More LaTeX- Graphics and Referencing

The template document today will be the LaTeX file for today's Lab. The class website has both the LaTeX and PDF versions of the Lab, so download those together with the figure `stack.eps`. This handout includes the lab on the reverse, together with line numbers for easy reference.

To Include a Figure

The relevant line numbers are 2 and 16-21.

- We must ALWAYS include the line `\usepackage{graphicx}`. This makes a package of figure handling tools available to the LaTeX software.
- Notice that lines 16 and 21 are "bookends" that set up a figure environment: `\begin{figure}` and `\end{figure}` The square brackets and `hb` is a suggestion to LaTeX that the figure be placed *here* or at the *bottom* (another option is t for top). Typically, we will let LaTeX decide where to put the figures.
- The next line, `\center`, will just center the figure.
- Line 18 is the line where we define the width (or height) of the figure to be included (use square brackets), followed by the filename (in curly braces). The file type we will use is "Encapsulated PostScript" or eps, which is assumed unless you type it in. In this case, we should have the figure file `stack.eps` in the same directory as our LaTeX file.
- Line 19 shows how to include a caption. GOOD WRITING STYLE: Always include enough information in your caption so that readers know why the figure is there (e.g., what is it supposed to be illustrating?) without necessarily reading the full text.
- Line 20 identifies a LABEL that we called "stack".

Labelling and Referencing

In our document, we have labelled three things for later referencing:

- A figure (Line 20 defines the label as `stack`). Notice that the figure is referenced on line 14 (this is how we do it!).
- An item number can be labelled and referenced. Line 40 labels the second item in that list as `arb`. Notice that this item is referenced on Line 47.
- To get an equation with an equation number, in place of the double dollar signs, use `\begin{equation}` and `\end{equation}` as in Lines 28-30.

GOOD LATEX STYLE: Never manually type numbers for a list, a figure or an equation- Always let LaTeX put them in for you. This is really important if you ever need to go back and add/delete material; using labels means you never have to worry about the equation or figure numbering.