Verbatim Text and Code Listings in LATEX

Raphael Frey, <webmaster@alpenwasser.net>

March 23, 2017

Abstract

There are many ways to integrate verbatim text (text which should, ideally, be unaltered) and formatted code (listings) into a LATEX document, as can easily be seen when looking at the corresponding topic pages on CTAN [10, 11]. This document presents examples for a few of them. The idea is not to provide in-depth documentation, but to give a brief overview of a few possibilities. Consulting the respective user manual is always recommended for detailled information.

For the *very* impatient: For most code listings, I use the **minted** package these days. While it is slow (at least on first compilation), it has served me well most of the time. But there are alternatives, and personal preferences matter, too. One's mileage may vary.

Contents

	The verbatim Environment	2 2 2
2	The verbatimbox Package [2]	2
3	The fancyvrb Package [3]	3
4	The listing Package [4]	3
5	The listings Package [5]	3
6	The listingsutf8 Package [6]	3
7	The mlpretty Package [7]	3
8	The minted Package [8]	3
9	References	3

1 The verbatim Environment

LATEX provides a verbatim Environment which, although it has quite a few limitations, is simple to use and often gets the job done well enough. For fancier things, there exists a re-implementation with a few added niceties.

1.1 Stock LATEX

The stock LATEX verbatim environment is used like this:

```
LaTeX Result vs. Code

\begin{verbatim}
#include <stdio.h>

main() {
    print("Hello, world!\n");
}
\end{verbatim}

#include <stdio.h>

main() {
    print("Hello, world!\n");
}
\end{verbatim}
```

1.2 Re-Implementation [1]

The re-implementation alleviates some limitations of the stock verbatim environment. For more details and to evaluate whether these limitations may be of relevance to your use case, consult the documentation at [1]. Basic usage is identical to the stock verbatim environment.

```
LaTeX Result vs. Code

\begin{verbatim}
#include <stdio.h>

main() {
    print("Hello, world!\n");
}
\end{verbatim}

#include <stdio.h>

main() {
    print("Hello, world!\n");
}
}
```

2 The verbatimbox Package [2]

A box is defined via \begin{verbbox}[options] content \end{verbbox}. This, however, does not yet display the bxo. This can be done via the \theverbbox command. This can be easily wrapped inside a box like so:

```
LaTeX Result vs. Code

\begin{verbbox}
#include <stdio.h>

main() {
    print("Hello, world!\n");
}
\end{verbbox}
\fbox{\theverbbox}
#include <stdio.h>
main() {
    print("Hello, world!\n");
}
```

Note the removal of empty lines in the result on the right. As above, check the documentation [2] for more options and possibilities.

- 3 The fancyvrb Package [3]
- 4 The listing Package [4]
- 5 The listings Package [5]
- 6 The listingsutf8 Package [6]
- 7 The mlpretty Package [7]
- 8 The minted Package [8]

9 References

- [1] Rainer Schöpf and The LATEX Team. "verbatim Reimplementation of and extensions to LATEX verbatim", Version 1.5q, 2001-MAR-12. [Online], http://ctan.org/pkg/verbatim, [Accessed: 2017-MAR-22].
- [2] Steven B. Segletes. "verbatimbox Deposit verbatim text in a box", Version 3.13, 2014-MAR-12. [Online], http://ctan.org/pkg/verbatimbox, [Accessed: 2017-MAR-22].
- [3] Timothy Van Zandt and Herbert Voß and Denis Girou. "fancyrvb Sophisticated verbatim text", Version 2.8, 2010-MAY-15. [Online], http://ctan.org/pkg/fancyvrb, [Accessed: 2017-MAR-22].
- [4] Volker Kuhlmann and Matthew Hebley. "listing Produce formatted program listings", Version 1.2, 1999-MAY-25. [Online], http://ctan.org/pkg/listing, [Accessed: 2017-MAR-22].
- [5] Brooks Moses and Carsten Heinz and Jobst Hoffman. "listings Typeset source code listings using LaTeX", Version 1.6, 2015-JUN-04. [Online], http://ctan.org/pkg/listings, [Accessed: 2017-MAR-22].
- [6] Heiko Oberdiek. "listingsutf8 Allow UTF-8 in listings input", Version 1.3, 2016-MAY-16. [Online], http://ctan.org/pkg/listingsutf8, [Accessed: 2017-MAR-22].
- [7] Julien Cretel. "matlab-prettifier Pretty-print Matlab source code", Version 0.3, 2014-JUN-19. [Online], http://ctan.org/pkg/matlab-prettifier, [Accessed: 2017-MAR-22].
- [8] Konrad Rudolph and Geoffrey Poore. "minted Highlighted source code for Late", Version 2.4.1, 2016-OCT-31. [Online], http://ctan.org/pkg/minted, [Accessed: 2017-MAR-22].

- [9] Dejan Živkovic. "verbments Syntax highlighting of source code in \(\mathbb{L}T_EX\) documents", Version 1.2, 2011-AUG-20. [Online], \(\text{http://ctan.org/pkg/verbments}\), [Accessed: 2017-MAR-22].
- [10] Comprehensive T_EX Archive Network. "Topic listing". [Online], http://ctan.org/topic/listing, [Accessed: 2017-MAR-22].
- [11] Comprehensive T_EX Archive Network. "Topic verbatim". [Online], http://ctan.org/topic/verbatim, [Accessed: 2017-MAR-22].