LaTeX - AN INNOVATIVE WAY OF CREATING DOCUMENTS

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INTRODUCTION TO LaTeX

WHAT IS LaTeX?

- LaTeX is a system for typesetting your documents.
- Like any other programming languages, you write a code in LaTeX and compile it to give an output in PDF format.
- Pronunciation of LaTeX:

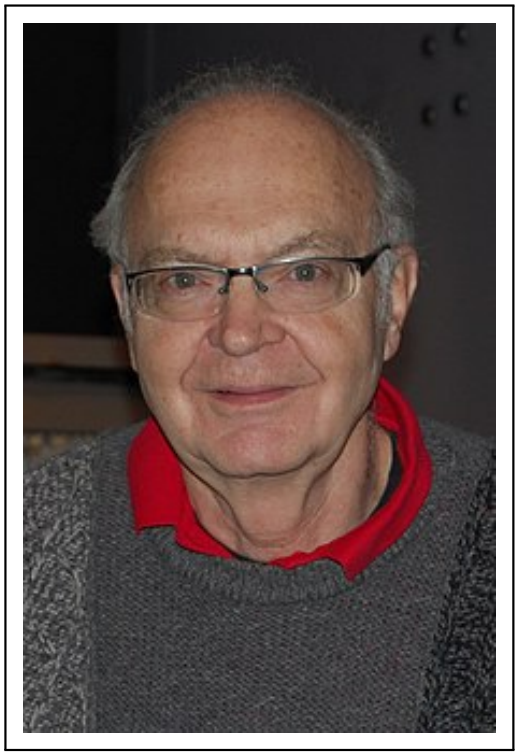
LATEX

LAH-TEK

WHY LaTeX?

- Results obtained from LaTeX are **wonderful**!
- There are a variety of use cases of LaTeX such as research paper writing, letter writing, presentations, visiting cards, sign boards, etc. very easily and accurately.
- Many top-notch institutes such as IITs, ICT Mumbai and almost all foreign institutes have made it mandatory to use LaTeX.

HISTORY OF LaTeX

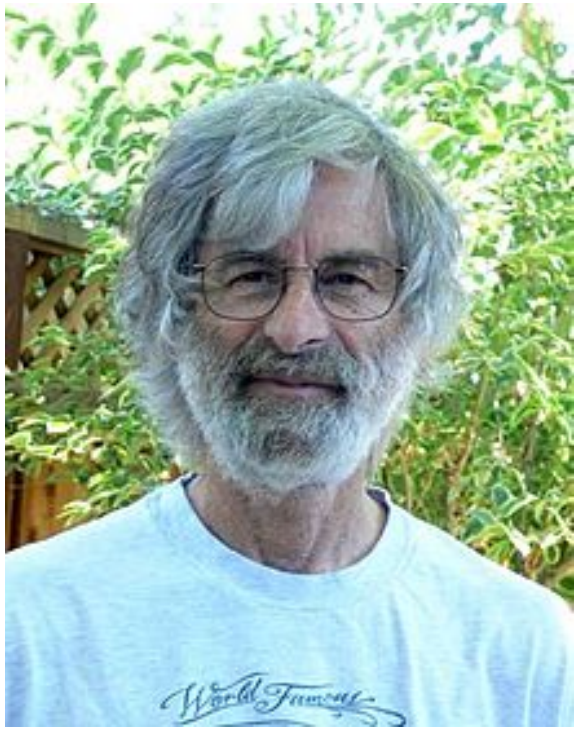


Donald Knuth
Created TeX in 1978
(1938 to Present)

- **Donald Knuth** wrote a book titled *The Art of Computer Programming*, which was first typeset using traditional hot metal typesetting, but when the second edition was published with the shift to phototypesetting and the unavailability of the original fonts, Knuth found the new results inferior and designed his own typesetting system called TeX.

HISTORY OF LaTeX

- **Leslie Lamport** created LaTeX as a wrapper over TeX to make it easy to produce general-purpose books and articles using TeX.



Leslie Lamport
Created LaTeX in 1984
(1941 to Present)

WYSIWYG VS NON – WYSIWYG

Feature	WYSIWYG	Non-WYSIWYG
User Interface	GUI with visual representation	Text-based interface with code
Flexibility	Limited to predefined styles and templates (WYSIAYG).	You can create custom solutions for free.
Integration	Limited integration with other systems.	Easier to integrate with different systems
Accuracy	May not always match output exactly	Has high accuracy - code directly affects output
Inserting Figures	It is daunting when you have some specific document format.	Once a figure is inserted, it automatically adjusts itself to fit in the format.
Control over layout	Visual control over layout	Precise and fine control by code adjustments.

SOME USEFUL LATEX COMMANDS

textbf	Bold text
textit	Italic text
underline	Underlined text
includegraphics	To add images
fbox	To add border to images
hline	Horizontal Line
hspace	Horizontal Space
vspace	Vertical Space
itemize	Bulleted List
enumerate	Numbered List

INSTALLING LaTeX

INSTALLING LaTeX

- LaTeX can be installed on **Linux**, **Windows** and **Mac-OS** using *Tex Live*.
- Online LaTeX editors are also available, both free and paid, but they have less features so are not recommended.
- If you want to use WYSIWYG tools and also want the features of LaTeX, you can use LYX.
- You can install LaTeX through this website: https://www.tug.org/texlive/
- You can install LYX through this website: https://www.lyx.org/

REFERENCES

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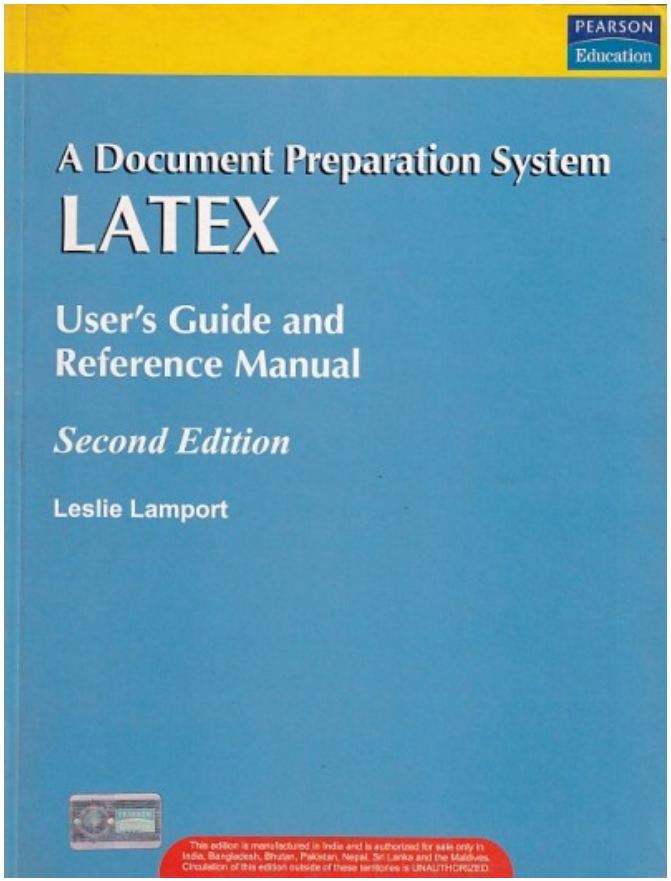

- https://www.overleaf.com/
- https://www.tug.org/texlive/
- https://tex.stackexchange.com/
- https://www.lyx.org/
  And Many More...!

THANK YOU!

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