`knitr` → LaTeX → HTML testing

September 18, 2012@ 13:10

1 introduction

I have been trying to find an Sweave → LaTeX → HTML pathway that works via `knitr` ...

I think I can get it to work now, although it's not as pretty as I'd like. The bottom line is that to get this working you need to

- include `render_listings()` in an R chunk near the top of your file (I prefer the default highlighting on aesthetic grounds, but this works better with existing LaTeX-to-HTML tools)
- add `\usepackage{graphicx}`; `\DeclareGraphicsExtension{.pdf}`; `\usepackage{listings}`; `\lstset{language=R}` to the preamble of your document, and make sure that the Sweavel.sty file is available.
- make sure you have `myhtml.cfg` file available (see the end of this document)
- run `htlatex` as follows:

  ```
  htlatex $*.tex myhtml "" "" "-interaction=nonstopmode"
  ```

  where (of course) `$*` is the basename of your document (this line is from a Makefile)

2 example

```
## normally also include=FALSE
render_listings()
```

(An equation)

$$a + b \tag{1}$$

Some code:

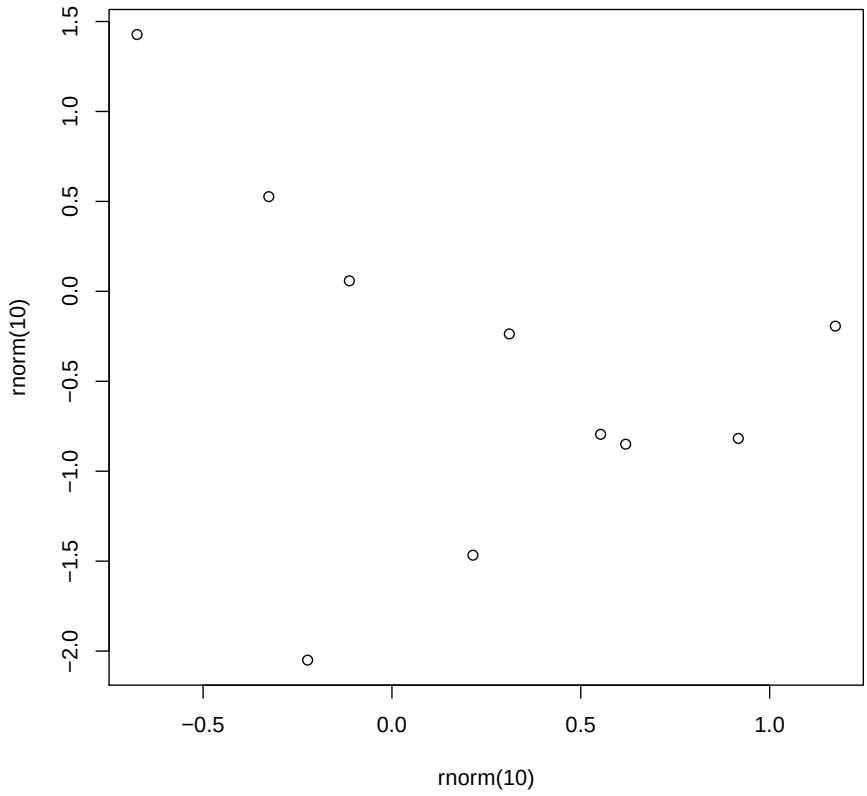
```
## here's a comment ...
(x ← 5^2)
```

```
[1] 25
```

```
y ← 17
```

A figure:

```
set.seed(101)
plot(rnorm(10), rnorm(10))
```



Inline R expression: the value of x is 25.
Session info:

```
sessionInfo()
```

```
R Under development (unstable) (2012-07-27 r60013)
Platform: i686-pc-linux-gnu (32-bit)

locale:
 [1] LC_CTYPE=en_CA.utf8       LC_NUMERIC=C
```

```
 [3] LC_TIME=en_CA.utf8        LC_COLLATE=en_CA.utf8
 [5] LC_MONETARY=en_CA.utf8    LC_MESSAGES=en_CA.utf8
 [7] LC_PAPER=C                LC_NAME=C
 [9] LC_ADDRESS=C              LC_TELEPHONE=C
[11] LC_MEASUREMENT=en_CA.utf8 LC_IDENTIFICATION=C

attached base packages:
[1] stats     graphics  grDevices utils     datasets  base

other attached packages:
[1] knitr_0.8

loaded via a namespace (and not attached):
[1] digest_0.5.2   evaluate_0.4.2 formatR_0.6    plyr_1.7.1
[5] stringr_0.6    tools_2.16.0
```

3 issues

- The assignment arrow `<-` inside the `Sinput` chunk confuses `htlatex` — have to run `htlatex` with `interaction=nonstopmode` (see below) — but the final document seems to come out OK. Is there a fix to `Sweavel.sty`, or something else, that will make it work?
- I don't have pretty syntax highlighting working for htlatex yet.

4 references

- From Yihui Xie, about using `render_listings()` (and the fact that he prefers to start with a markdown document): `https://groups.google.com/forum/#!msg/knitr/Dv2JmcDcuBo/dYkp2rEuSlAJ`
- htlatex image processing: `http://tex.stackexchange.com/questions/46156/pdf-image-files-and-htlatex`
- htlatex formatting (I don't have this working right yet): `http://tex.stackexchange.com/questions/7216/how-to-get-tex4ht-to-respect-listings-styling-better`
- more on htlatex/listings formatting (haven't tried this yet): `http://tex.stackexchange.com/questions/64054/latex-to-html-preserving-code-coloring-from-listings`

5 latexml

`latexml` is an alternative conversion program that I haven't managed to get working equally well ...

```
system("latexml --dest='knitr_listings_test.xml' knitr_listings_test.tex")
system("latexmlpost --dest='knitr_listings_test.xhtml' knitr_listings_test.xml")
```

6 myhtml.cfg

```
\Preamble{html}
\begin{document}
%% the following is from
%% http://tex.stackexchange.com/questions/7216/
%%         how-to-get-tex4ht-to-respect-listings-styling-better
%% it's supposed to get listings looking nice, but works with
%% standard listings output -- rather than output generated by
%% Sweavel.sty, which defines new listing environments
%% Sinput, Scode, Soutput ... ???
  \Css{div.lstinputlisting table.caption {
     background: rgb(64,128,64);
     color: white;
     font-family: sans-serif;
     padding-right: 100\%;
     }
     div.lstinputlisting .pcrro7t- {
       color: red;
     }
 }
 %% the following is from
 %% http://tex.stackexchange.com/questions/46156/pdf-image-files-and-htlatex
  \Configure{graphics*}
         {pdf}
         {\Needs{"convert \csname Gin@base\endcsname.pdf
                                \csname Gin@base\endcsname.png"}%
          \Picture[pict]{\csname Gin@base\endcsname.png}%
         }
\EndPreamble
```