

A One-Page Guide to Using noweb with L^AT_EX

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after Lee Wittenberg and Carl Gregory

The noweb file foo.nw

Documentation

@ in column 1 of a line by itself starts a documentation chunk.

Text is in L^AT_EX; use `[[...]]` for embedded code fragments.

noweave automatically wraps file in

```
\documentclass{article}
\usepackage{noweb}
\begin{document}
:
\end{document}
```

To avoid wrapper, put `\documentclass` and `\usepackage` in your source and use `noweave -delay`.

For emacs users: A first line of `% -*- mode: Noweb; noweb-code-mode: c-mode -*-` is useful (to set editing mode for code chunks). The Unix `teTeX` distribution comes with helpful Info files that cover L^AT_EX and `dvips`.

Typical Commands

```
notangle -L -Rfoo.c foo.nw > foo.c
notangle -Rfoo.h foo.nw | cpif foo.h
noweave -filter l2h -index -html foo.nw > foo.html
noweave -x foo.nw > foo.tex
latex foo; latex foo
latex '\scrollmode \input foo'
dvips -o foo.ps foo
```

Extract file `foo.c`, with `#line`
Extract file `foo.h` if it has changed (without `#line`).
Create HTML, converting documentation from L^AT_EX.
Create L^AT_EX document with cross-reference, no index.
Process L^AT_EX into “device-independent” (dvi) file.
Alternate L^AT_EX command for use in Makefile.
Convert `foo.dvi` into PostScript.

Minimal L^AT_EX

Special characters

Not to be typed in text; OK in code

```
% \ { } $ & # ^ _ ~
```

Escapes for specials

```
\% $\backslashslash$ \{ \} \$ \& \# \_
```

Blank line is new paragraph.

Write ‘‘quotes’’ to get “quotes.” Never "quotes".

Titles `\title{...}`
`\author{...}`
`\maketitle`

Sectioning `\section{...}`
`\subsection{...}`
`\subsubsection{...}`

Code

`<<... name of chunk...>>=` in column 1 of a line by itself starts a code chunk.

Code is in any language; use `<<...>>` to include other code chunks by reference.

You can write multiple code chunks with the same name; they are concatenated.

Name chunks inside functions with verbs, e.g., *<copy all lines from in to out, adding markup>*.

Name chunks holding declarations with nouns, e.g., *<private function prototypes>* or *<definitions of exported functions>*.

Name top-level “root” chunks after the files they are to represent, e.g., `<<foo.c>>=` or `<<foo.h>>=`.

Fonts `\emph{emphasis}`
`\textbf{bold}`
`\texttt{typewriter}`
`\textit{italics}`
`\textsf{sans serif}`
`\textsc{SMALL CAPS}`

Lists List of items List of items
`\begin{itemize}`
`\item one` • one
`\item two` • two
`\item three` • three
`\end{itemize}`

Also `\begin{enumerate}` for numbered lists.

Get the right version; you want L^AT_EX2_ε, not L^AT_EX 2.09.