LaTeX Exercises

RSI 2007 TAs

1 Basic LaTeX Stuff

1. Create a new directory called `LatexIntroPaper`.
2. Create a new .tex file called `latex-example.tex` in your `LatexIntroPaper` directory.
3. Open the file with emacs and make a very simple document with some text. Specify the `documentclass` to be "article."
4. Add title, author, and date information and make a title appear at the top of the page.
5. Include some **bold** and *italic* text. Experiment with other font styles like `this`.
6. Include a manual line break like this
   and

   center some text.
7. Add a bulleted and numbered list somewhere in your document. See if you can figure out how to nest them.
   - See, isn't this better than Word?
   - Everything is just so much prettier...
8. Generate a .pdf file using `pdflatex` and view it using `acroread`.

2 Sections and Referencing

1. Add to your document three sections, a few subsections, and a subsubsection.

2. Label one of the sections you created and create a reference to this section. You should have something like this: In Section 1 you should have made a simple document. Add another label and reference to see that LaTeX takes care of the numbering for you.

3. Create some footnotes.[1]

4. Add a few citations and create a bibliography section at the bottom of your paper[1] Note you may need to compile your .tex file twice to get the citations to appear properly.

3 Figures and Tables

1. Create a table to your document. Then add a caption and reference. Try creating something like Table 1.

11:00	Bedcheck	Don't miss it or your counselor will embarass you!
11:30–?	Fun	The fun starts after bedcheck!
???	Sleep	It's hard to find time.

Table 1: Your schedule.

2. Add an figure of any kind to your document. Again add a caption and reference. Note that not all image formats are supported by `pdflatex`. Recommended file formats are .png and .jpg. Do NOT use .eps or .gif files, as these don't work with `pdflatex`. It's easy to convert from one file format to another; use the command `convert file.ext1 file.ext2`. For example, to convert `image.gif` to `image.png` just type `convert image.gif image.png`.

[1] Listen to your tutors!

Figure 1: Your dorm!

4 Math Mode

1. The real power of LaTeX is with its ability to format math expressions. Write whatever cool math equation you'd like.

2. Write some inline math expressions as well: $E = mc^2$.

3. Experiment with other symbols and operators. You can find a lot of information about what is possible with math mode here:

   `http://www.ams.org/tex/amslatex.html`

   .

5 Looking Stuff Up

It's impossible to cover everything that LaTeX can do in a few days. But luckily its very easy to figure out how to do something we haven't covered (or you forgot about). Just Google it! You'll be happily suprised how easy it is to find examples for exactly what you're looking for. If you are still stuck, *someone* will be able to help you. Also check out the following:

- Art of Problem Solving:

  `http://www.artofproblemsolving.com/LaTeX/AoPS_L_About.php`

- RSI LaTeX materials on the website:

  `http://web.mit.edu/rsi/www`

References

[1] The Gods of RSI.