# An Annotated Document Source

C. V. Radhakrishnan

Mahesh wanted to see the annotated source of the TEX document that generated the output shown here.

There are two components to the source:

1. document source, let us call it as `test.tex`.

2. a custom configuration for TEX4ht, let us call it `my.cfg`.

## Document Source

```
\documentclass[a4paper]{article}

\usepackage{lettrine}
\usepackage{lipsum,shortvrb}
\usepackage[utf8]{inputenc}

\MakeShortVerb{\|}

\def\hlink#1#2{\Tg<a href="#1">#2\Tg</a>}

\begin{document}

\title{Taming \TeX4ht to Support Lettrine Package}

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        \Tg<small>\hlink{http://www.river-valley.com}{River Valley},
        Trivandrum, \textsc{india}\Tg</small>}

\maketitle

\lettrine{T}{his code} has kindly been contributed by
\hlink{http://www.raphink.info/}{Rapha\"el Pinson} and is
\hlink{https://github.com/cc-translators/sagesse/blob/master/lettrine.4ht}
{available here}. The original code was slightly modified to fit
into the scheme of \TeX4ht.  Rapha\"el had provided eight hooks to
reconfigure |\lettrine| which I'd reduced to seven. All the hooks are
provided below:

\begin{enumerate}
 \item Before |\lettrine|
 \item After  |\lettrine|
 \item Before lettrine initial character
 \item Between lettrine initial character and lettrine line
 \item After lettrine line
 \item Before lettrine ante
 \item After lettrine ante
\end{enumerate}

\lettrine{F}{urther} hooks have been defined to access initial
character and lettrine line in case we want to configure
|\lettrine|. |\HlettrineChar| and |\HlettrineString| can be used to
access the character and line respectively. The screenshot of this
```

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```
pages as rendered in Firefox is \hlink{lettrine.png}{available here}.

Here is a bit of dummy text to fill in the page. \lipsum[5-9]

\end{document}
```

There is nothing special to explain in the above part. `\hlink` is a custom macro with two arguments to cross-link something to a URL. The packages are popular ones and needs no introduction.

## Custom Configuration

The custom configuration, `my.cfg` has two parts — a preamble part and a post preamble part. Preamble area shall consist of three important commands:

1. `\Preamble` — beginning of preamble area.
2. `\begin{document}` — do not confuse with the `\begin{document}` in your document source.
3. `\EndPreamble` — end of preamble area.

`\Preamble` shall contain all the options that are to be passed on to TEX4ht. Options can be provided as comma separated strings. If any TEX packages are needed, those should be loaded before `\Preamble` command as shown below, where we have loaded `\xspace` package.

```
\RequirePackage{xspace}

\Preamble{xhtml,NoFonts,ext=html,charset="utf-8"}
```

For more details about options, please see this post.

```
\Configure{PROLOG}{DOCTYPE}
\Configure{VERSION}{}
\Configure{DOCTYPE}{\HCode{<!DOCTYPE html>\Hnewline}}
\Configure{HTML}{\HCode{<html>\Hnewline}}{\HCode{\Hnewline</html>}}
\Configure{@HEAD}{}
\Configure{@HEAD}{\HCode{<meta
        \expandafter\csname a:charset\endcsname/>\Hnewline}}
\Configure{@HEAD}{\HCode{<meta name="generator" content="TeX4ht
        (http://www.tug.org/tex4ht/)" />\Hnewline}}
\Configure{@HEAD}{\HCode{<link
        rel="stylesheet" type="text/css"
        href="\expandafter\csname aa:CssFile\endcsname" />\Hnewline
    }
}
\Configure{BODY}{\Tg<body>}{\Tg</body>}

\begin{document}

\def\hlink#1#2{\Tg<a href="#1">#2\Tg</a>\xspace}

\EndPreamble
```

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All the configuration items that are processed by TEX4ht at \begin{document} shall be provided before the \begin{document} command that appears in the preamble area. All the elements that form part of prolog and <head> element of HTML are the ideal candidates. Thus, PROLOG, VERSION, DOCTYPE, HTML, @HEAD and BODY are re-configured as we want them in a different manner. In HTML 5, we do not need DTD, XML version and further several meta part are more simplified, we reconfigure these items in this part of the configuration. You might note that @HEAD is additive, each \Configure{@HEAD} has one argument which will be added to the <head>...</head> part of the HTML. We have inserted character set, .css, meta information relating to generator which is TEX4ht, by re-configuring @HEAD.

