

L^AT_EX: Online module 3

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Topics to be covered

- Structure of the document class
- Justification of paragraphs and sections
- Examples

Structure

- Recap that a document class can be of type article, book and report.
- Each document class can be structured in the following manner:
 - 1 Title, author, date
 - 2 Table of contents
 - 3 Chapters and sections
 - 4 Sub sections and sub sub sections
 - 5 Bibliography
- Numbering of chapters and sections are automatically taken care off by \LaTeX
- Chapters and sections can be made unnumbered

contd...

All the following commands should be in the preamble of the document

- To create a title use the command `\title`. Command to create a title page use `\maketitle` and this should be written immediately after the `\begin{document}`
- Command to write authors name: `\author`
- Command to write down the date of the article: `\date`
- Command to write down the todays date of the article: `\date{\today}`

Example

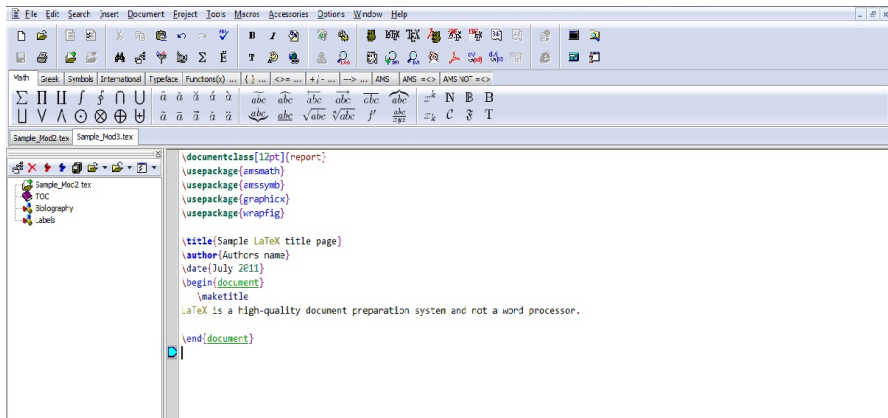


Fig1: Snap shot for creating title, author's name, date

contd...

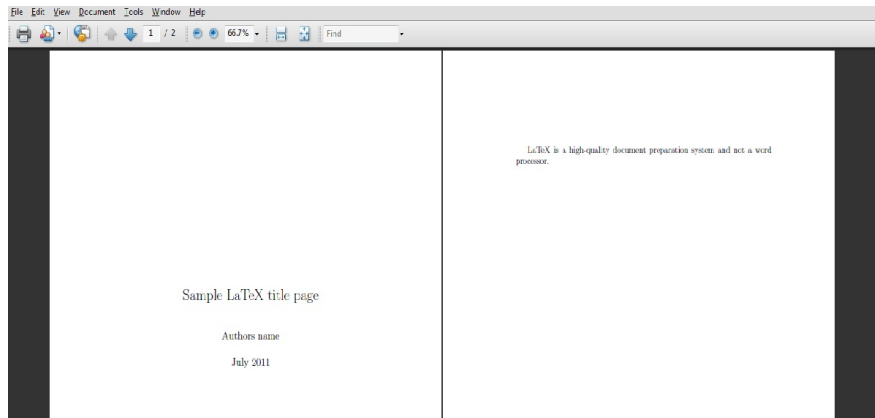


Fig2: Output of the previous slide

Table of contents

- Table of contents can be created by the command: `\tableofcontents`
 - 1 Enter the table of contents command at the location where you want table of contents to appear
 - 2 You should compile your \LaTeX code twice: once for numbering and second time for listing the table of contents
 - 3 To generate a roman style page number for the table of contents and an arabic style page number for the rest of the document, we use the command:

```
\pagenumbering{roman} \tableofcontents \newpage  
\pagenumbering{arabic} \tableofcontents
```

