

ffcode: L^AT_EX Package for Fixed-Font Code Blocks*

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1 Introduction

This package helps you write source code in your articles and make sure it looks nice. Install it from CTAN and then use like this (pay attention to `\ff` command and `ffcode` environment):

```
\documentclass{article}
\usepackage{ffcode}
\begin{document}
The function \ff{fibonacci}
is recursive:
\begin{ffcode}
int fibo(int n) {
    if (n < 2) {
        return n; |$\label{ln:ret}$|
    }
    return fibo(n-1)+fibo(n-2);
}
\end{ffcode}
The line no.~\ref{ln:ret}
terminates it.
\end{document}
```

The function `fibo()` is recursive:

```
1 int fibo(int n) {
2     if (n < 2) {
3         return n;
4     }
5     return fibo(n-1)+fibo(n-2);
6 }
```

The line no. **3** terminates it.

2 Package Options

nopygments You have to run `pdflatex` with `--shell-escape` flag in order to let `minted` (the package we use) to run `Pygments` and format the code. If you don't want this to happen, just use `nopygments` option.

noframes If you want to omit the light gray frames around `\ff` texts, use the package option `noframes`.

*The sources are in GitHub at [yegor256/ffcode](https://github.com/yegor256/ffcode)

`nobars` To omit the vertical gray bar at the left side of each snippet, use `nobars` option of the package.

`nonumbers` To omit the line numbers, use `nonumbers` option of the package.

`nocn` By default, the numbering is continuous: line numbers start at the first snippet and increment until the end of the document. If you want them to start from one at each snippet, use `nocn` (stands for “no continuous numbering”) option of the package.

3 Typesetting

By the way, the package correctly formats low-height texts, for example, just a dot: `.`

A pair of vertical lines decorate a TeX command inside the snippet. If you want to print a single vertical line, use this: `\vert`.

The command `\ff` behaves differently in math mode — it doesn’t add gray frames:

```
\documentclass{article}
\usepackage{ffcode}
\begin{document}
\begin{equation}
x = \int_{\text{home}}^N f(x).
\end{equation}
\end{document}
```

$$x = \int_{\text{home}}^N f(x). \quad (1)$$

4 Line Highlighting

You can highlight some lines in your `ffcode` environment, or can use any other additional configuration parameters from `minted` package:

```
\documentclass{article}
\usepackage{ffcode}
\begin{document}
\begin{ffcode*}
  {highlightlines={1,4-5}}
while (true) {
  print("Hello!")
  print("Enter your name:")
  scan(x)
  print("You name is " + x)
}
\end{ffcode*}
\end{document}
```

```
7 while (true) {
8   print("Hello!")
9   print("Enter your name:")
10  scan(x)
11  print("You name is " + x)
12 }
```

Using this second argument of `ffcode*` (with the trailing asterisk), you can provide any other options from `minted` package to the snippet.

5 Implementation

First, we parse package options:

```
1 \RequirePackage{xkeyval}
2 \makeatletter
3 \DeclareOptionX{nopygments}{\PassOptionsToPackage{draft=true}{minted}}
4 \newif\iff@noframes
5 \DeclareOptionX{noframes}{\ff@noframetrue}
6 \newif\iff@nobars
7 \DeclareOptionX{nobars}{\ff@nobarstrue}
8 \newif\iff@nonumbers
9 \DeclareOptionX{nonumbers}{\ff@nonumberstrue}
10 \newif\iff@nocn
11 \DeclareOptionX{nocn}{\ff@nocntrue}
12 \ProcessOptionsX\relax
13 \makeatother
```

Then, we configure minted package:

```
14 \RequirePackage{minted}
15 \setminted{breaklines}
16 \setminted{escapeinside=||,mathescape}
17 \setminted{highlightcolor=gray!25}
18 \usemintedstyle{bw}
```

ffcode Then, we define ffcode environment:

```
19 \makeatletter\iff@nonumbers
20   \iff@nobars
21   \newminted[ffcode]{text}{}
22   \else
23     \newminted[ffcode]{text}{framesep=6pt,
24       framerule=1pt,rulecolor=gray,frame=leftline}
25   \fi
26 \else
27   \renewcommand{\theFancyVerbLine}{\textcolor{gray}
28     {\tiny\oldstylenums{\ttfamily\arabic{FancyVerbLine}}}}
29   \iff@nocn
30     \iff@nobars
31       \newminted[ffcode]{text}{
32         linenos,numbersep=2pt
33       }
34     \else
35       \newminted[ffcode]{text}{
36         framesep=6pt,framerule=1pt,rulecolor=gray,
37         frame=leftline,linenos,numbersep=2pt
38       }
39     \fi
40   \else
41     \iff@nobars
42       \newminted[ffcode]{text}{
43         firstnumber=last,linenos,numbersep=2pt
44       }
45     \else
46       \newminted[ffcode]{text}{
47         framesep=6pt,framerule=1pt,rulecolor=gray,
```

```

48         frame=leftline,firstnumber=last,linenos,numbersep=2pt
49     }
50     \fi
51 \fi
52 \fi\makeatother

```

\ff@print Then, we define supplementary commands \ff@print and \ff@printx:

```

53 \makeatletter
54 \newcommand\ff@print{\begingroup\obeyspaces\ff@printx}
55 \newcommand\ff@printx[1]{\texttt{#1}\endgroup}
56 \makeatother

```

\ff@rule Then, we define supplementary command \ff@rule:

```

57 \makeatletter\newcommand\ff@rule
58   {\vrule height 6pt depth 1pt width 0pt}
59 \makeatother

```

\ff Finally, we define \ff command:

```

60 \makeatletter\iff@noframes
61   \newcommand\ff[1]{\ff@rule\ff@print{#1}}
62 \else
63   \RequirePackage{tcolorbox}
64   \newtcbbox\ff@box{nobeforeafter,colframe=gray!80!white,
65     colback=gray!5!white,boxrule=0.1pt,arc=1pt,
66     boxsep=1.2pt,left=0.5pt,right=0.5pt,top=0.2pt,bottom=0.2pt,
67     tcbox raise base}
68   \newcommand\ff[1]{\relax\ifmmode%
69     {\ff@rule\ff@print{#1}}%
70   \else%
71     {\ff@box{\ff@rule\ff@print{#1}}}
72   \fi}
73 \fi\makeatother

```

Change History

v0.2.0
General: Initial version 3

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