Latex and org-mode

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1 Intro

For writing technical documentations latex is of course the best choice. orgmode is an emacs extensions which (between the other things) can also be very well used for writing technical documents.

It can exports into many different formats, and the syntax is very neat and simple. As for latex source files it's just text, but unless you're doing specific things in an org-file you can avoid all the *burocracy*.

The various `\usepackage` are automatically generated.

2 Some symbols

This is just a small list of useful latex symbols, here you find the list of all latex symbols

σ	`\sigma`
π	`\pi`
$\bowtie$	`\Join`
$\in$	`\in`
$\notin$	`\notin`
$\wedge$	`\wedge`
$\vee$	`\vee`
$\exists$	`\exists`
$\nexists$	`\nexists`
$\forall$	`\forall`
$\rightarrow$	`\rightarrow`
$\leftarrow$	`\leftarrow`

3 Arguments

Sometimes you need to give arguments to functions. In general we use `_` for lower indexes, `^` for exponents and () for arguments. When you have multiple arguments in the index or the exponent put them together with {}.

For example:

$\log_x{}^2$	`\log_x^2`
$\sigma_{\mathrm{A,B}}(\pi_C\ \mathrm{R})$	`\sigma_{A,B}(\pi_C R)`

4 Quoting

Latex has some key characters that have a special meaning. If you want to insert those characters you have to quote them with "\". So for example.

$\pi_{\{A,B\}}$	`\pi_{\{A,B\}}`

Here one { is quoted and will be inserted as it is and the other is used to join the arguments.

5 Equations

Things are getting a bit more complicated here. To get an equation system like this you can just paste the code below wherever in your org-file.

$$\begin{cases} 1 \text{ if } x <= 0 \\ \bot \text{ otherwise} \end{cases}$$

```
\left \{
\begin{array}{ll}
\mbox{1 if  x <= 0} \\
\bot \mbox{ otherwise}
\end{array}
\right
```