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 \texttt{ff} command and \texttt{ffcode} environment):

\begin{Verbatim}
\documentclass{article}
\usepackage{ffcode}
\pagestyle{empty}
\begin{document}
The function |fibo()| 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}
Line no.~\ref{ln:ret} returns \texttt{n} and terminates it.
\end{document}
\end{Verbatim}

2 Package Options

\begin{itemize}
  \item \texttt{nopygments} You have to run \texttt{pdflatex} with \texttt{-shell-escape} flag in order to let \texttt{minted} (the package we use) to run Pygments and format the code. If you don’t want this to happen, just use \texttt{nopygments} option.
  \item \texttt{noframes} If you want to omit the light gray frames around \texttt{ff} texts, use the package option \texttt{noframes}.
  \item \texttt{nobars} To omit the vertical gray bar at the left side of each snippet, use \texttt{nobars} option of the package.
\end{itemize}

*The sources are in GitHub at \texttt{yegor256/ffcode}
To omit the line numbers, use \texttt{nonumbers} option of the package.

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 \texttt{nocn} (stands for “no continuous numbering”) option of the package.

You can make your \texttt{ff} pieces look bolder than usual, which may be pretty convenient for some document classes (pay attention to the usage of the \texttt{lmodern} package, without it the bold won’t work, as explained \url{here}):

\begin{verbatim}
\usepackage{lmodern}
\usepackage[bold,noframes]{ffcode}
\begin{document}
Sometimes it’s necessary to make code pieces look bolder, like the \texttt{fibo()} function in this text.
\end{document}
\end{verbatim}

You can change the font family of \texttt{ff} pieces to \texttt{sffamily}:

\begin{verbatim}
\usepackage[sf,bold,noframes]{ffcode}
\begin{document}
Sometimes you may want them to look not strictly fixed-width, but more elegant, like the \texttt{\emph{fibo()}} here.
\end{document}
\end{verbatim}

\section{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: “|char‘\vert|.”

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

\begin{equation*}
\begin{aligned}
x &= \int_{\text{home}}^N f(x).
\end{aligned}
\end{equation*}

\section{Line Highlighting}

You can highlight some lines in your \texttt{ffcode} environment, or can use any other additional configuration parameters from \texttt{minted} package:
while (true) {
    print("Hello!")
    print("Enter your name:")
    scan(x)
    print("You name is " + x)
}

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

\section{Implementation}

First, we parse package options with the help of \texttt{pgfplots} package:
\begin{verbatim}
\RequirePackage{pgfplots}
\pgfkeys{
  /ff/.cd,
  bold/.store in=\ff@bold,
  sf/.store in=\ff@sf,
  nopygments/.store in=\ff@nopygments,
  noframes/.store in=\ff@noframes,
  nonumbers/.store in=\ff@nonumbers,
  nobars/.store in=\ff@nobars,
  novert/.store in=\ff@novert,
  nocn/.store in=\ff@nocn,
}
\ProcessPgfPackageOptions{/ff}
\end{verbatim}

Then, we disable pygments for \texttt{minted}, if necessary:
\begin{verbatim}
\makeatletter\ifdefined\ff@nopygments
\PassOptionsToPackage{draft=true}{minted}
\fi\makeatother
\end{verbatim}

Then, we configure \texttt{minted} package:
\begin{verbatim}
\RequirePackage{minted}
\setminted{breaklines}
\setminted{escapeinside=||,mathescape}
\setminted{highlightcolor=gray!25}
\usemintedstyle{bw}
\end{verbatim}

Then, we define \texttt{ffcode} environment:
\begin{verbatim}
\makeatletter\ifdefined\ff@nonumbers
  \ifdefined\ff@nobars
    \newminted[ffcode]{text}{}
  \else
    \newminted[ffcode]{text}{framesep=6pt,}
    \framerule=1pt,rulecolor=gray,frame=leftline}
  \else
    \renewcommand{\theFancyVerbLine}{\textcolor{gray}{\tiny\oldstylenums{\ttfamily\arabic{FancyVerbLine}}}}
\end{verbatim}
\ifdefined\ff@nocn
\ifdefined\ff@nobars
\newminted[ffcode]{text}{
   linenos,numbersep=2pt
 }
\else
\newminted[ffcode]{text}{
   framesep=6pt,framerule=1pt,rulecolor=gray,
   frame=leftline,linenos,numbersep=2pt
 }
\fi
\else
\ifdefined\ff@nobars
\newminted[ffcode]{text}{
   firstnumber=last,linenos,numbersep=2pt
 }
\else
\newminted[ffcode]{text}{
   framesep=6pt,framerule=1pt,rulecolor=gray,
   frame=leftline,firstnumber=last,linenos,numbersep=2pt
 }
\fi
\fi
\fi

\makeatletter
\newcommand\ff@print[1]{\textnormal{%
\ifdefined\ff@sf\sffamily\else\ttfamily\fi%\ifdefined\ff@bold\fontseries{b}\selectfont\fi% #1%}
}
\makeatother

\ff@rule  Then, we define supplementary command \texttt{\ff@rule}:
\makeatletter
\newcommand\ff@rule{\vrule height 6pt depth 1pt width 0pt}
\makeatother

\texttt{tcolorbox}  Then, we use \texttt{tcolorbox} to define \texttt{\ff@box} command for a gray box around verbatim text block:
\makeatletter
\ifdefined\ff@noframes\else
\RequirePackage{tcolorbox}
\newtcbbox\ff@box{nobeforeafter,colframe=gray!80!white, colback=gray!5!white,boxrule=0.1pt,arc=1pt, boxsep=1.2pt,left=0.5pt,right=0.5pt,top=0.2pt,bottom=0.2pt, tcbox raise base}
\fi
\makeatother

\ff@x  Then, we define \texttt{\ff@x} internal command for printing a piece of fixed-width-font text:
\makeatletter
\NewDocumentCommand\ff@x{v}{\ff{#1}}
\makeatother

\ff Then, we define \ff macro:
\makeatletter
\newcommand\ff[1]{% 
  \ifdefined\ff@noframes%
    \ff@rule\ff@print{#1}%
  \else%
    \relax\ifmmode%
    \ff@rule\ff@print{#1}%
  \else%
    \ff@box{\ff@rule\ff@print{#1}}%
  \fi%
  \fi%
}
\makeatother

\novert Finally, we let vertical bars work similar to \ff, as suggested here and here (unless \novert package option is used):
\makeatletter
\ifdefined\ff@novert\else
  \catcode'|active
  \AtBeginDocument{\catcode'|active\protected\def{|{\ff@x}}}
  \catcode'| 12 %
\fi\makeatother

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# Change History

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