



# Document Preparation Using $\text{L}^{\text{A}}\text{T}_{\text{E}}\text{X}2_{\epsilon}$

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# SESSION SERIES PLAN I

- ⊙ Introduction to L<sup>A</sup>T<sub>E</sub>X
- ⊙ Why use it (or whats wrong with MS-Word)
- ⊙ Terminology
- ⊙ Getting started
  - ▷ Installing the software
  - ▷ Setting up the preferences
- ⊙ Document structure
  - ▷ Setting the document class
  - ▷ Sections, subsections and formatting
  - ▷ Figures and Tables

## SESSION SERIES PLAN II

- ▷ Using packages (or whats with this undefined control sequence!)
- ▷ Typesetting Math/Equations
- ▷ Bibliographies (and how not to have headaches working with them)
- ⊙ Advanced topics
- ⊙ Setting up algorithms
- ⊙ Code/program/policies/output formatting
- ⊙ Must-see documents

# INTRODUCTION TO L<sup>A</sup>T<sub>E</sub>X

- ⊙ Based on T<sub>E</sub>X
- ⊙ Pronounced leh-tek (k being the sound of Arabic خ or Greek χ)
- ⊙ Takes in L<sup>A</sup>T<sub>E</sub>X source and generates a number of outputs (dvi, html, rtf, pdf, ps )
- ⊙ The output is concerned with placing boxes around the page
- ⊙ Boxes are combined to form other boxes
- ⊙ Placed using fixed or elastic widths and distances

## INTRODUCTION (CONTD.)

- ⊙ What's wrong with MS-Word?
- ⊙ Lack of control
- ⊙ Have to focus on content and presentation at the same time
- ⊙ Too much effort required to format for specific conferences/journals
- ⊙ Too much effort to change from one format to another
- ⊙ Difficult to manage versions
- ⊙ Difficult to manage references (even with EndNote)

# INTRODUCTION (CONTD.)

- ⊙ Whats wrong with LaTeX?
- ⊙ You need to learn how to use it!
- ⊙ Its not completely intuitive (for some)

# THE POWER OF L<sup>A</sup>T<sub>E</sub>X– AN EXAMPLE

Output:

2. What is the second question I should ask you?

.....  
.....  
.....  
.....  
.....  
..... [3]

# THE POWER OF L<sup>A</sup>T<sub>E</sub>X– AN EXAMPLE

Output:

2. What is the second question I should ask you?

.....  
.....  
.....  
.....  
.....  
.....[3]

Input:

What is the second question I should ask you?  
`\putansline{6}{3}`



# TERMINOLOGY

- ⊙ Document (the output)
- ⊙ Document Class (the main type defining the doc)
- ⊙ Package (a file encapsulating commands for a specific purpose)
- ⊙ .sty (style files)
- ⊙ .cls (document class files)
- ⊙ FNDB (filename database)
- ⊙ update ( file/repository/meta information)

# MUST SEE DOCUMENTS

- ⊙ “A Not So Short Introduction to LaTeX”
- ⊙ “The LaTeX Comprehensive Symbol List”

# GETTING STARTED

- ⊙ To work with LaTeX, you need:
  - ▷ an editor (T<sub>E</sub>XnicCenter, Kile, WinEdt, LED)
  - ▷ a compiler (MikT<sub>E</sub>X, T<sub>E</sub>XLive, tetex ...)
- ⊙ Enough talk. Lets get started!

- ⊙ Installing software

# DEMO

- ⊙ Installing software
- ⊙ Creating your first document

# DEMO

- ⊙ Installing software
- ⊙ Creating your first document
- ⊙ Getting the required packages

# DEMO

- ⊙ Installing software
- ⊙ Creating your first document
- ⊙ Getting the required packages
- ⊙ Creating your second document (an ACM format paper)

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- ⊙ Creating your third document (a Springer format paper)



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- ⊙ Creating your fourth document (an IEEE transactions format paper)

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- ⊙ Algorithms

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- ⊙ Algorithms
- ⊙ Mathematical typesetting

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- ⊙ Creating your fourth document (an IEEE transactions format paper)
- ⊙ Algorithms
- ⊙ Mathematical typesetting
- ⊙ Cool output boxes with line numbers!

## GETTING THE SOURCES

- ⊙ You can get the resources for these sessions here: <http://www.csrdy.org/nauman/2011/10/16/latex-screencasts/>
- ⊙ Feel free to leave comments on the post there if you have any questions at all. I'll try to answer them as soon as possible.
- ⊙ All the required files (and completed documents) can be downloaded from this page.
- ⊙ You can find a really good resource on learning L<sup>A</sup>T<sub>E</sub>X here: <http://ctan.org/tex-archive/info/lshort/english/lshort.pdf>