{ddf08}	Truncated author list without year	Datta et al.
\citeauthor*{ddf08}	Full author list without year	Datta, Deb, and Fonseca
\citeyear{ddf08}	Only year	2008
\citeyearpar{ddf08}	Only year (in parentheses)	(2008)
\citealt{ddf08}	Truncated author list and year	Datta et al. 2008
\citealp{ddf08}	Truncated author list and year, separated by a comma	Datta et al., 2008

mentioned that as in **\cite{}** stated in §15.2, multiple references may be cited through any of the commands of Table 15.4 also, e.g., **\citet{**ddf08,deb01**}** or **\citep{**ddf08,deb01**}**.

The patterns of citation markings under the **natbib** package can be altered by using different options to **\usepackage[]{}**. Some of such options are given in Table 15.6 on the next page. Provision is also there for obtaining combined effect using multiple options, separating two options by a comma, e.g., for obtaining compressed numbered citations in curly braces, the **natbib** package is to be loaded as **\usepackage[curly, numbers, sort&compress]{natbib}**. It is to be mentioned that, if the **numbers** option is used, the references will be listed by numbers.

Table 15.6 Citation patterns under the **natbib** package

	Option	Function (†Default)	Output of **\citet{}, or \citep{}**
Delimiter	**round**	Parentheses	Datta (2013), or (Deb, 2015)
	square	Square brackets†	Datta [2013], or [Deb, 2015]
	curly	Curly braces	Datta {2013}, or {Deb, 2015}
	angle	Angle brackets	Datta <2013>, or <Deb, 2015>
Separator of two citations	**colon**	Semi-colon†	Datta (2013); Deb (2015), or (Datta, 2013; Deb, 2001)
	comma	Comma	Datta (2013), Deb (2015), or (Datta, 2013, Deb, 2001)
Citation mode	**authoryear**	Author and year†	Datta (2013), or (Deb, 2015)
	numbers	Numbered	Datta [1], or [2,3,4,7]
	super	Superscribed	Datta[1], or [2,3,4,7]
Sorting	**sort**	Sorting as per reference list	Datta (2013), Deb (2015), or (Datta, 2013, Deb, 2001)
	sort&compress	Sorting as per reference list and compressing numeric citations	Datta [1], or [2–4,7]
First long	**longnamesfirst**	First citation in starred mode† and rest as instructed by users	Datta, Deb, Fonseca (2008), or (Datta et al., 2008)

15.4 Compiling BIBT_EX based L^AT_EX Input File

If the bibliography is generated through the BIBT_EX program, the compilation of the L^AT_EX file is to be changed from that addressed in §14.3 on page 139. In this case, it is to be compiled by using the following four lines of commands:

```
$ latex myarticle
$ bibtex myarticle
$ latex myarticle
$ latex myarticle
```

where 'myarticle' is the name of the L^AT_EX input file with 'tex' extension. The 'bibtex' command compiles the bibliography file included in myarticle.tex. The last two 'latex' commands link the BIBT_EX generated bibliographic references with L^AT_EX. The above four lines of commands will produce five files, namely myarticle.aux, myarticle.log, myarticle.dvi, myarticle.bbl, and myarticle.blg (§20.4.1 on page 199 discusses in detail). As mentioned in §1.4 on page 4, the 'myarticle.dvi' file can be viewed in a document viewer or can be used to produce a '.ps' or '.pdf' file.

15.5 Editing the **.bbl** File*

As stated at the beginning of this Hour that the BIBT_EX program internally prepares the list of references in the **thebibliography** environment, it is stored in a .bbl file

(refer §15.4). If the BIBTEX generated bibliographic reference list is not satisfactory, the required changes can be made in the `.bbl` file. For this, the following four steps are to be followed:

1. Save the `.bbl` file with another name, e.g., `edbbl.bib`. The change of name is necessary, otherwise the previous `.bbl` file (i.e., the edited `.bbl` file) will be overwritten by the new one if recompiled using the commands stated in §15.4.

2. Make the necessary changes in the `edbbl.bib` file according to the instructions addressed in §14.1 on page 137 for preparing the database under the **thebibliography** environment.

3. In the LATEX input file, replace the **\bibliographystyle{}** and **\bibliography{}** commands by the **\input{**`edbbl.bib`**}** command (note that, as stated in §15.2, the original bibliographic database file is linked in the LATEX input file through **\bibliographystyle{}** and **\bibliography{}**). Some publishers may ask to put the bibliographic references in the LATEX input file itself, instead of putting in a separate file. In that case, instead of the **\input{**`edbbl.bib`**}** command, the contents of the `edbbl.bib` file may simply be copied and pasted in that location.

4. Recompile the LATEX input file as stated in §14.3 on page 140 or §15.4 on the previous page.

15.6   Multiple Bibliographies*

In a document, in which different units (like chapters of a book, or sections of an article) are prepared in separate `.tex` files and then included in a root file using the **\include{}** command (§20.2 on page 192 discusses in detail), unit-wise separate bibliographic reference lists can be produced with the support of the **chapterbib** package. This provision may be required specially in edited books or conference proceedings, which contain units written by different authors. All the bibliographic styles and citation commands discussed above, as well as in Hour 14, are still applicable. Additionally, the following jobs will be required:

1. Load the **chapterbib** package in the preamble.

2. At the end of each unit file, insert the required bibliographic reference database, as follows, either in the **thebibliography** environment as stated in Hour 14 or through the **\bibliographystyle{}** and **\bibliography{}** commands as stated in §15.2.

> 1. **\begingroup**
> 2. **\let\clearpage\relax**
> 3. **\renewcommand{\bibname}{**References**}**
> 4. **\vskip** 5mm
> 5. Either **\begin{thebibliography}{}** … **\end{thebibliography}**
>   or **\bibliographystyle{} \bibliography{}**, as applicable
> 6. **\endgroup**

In order to implement the optional local effects of lines 2–4 (particularly under some document-classes, like **book** or **report**), the commands are grouped by the **\begingroup** and **\endgroup** commands in lines 1 and 6, respectively. The set of commands in line 2 removes intermediate blank pages, if any, and starts the bibliographic reference list on the same page with the contents of the unit. The command in line 3 is to produce the bibliographic list under the heading 'References', while the command in line 4 is to maintain some vertical blank space (manually set) on the top of the heading 'References'. Finally, the mandatory **thebibliography** environment or the set of **\bibliographystyle{}** and **\bibliography{}** commands is to insert the required bibliographic reference database.

3. Compile the files according to §14.3 on page 140 if the reference database is inserted in the **thebibliography** environment, while according to §15.4 if it is produced through BIBTEX. In the case of BIBTEX, each unit file is to be compiled with a separate bibtex command. As an example, consider that two unit files, myunit1.tex and myunit2.tex, are included in the root file mydoc.tex. Then these are to be compiled through the following five lines of commands:

```
$ latex mydoc
$ bibtex myunit1
$ bibtex myunit2
$ latex mydoc
$ latex mydoc
```