Presentation Grading

On the Fly… as students present

5-Minute Presentation

In order to apply all the advice you received and further refine your skills, we will do a second round of the 5-minute presentation of your specific aims this semester under the same guidelines as during the fall semester. To sign up for a presentation slot, go to this Doodle Poll and select one option.

http://www.doodle.com/mn89vkzL332vzxe3

Please submit a pdf version of your slides at the latest just before your presentation.

Mechanics of Writing
Three Things

Cited References


Text Tools

impossible to do

MS Word

LaTeX

document complexity and size

effort and time consumption
Word Rage

Remember “Death by Powerpoint”?

Word does too much and it does it without asking you!

Like moving figures around, or creating lists you did not want.

Sometimes moving one thing can mess up your whole document!

It always feels like I have to trick Word into doing what I want.

http://3monththesis.com/writing-a-thesis-word-or-latex/

So What is LaTeX?

TEX → LATEX

Don Knuth
Leslie Lamport

http://www.lamport.org/
What You Can Do With \LaTeX

### Trigonometry

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Pythagorean theorem:

\[ C^2 = A^2 + B^2. \]

Definitions:

\[
\begin{align*}
\sin \alpha &= A/C, & \cos \alpha &= B/C, \\
\csc \alpha &= C/A, & \sec \alpha &= C/B, \\
\tan \alpha &= \frac{\sin \alpha}{\cos \alpha} = \frac{A}{B}, & \cot \alpha &= \frac{\cos \alpha}{\sin \alpha} = \frac{B}{A}.
\end{align*}
\]

Area, radius of inscribed circle:

\[
\frac{1}{2} AB, \quad \frac{AB}{A + B + C}.
\]

---

### Andante KV 315

*pour flûte et orchestre*

W. A. Mozart

transcription pour flûte, hautbois et orgue

D. Taupin

Flûte

Haubois

Violon

Orgue
What You Can Do With LaTeX

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Bioengineering 6061: Presentations

Mechanics of Writing

What You Can Do With LaTeX

MDaemon 6.8 Stops Spam

Two new features — Bayesian filtering and heuristic detection — have made MDaemon 6.8 very effective at stopping spam before it reaches users.

With Bayesian filtering, each email site decides what is spam and legitimate email by dragging and dropping examples of both into the filtering engine. The filter then compares the content of the examples to the content of new messages to separate spam from real mail. Given several hundred examples of each type, Bayesian filtering is more than 95 percent accurate on spam, with virtually zero mistakes for important email.

Bayesian spam detection uses feature-matching rules — red HTML text, for example — to identify spam. Through years of "learning" what spam (and legitimate) messages typically look like, the heuristic rules have become very reliable in separating spam from normal email.

MDaemon supports multiple means of fighting spam, including assured access through white lists.

For more information on stopping spam with MDaemon, see the Security Tools for Spam Control white paper, the MDaemon AntiSpam HowTo and the AntiSpam tutorial, by Rob McWilliam.

Bioengineering 6061: Presentations

Mechanics of Writing
What You Can Do With LaTeX

Real-time MRI guided radio frequency ablation for patients with atrial fibrillation

Robert S. Macleod1,2,3,4, and Nassir Marrouche1

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What You Can Do With LaTeX

ELECTROCARDIOGRAPHIC MAPPING AND CHARACTERIZATION OF MYOCARDIAL ISCHEMIA

by

Shibaji Shome

A dissertation submitted to the faculty of
The University of Utah
in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

The LaTeX Philosophy

Separate the writing from the document creation

Let the computer keep track of things

Support clean structure

Make shareable document and shareable templates

Extend the language through packages

Visible markup is more powerful than hidden “smart” commands
The LaTeX Process

\begin{document}
\title{Notes for Lab \#1: Dissection}
\author{2012: Rob, Brian, Brett, and the legacy of great TA's}
\maketitle
\tableofchildlinks
\section{Introduction}
This Lab allows you to identify and compare the size, shape and tissue type of the major anatomic landmarks of the heart and lungs. The goal of the lab is not, however, just to observe anatomy but to associate structure with function. The heart is a pump for blood that comes into the right atrium, goes out through the right ventricle, returns through the left atrium, and leaves again through the left ventrical. Imagine this is all the information you had and imagine you are the first person to be permitted to dissect one. Try and figure out what the various components are, how each works, especially how the shape, composition, and even texture of each part contributes to its function.
\section{Reference material}
\begin{itemize}
\item \htmladdnormallink{www.hometrainingtools.com} from the \htmladdnormallink{Home Science Tools} web site.
\item \htmladdnormallink{www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm} from the \htmladdnormallink{Biological Sciences HomePage}.
\item Both lung photos \htmladdnormallink{faculty.washington.edu/kepeter/119/images/lung_sections.htm} and heart photos \htmladdnormallink{faculty.washington.edu/kepeter/119/images/heart_sections.htm} from Karen Petersen at the University of Washington.
\item Even a \htmladdnormallink{YouTube video}.
\end{itemize}
\end{document}
The LaTeX Process