```
\Configure{textsc}{\Tg<span class="sc">}{\Tg</span>}
\Configure{texttt}{\Tg<span class="tt">}{\Tg</span>}
\Configure{textbf}{\Tg<span class="bf">}{\Tg</span>}

\Css{.sc{font-variant: small-caps;}}
\Css{.bf{font-weight: bold;}}
\Css{small{font-size: .8em;}}
\Css{.tt,.verb{font-family: monospace; white-space: nowrap;
   color: \#222; font-size: 85\%;}}
```

The above lines show a few font attributes configuration where we have configured commands like \textsc, \textbf, and \texttt. The related .css declarations have been provided following the font attributes.

```
\Css{body{margin-top: 2em; margin-bottom: 1em; width: 60\%;
   margin-left: auto; margin-right: auto; padding: 3em;
   color: \#444; box-shadow: 2px 2px 20px -5px \#bfbfbf;
   -webkit-box-shadow: 2px 2px 20px -8px \#bfbfbf;
   -moz-box-shadow: 2px 2px 20px -5px \#bfbfbf;
   font-family: "EB Garamond";
   font-style: normal;
   font-size: 1em; line-height: 1.3em;
   border: 1px solid \#fefeef; }}

\Css{p.indent{ text-indent: 0em }}
```

The above provides .css declarations for <body> elements with a soft gray shadow, 60% width of the window, slightly grayed text color, slightly increased line height, 3em padding on all sides, etc. Not a big deal. The text indent has been suppressed through another .css declaration, as the indent can interfere with lettrine spacing.

Our custom configuation ends here if you do not want to make use of the free web font, namely, EB Garamond created by Georg Duffner and distributed under OFL font licence. The font can be had from Google or from here. The succeeding lines are .css declarations to make use of Garamond and CheshireInitials fonts in your document.

```
\Css{@font-face{font-family: InitialsFont; font-style: normal;
   src: url(/fonts/CheshireInitials.ttf);}}
\Css{@font-face{font-family: "EB Garamond SC"; font-variant: small-caps;
   src: url(/fonts/EBGaramond12-SC.ttf);}}
\Css{@font-face{font-family: "EB Garamond"; font-style: normal;
```

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```
      font-weight: normal; font-variant: normal;
      src: url(/fonts/EBGaramond12-Regular.ttf);}}
\Css{@font-face{font-family: "EB Garamond Italic"; font-style: italic;
      font-weight: normal;font-variant: normal;
      src: url(/fonts/EBGaramond12-Italic.ttf);}}
\Css{@font-face{font-family: "EB Garamond Bold"; font-style: normal;
      font-weight: bold; font-variant: normal;
      src: url(/fonts/EBGaramond12-Bold.ttf);}}
\Css{em, i, .ecti, .ecti1, .thanks, .signature, .dvquote-text,
.dvprayer-text{font-family: "EB Garamond Italic", serif;}}
%
\Css{strong, b, .partToc a, .partToc, .likepartToc a, .likepartToc,
.chapterToc a, .chapterToc, .likechapterToc a, .likechapterToc,
.appendixToc a, .appendixToc, .addchapToc,
.paragraphHead, .likeparagraphHead,
.subparagraphHead, .likesubparagraphHead,
.caption td.id{font-family: "EB Garamond Bold", serif;}}
%
\Css{.small-caps, .booksubtitle, .dvday, .sectionHead,
.dvquote-ref, .dvbox .lettrine-line{font-family: "EB Garamond SC", serif;}}
%
% CheshireInitials for Lettrine character
%
\Css{.lettrine{float: left; font-family: InitialsFont;
      line-height: 1.15; margin-left: -0.1em; padding-bottom: -0.6em;
      margin-bottom: -1em; margin-right: 0.2em;}}
```

### How to run T<sub>E</sub>X4ht

Save the above sources as `test.tex` and `my.cfg` respectively. Following command can be invoked from terminal:

```
mzlatex test my ' -cunihtf'
```

The synatax is

```
script <tex-file> <conf-file> '<options-for-t4ht>'
```

Please note the space between the opening single quote character and `-cunihtf` which is very important.

Enjoy the magic!

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