## mcode.sty Demo

Florian Knorn, florian@knorn.org

March 20, 2022

#### NOTE — BEFORE YOU START

All that this package does is to configure the listings package for you. If anything is not working the way you want it, refer to the listings documentation first and / or take a look at the mcode.sty file itself, which is well documented internally.

The listings documentation can be accessed either by typing texdoc listings into a command prompt on your system, or online:

http://mirrors.ctan.org/macros/latex/contrib/listings/listings.pdf

### Installation of the package

As with any other small package, just place the mcode.sty file in the same folder as your document, or put it somewhere where LaTeX can find it. Done!

# Usage - 3 ways

- 1) This inline demo for i=1:3, disp('cool'); end; uses the \mcode{} command. 1
- 2) The following is a block using the lstlisting environment.

<sup>&</sup>lt;sup>1</sup>Works also in footnotes: for i=1:3, disp('cool'); end;

```
for i = 1:3
         if \quad i \ \geq \ 5 \ \&\& \ a \ \neq \ b 
                                    % literate programming replacement
2
                                        % comment with some IATEX
in it: \pi x^2
             disp('cool');
3
        [:, ind] = max(vec);
        x_{last} = x(1,end) - 1;
        v(end);
7
        really really long really really long really really long ...
             really really long really really long line % blaaaaaaaa
        ylabel('Voltage (\mu V)');
   end
10
```

Note: Here, the package was loaded with the framed, numbered, autolinebreaks and useliterate options. Please see the top of mcode.sty for a detailed explanation of these options.

3) Finally, you can also directly include an external m-file from somewhere on your hard drive (the very code you use in MATLAB, if you want) using the \lstinputlisting{/SOME/PATH/FILENAME.M} command. If you only want to include certain lines from that file (for instance to skip a header), you can use \lstinputlisting[firstline=6, lastline=15]{/SOME/PATH/FILENAME.M}.

#### FAQ

- Why does delta get replaced by  $\Delta$ , = by  $\neq$ , etc.? Well, that's precisely what the useliterate option does. If you don't want that, don't use it.
- Can I get contiguous line numbers from one code block to another? Yes, but you have to read the listings documentation for that (Section 4.8 in particular).
- mcode.sty doesn't work in my document! Well, try your (Matlab) code fragment in this demo document here to see whether there's something in it that might be causing a problem (not so likely, but possible), or if there's some conflict between the listings package and some other package you have loaded.
- Is feature XYZ possible? Well, the listings package might already be able to do that. Please consult its documentation (see red box at the top)!