\begin{document}
\section{Introduction}
This Lab allows you to identify and compare the size, shape and tissue type of the major anatomic landmarks of the heart and lungs. The goal of the lab is not, however, just to observe anatomy but to associate structure with function. The heart is a pump for blood that comes into the right atrium, goes out through the right ventricle, returns through the left atrium, and leaves again through the left ventricle. Imagine this is all the information you had and imagine you are the first person to be permitted to dissect one. Try and figure out what the various components are, how each works, especially how the shape, composition, and even texture of each part contributes to its function.

\section{Reference material}
\begin{itemize}
\item \htmladdnormallink{www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm}{http://www.gwc.maricopa.edu/class/bio202/heart/anthrt.htm} from the \htmladdnormallink{Biological Sciences HomePage}{http://www.gwc.maricopa.edu/class/bio202/index.htm}
\item Even a \htmladdnormallink{YouTube video}{http://www.youtube.com/watch?v=z3UHpvEJMns}
\end{itemize}
\end{document}
What LaTeX Keeps Track Of

- Sections (6 levels)
- Page numbers
- Figures
- Tables
- Lists and list items
- Equation numbers
Equations

\begin{equation}
  n(t) = n_{\infty}(v_o) - (n_{\infty}(v_o) - n_0)e^{-t/\tau_n(v_o)}.
\end{equation}

\label{eq:pot-nsol}

\begin{align*}
  n(t) &= n_{\infty}(v_o) - (n_{\infty}(v_o) - n_0)e^{-t/\tau_n(v_o)} \\
  &= n_{\infty}(v_o) - (n_{\infty}(v_o) - n_0)e^{-t/\tau_n(v_o)}
\end{align*}

LaTeXiT

\begin{figure}[!ht]
  \centering
  \includegraphics[width=100mm]{./Figures/NonConformal}
  \caption{A comparison of the replicated boundary between two material types using conformal, or a boundary fitting meshing algorithm, and without conformal meshing techniques. The solid red line in this figure represents the original boundary between the two materials. Figure A shows a meshing algorithm ... }
  \end{figure}

Figure 1: A comparison of the replicated boundary between two material types using conformal, or a boundary fitting meshing algorithm, and without conformal meshing techniques. The solid red line in this figure represents the original boundary between the two materials. Figure A shows a meshing algorithm that does not attempt to preserve the interface during the tessellation of the volume, but reconstructs the boundary post-tessellation. Figure B shows a conformal mesh that attempts to preserve the boundary by placing nodes directly on the interface.
Comparison of the tools

Reference Management Software: a Comparative Analysis of Four Products

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<th>Mendeley</th>
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Table 3: Our ratings of the feature sets of the four RMs on a scale of 1 to 5, with 5 being best.

http://www.istl.org/11-summer/refereed2.html
MacLeod et al., \cite{RSM:Mac2001} in 2001 described a method...

@Article{RSM:Mac2001,
  author =       "R.S. MacLeod and B. Punske and S. Shome and B. Yilmaz and B. Taccardi.",
  title =        "The Role of Heart Rate and Coronary Flow During Myocardial Ischemia",
  journal =      j-JE, 
  year =         "2001",
  OPTvolume =    "34(supp)",
  pages =        "43--51",
  note =         "ISCE conference paper",
  doi =          "https://doi.org/10.1016/S1532-8833(01)00043-1",
  bibdate =      "Thu Mar 29 15:36:08 2001",
}

Bibliography


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How to Learn LaTeX

The Not So Short Introduction to \LaTeX{} $2\varepsilon$

Or $\LaTeX{} 2\varepsilon$ in 157 minutes

Rob's \LaTeX{} Page

http://www.sci.utah.edu/~macleod/latex/

Basic Documentation

- Rob's \LaTeX{} Page

Getting the Software

- There are many sources for \LaTeX{}, almost all of them free. Here are some (i.e., people I respect, have used):
  - MacTeX: MacTeX is the best choice for Mac OS X users.
  - MiKTeX: MiKTeX is the best choice for Windows users.
  - TeX Live: TeX Live is the best choice for Linux users.
  - CTAN: The Comprehensive \LaTeX{} Archive Network (CTAN) is also available online.

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Rob's \LaTeX{} Page
LaTeX Companions

In debugging LaTeX compiling errors, it helps to view the raw output, and scroll up from the bottom until you find a useful error message. For instance, I am currently using Kile as my LaTeX editor. I have to switch from “Log and Messages” to the “Output” tab at the bottom to get more meaningful data on the error.

Why Not LaTeX?

Hard Work
Creativity
Success
impossible to do

document complexity and size

MS Word
LaTeX

effort and time consumption