



# 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  $\text{\LaTeX}$
- ▶ 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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- ▶ Algorithms

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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>