Title

a demo by

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1. Introduction

This is a demo of all the features of GohLaTeX. Shame on you for not learning Plain TeX. This is not a perfect imitation; the keen Plain TeX user will notice that some things (e.g., spacing between paragraphs) still isn't as beautiful as in Plain.

Theorem 1. *This is how to make a theorem.*

Proof. Prove the theorem afterwards. ∎

Lemma 2 (*Parentheses*). *Sometimes you want to name your theorems/lemmas.*

Solution. Sometimes you want to put the slug in display math mode. We have shown that

$$2 + 2 = 4. \quad ∎$$

Sometimes you want to typeset an algorithm:

Algorithm A (*Name*). Description of algorithm.

A1. [Initialise.] Use GohLaTeX.

A2. [Fall in love.] The formatting is so exquisite that you want to do unspeakable things to it (like write your own TeX macros).

A3. [Convert.] Switch to Plain TeX.

A4. [Enlightenment.] Your soul transcends. ∎

I'm not sure why you have to leave a blank space between each algorithm step for it to work. You don't have to do that in Plain TeX. When the algorithm has ≥ 10 steps, you'll want `\aalgbegin` instead.

Algorithm B (*Math*). These are some math macros I added. There are not too many of them and you should probably use your own macros for other things you like.

B1. [Sets.] We have the inclusion $\mathbf{N} \subseteq \mathbf{Z} \subseteq \mathbf{Q} \subseteq \mathbf{R} \subseteq \mathbf{C}$.

B2. [Probability.] We find that $\mathbf{P}\{A\} = 1$, $\mathbf{E}\{X\} = 2$, and $\mathbf{V}\{X\} = \sigma^2$.

B3. [Indicators.] The indicator of an event $\mathbf{1}_A$ equals 1 if A is true and 0 if A is false. You can also spell out the event; for example if A is the event that u — v, then you can write $\mathbf{1}_{[u—v]}$.

B4. [Dots.] We sometimes want to define $[1\,..\,n] = \{1, 2, \ldots, n\}$.

B5. [Equation numbers.] You can number your equations with old-style numerals:

$$[z^n]f(z) = \frac{1}{2\pi i} \oint \frac{f(z)}{z^{n+1}}\, dz. \tag{1}$$

B6. [Reference.] You can reference an equation using (1234567890).

B7. [Credit where it's due.] Some of these macros are lifted right out of `plain.tex`, which was written by Knuth himself.

B8. [Operators.] You can make your own operators and functions myfunc(x) and they can even have limits, like

$$\operatorname*{mylim}_{n\to\infty} \operatorname{myfunc}(n).$$

B9. [Stalling.] Can't you tell I'm just trying to get to ten steps?

B10. [Slug.] Don't forget to end your algorithm with a slug! ∎

This is the end of a subsection.

Big bold label. Use this when you don't want to start a whole new section, but you still want to break up your text.