Kathleen Tuite
CS 326, Section B-
Homework 99

CS 326 – LaTeX Example

Your Name

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Look at the .tex file to see how each piece of this document was made.

1. **How to turn this .tex into a pdf**

   - On the CSE lab machines: Run `pdflatex sourcefile.tex`

   - On MacOSX: Download MacTex2007 from *http://www.tug.org/mactex/*, which includes a TeX distribution, a nice LaTeX editor (TeXShop), and a number of other things.

   - On Windows: Download MiKTeX from *http://miktex.org*, download TexnicCenter (or other editor) from *http://www.toolscenter.org/*, and install them. TexnicCenter might ask you to locate the miktex distribution for it, which is probably in `programfiles/miktex2.7/miktex/bin`. Make sure your editor is set to build pdf files. **Alternatively,** you can get the complete package for Windows from *http://www.tug.org/protext/*.

   Editors for Mac/Win should have menus and buttons to click to give you starter code for most of the things you'll want to do, lists, tables, etc. If you prefer a more bare-bones editing environment, emacs has a TeX mode. If you just install the TeX distribution on your computer, you can compile .tex files and produce .pdfs with the command line.

2. **Examples of things you might need in your homework write-ups**

   - Lists, like this one. Use `enumerate` or `itemize`. You can let the bulleting or numbering be automatic, or you can specify your own.

   ⋆ This bullet is made with `\star`

   - Special symbols: All commands start with a backslash. Look at the .tex for the following section. Put dollar signs around symbols and equations to be in 'math mode'.

     not $\neg$
     conjunction $\wedge$
     disjunction $\vee$
     exclusive or $\oplus$
     exists $\exists$

for all $\forall$

anything power-ized 5^5, $56^{hello!}$, $5^{5^{5^5}}$

asymptotic notation $O(n)$, $\Omega(n^2)$, $\Theta(nlogn)$

whole equations $ax^2 + bx + c - \sqrt[5]{abc} = \frac{99}{100} + 50\left(\frac{a^2}{10!}\right)$

- Code snippets: (Use `verbatim` command.)

```
for (int i = 0; i < 100; i++) {
    System.out.println(i);
}
//Tabs do not show up in verbatim mode, but spaces do
```

- Aligned equations and proofs:

  Proof. The sum of the numbers from 1 through n $= \frac{n(n+1)}{2}$.

$$\sum_{i=1}^{n} i = 1 + 2 + ... + (n-1) + n \qquad \text{summation written out}$$

$$= \frac{1}{2}(1 + ... + n + 1 + ... + n) \qquad \text{add sum again but divide by 2}$$

$$= \frac{1}{2}([1 + n] + [2 + (n-1)] + ... + [n+1]) \qquad \text{rearrange}$$

$$= \frac{(n)(n+1)}{2} \qquad \text{factor}$$

$$\square$$

- Images: Include graphics and automatically numbered references to your graphics, like this reference to Figure 1. Most image types work for when making a .pdf (.png, .jpg, etc.) and .eps works for making .dvi output.
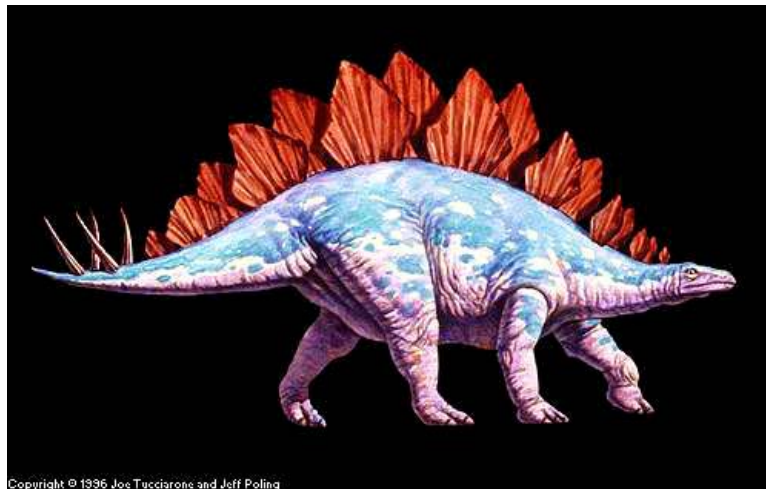

Figure 1: Stegosaurus