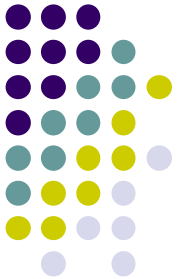

Introduction to Computer Science

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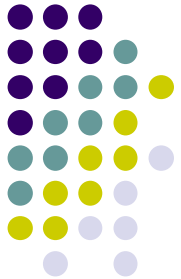
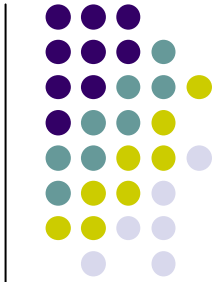
LaTeX Introduction

What is LaTeX, not Word?



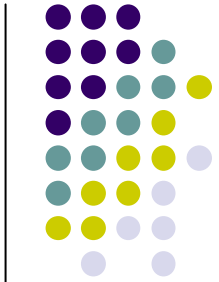
- How to pronounce LaTeX? (Lah-tek, or Lay-tek)
- A typesetting program, not a word-processor
- Macros of TeX (Donald E. Knuth)
- Current version LaTeX2ε
- Designed for producing beautiful books, thesis, papers, articles...
- De facto standard for writing academic papers

Why LaTeX, not Word?



- Professional result
- Platform, version independent (Unix, Windows…)
- Pre-set standard formats (for paper, thesis…)
- Bibliography management
- Fast, professional math equations typesetting
- Free available
- The commands are easy to learn
- Never crash, never lose your file
- Can compile very big books (unless your document is more than 70,000 pages!)

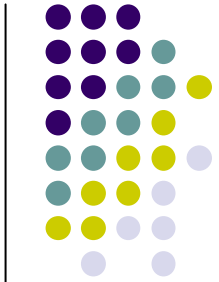
Disadvantages



- You need other software (*xfig*) for pictures (Word picture can be used in LaTeX)
- Spelling/grammar checking is not as convenient as those in MS Word (*emacs+ispell* is good)

- Remember some commands
- Not straightforward for creating complex tables
- Not integrated with other MS Office products

How To Run LaTeX



- Edit *emacs myfile.tex*
- Compile *latex myfile*

  F5 (WinShell)
- View the dvi file *xdvi myfile* (UNIX)

  F7 (WinShell) *yap myfile* (Windows)
- Dvi --> PostScript *dvips myfile*

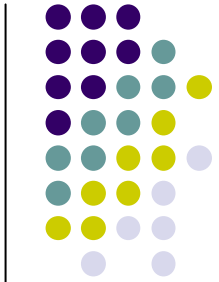
  F8 (WinShell)
- View PostScript *gv myfile* (UNIX)

  F9 (WinShell) Use *gsview* (Windows)

BibTeX--Bibliography Management

- Bibliography database file mybib.bib
- Command *cite{biblabel}*
- How to compile
  - latex myfile
  - bibtex myfile
  - latex myfile (may need to run twice)
- ".bib" file template (see my home page)
- Two bibliography servers (see my home page)
  - Powerful search engines
  - BibTeX file included

LaTeX Skeleton



```
% my first LaTeX file
\documentclass{article}
    % preamble
    \usepackage{graphicx}
\begin{document}
    \section{This is a section}
    \subsection{This is a subsection}
        First paragraph is here.

        Second paragraph is here.
\end{document}
```

How to run LaTeX