Body of an article, report

- A report or an article is composed of chapters, sections, subsections, and so on
- To create a chapter use the command: `\chapter{Chapter name}`
- To create a section use the command: `\section{Section name}`
- To create a subsection use the command:
`\subsection{Sub section name}`
- Use the command `sub sub section` if you want to create a sub sub section
- Numbering is automatically taken care, but to omit numbering use `*`, say for example, `\section*{Section name}`

Example

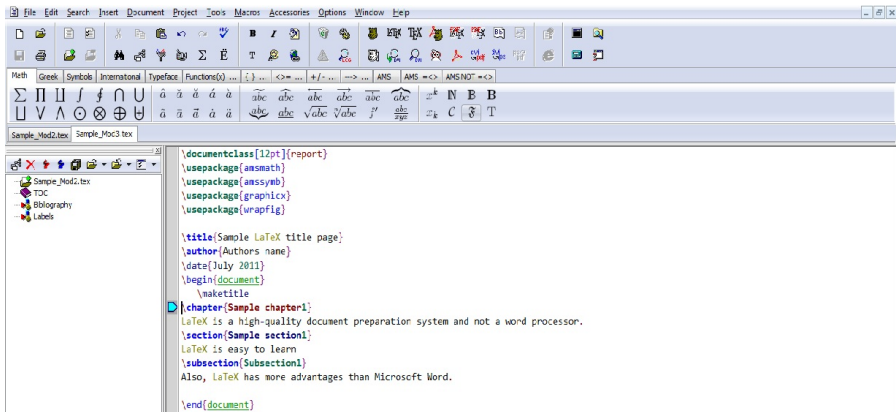


Fig3: Snap shot for creating chapter, section and subsection

contd...

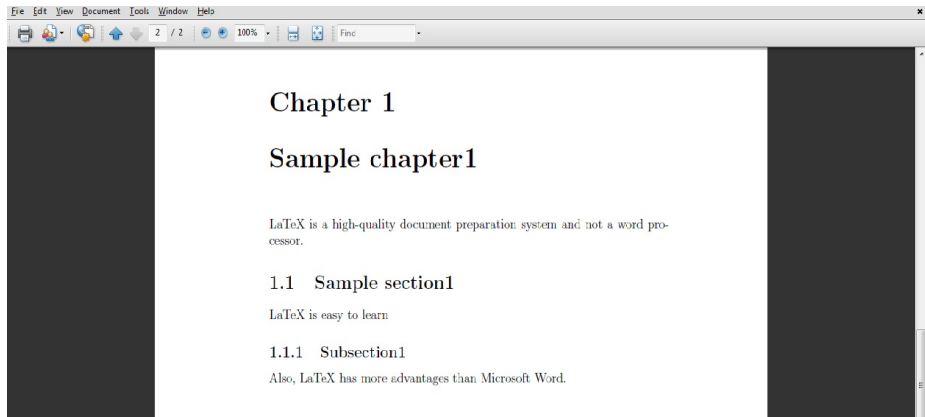


Fig4: Output of the previous slide

Justification- center

- Paragraphs can either be centered, flushed left or flushed right
- Centered- all the sentences in the paragraph are centered. Command to be used is the following:

```
\begin{center}
```

Sentence 1

Sentence 2

```
\end{center}
```

Example

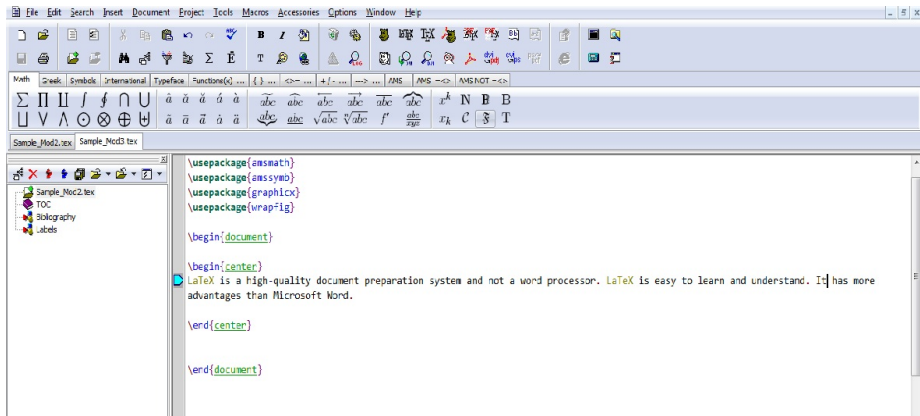


Fig5: Snap shot on designing a paragraph using center command

contd...

