

A One-Page Guide to Using `noweb` with \LaTeX

Norman Ramsey
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 \LaTeX ; 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 \LaTeX and `dvips`.

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>>=`.

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 \LaTeX .
Create \LaTeX document with cross-reference, no index.
Process \LaTeX into “device-independent” (dvi) file.
Alternate \LaTeX command for use in Makefile.
Convert `foo.dvi` into PostScript.

Minimal \LaTeX

Special characters

Not to be typed in text; OK in code

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

Escapes for specials

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

Blank line is new paragraph.

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

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

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

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 $\text{\LaTeX}2\epsilon$, not \LaTeX 2.09.