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`.

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>>=.

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`.

Typical Commands

`notangle -L -Rfoo.c foo.nw > foo.c`	Extract file `foo.c`, with `#line`
`notangle -Rfoo.h foo.nw | cpif foo.h`	Extract file `foo.h` if it has changed (without `#line`).
`noweave -filter l2h -index -html foo.nw > foo.html`	Create HTML, converting documentation from LaTeX.
`noweave -x foo.nw > foo.tex`	Create LaTeX document with cross-reference, no index.
`latex foo; latex foo`	Process LaTeX into "device-independent" (`dvi`) file.
`latex '\scrollmode \input foo'`	Alternate LaTeX command for use in Makefile.
`dvips -o foo.ps foo`	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
\begin{itemize}
\item one
\item two
\item three
\end{itemize}
```

List of items

- one
- two
- three

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

Get the right version; you want LaTeX2ε, not LaTeX 2.09.