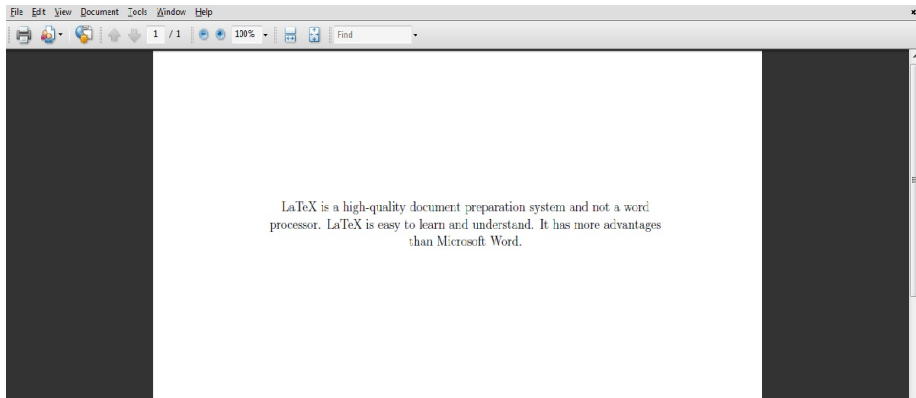


Fig6: Output of the previous slide

Justification- flush left

- Flush left- in this environment all the sentences are flushed towards the left side of the margin. Command to be used is the following:

```
\begin{flushleft}
```

```
Sentence 1
```

```
Sentence 2
```

```
\end{flushleft}
```

Example

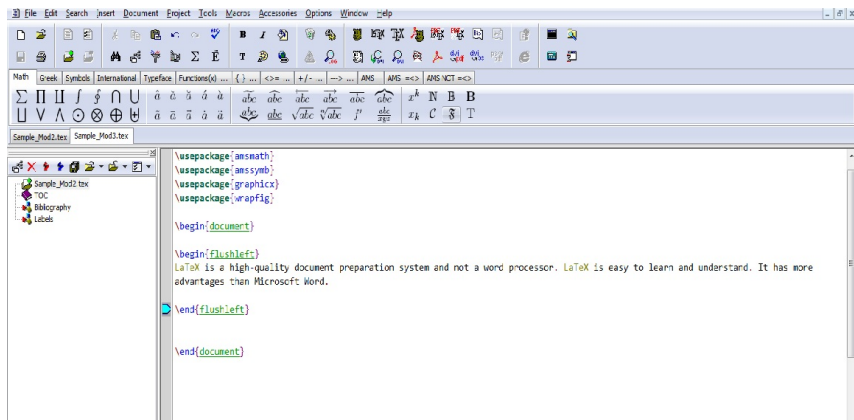


Fig7: Snap shot on designing a paragraph using flush left command

contd...

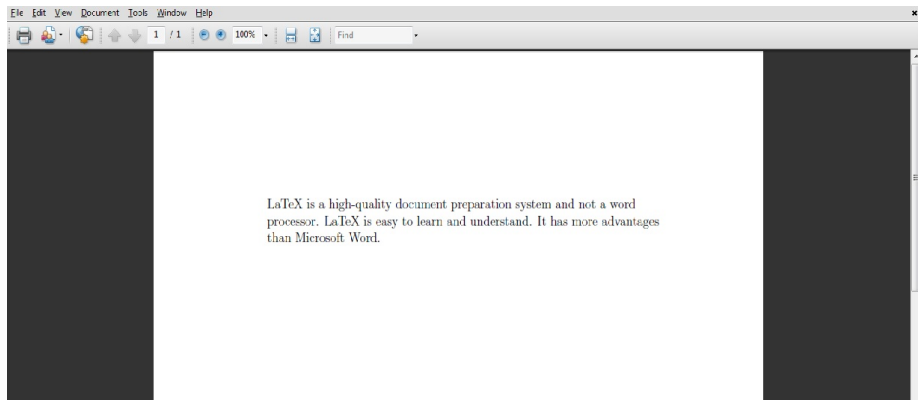


Fig8: Output of the previous slide

Justification- flush right

- Flush right- in this environment all the sentences are flushed towards the right side of the margin. Command to be used is the following:

```
\begin{flushright}
```

```
Sentence 1
```

```
Sentence 2
```

```
\end{flushright}
```

Example

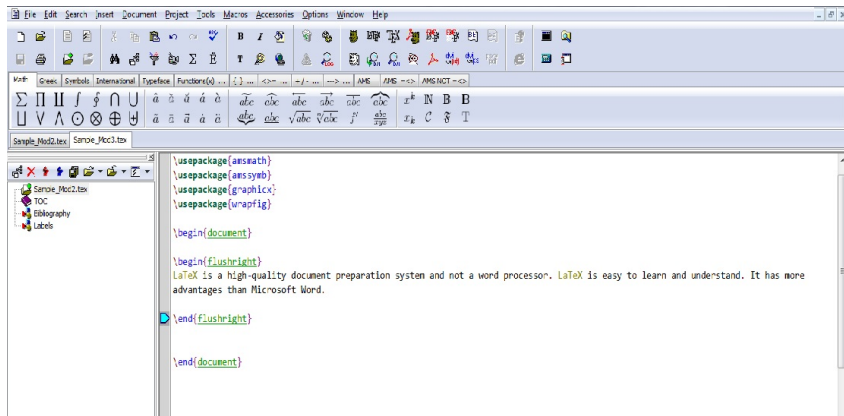


Fig9: Snap shot on designing a paragraph using flush right command

contd...

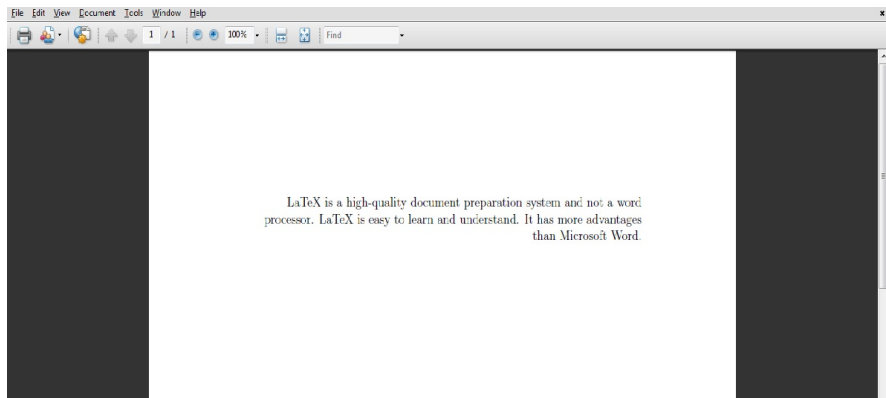


Fig10: Output of the previous slide

Bibliography

The structure of a bibliography is as follows:

```
\begin{thebibliography}{number of maximum entries}
\bibitem{key 1}entry 1
\bibitem{key 1}entry 2
\bibitem{key 1}entry 3
\end{thebibliography}
```

contd...

- `\bibitem`: represents an entry into the bibliography page
- Key argument is a keyword for referring to that particular entry
- To cite a particular bibliographic entry within the document, we use the command `\cite{key}`
- Entry 1, entry 2, entry 3 refers to the bibliographic information such as author, title, publication, and so on

Note that bibliographic entries can be of different formats depending on the specifications of a document

Example

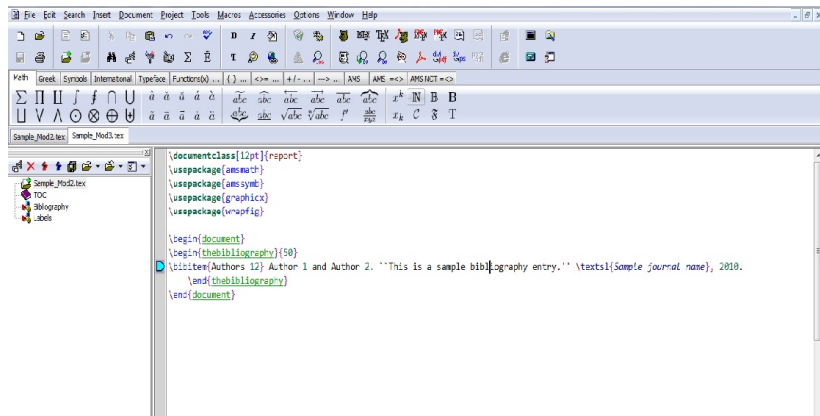


Fig11: Snap shot of a sample bibliography

contd...

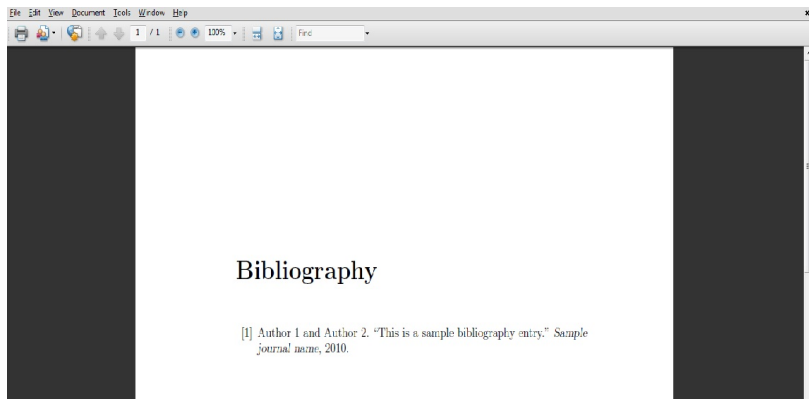


Fig12: Output of the previous slide

References

For more references please visit the following websites:

- 1 <http://www.latex-project.org/>
- 2 <http://en.wikibooks.org/wiki/LaTeX>
- 3 <http://www.ctan.org/>

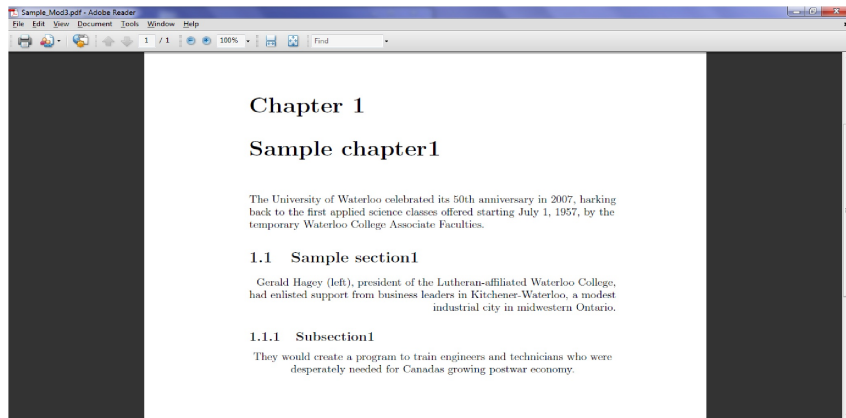


Fig13: Try to get the following output