

The mdframed package

Examples for `framemethod=default`

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In this document I collect various examples for `framemethod=default`. Some presented examples are more or less exorbitant.

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1 Loading

In the preamble only the package `mdframed` with the option `framemethod=default` is loaded. All other modifications will be done by `mdfdefinestyle` or `mdfsetup`.

Note

Every `global` inside the examples is necessary to work with the package `showexpl`.

2 Examples

All examples have the following settings:

```
\mdfsetup{skipabove=\topskip, skipbelow=\topskip}
\newrobustcmd\ExampleText{%
An \textit{inhomogeneous linear} differential equation
has the form
\begin{align}
L[v] = f,
\end{align}
where  $L$  is a linear differential operator,  $v$  is
the dependent variable, and  $f$  is a given non-zero
function of the independent variables alone.
}
```

Example 1 – very simple

```

\global\mdfdefinestyle{exampledefault}{%
  \linecolor=red , \linewidth=3pt , %
  \leftmargin=1cm , \rightmargin=1cm
}
\begin{mdframed}[style=exampledefault]
\ExampleText
\end{mdframed}

```

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \tag{1}$$

where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.

Example 2 – hidden line + frame title

```

\global\mdfapptodefinestyle{exampledefault}{%
  \topline=false , \rightline=true , \bottomline=false }
\begin{mdframed}[style=exampledefault , frametitle={Inhomogeneous linear}]
\ExampleText
\end{mdframed}

```

Inhomogeneous linear

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \tag{2}$$

where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.

Example 3 – colored frame title

```

\renewcommand\mdfamedtitleenv[1]{%
    \colorbox{green}{%
        \parbox{\dimexpr\linewidth-6pt\relax}{%6pt=linewidth
            {\centering\bfseries #1}}}%
        \par\kern.5\baselineskip\noindent%
    }
\global\mdfapptodefinestyle{exampledefault}{%
    rightline=true,innerleftmargin=0,innerrightmargin=0}
\begin{mdfamed}[style=exampledefault,frametitle={Inhomogeneous linear}]
\ExampleText
\end{mdfamed}

```

Inhomogeneous linear

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \quad (3)$$

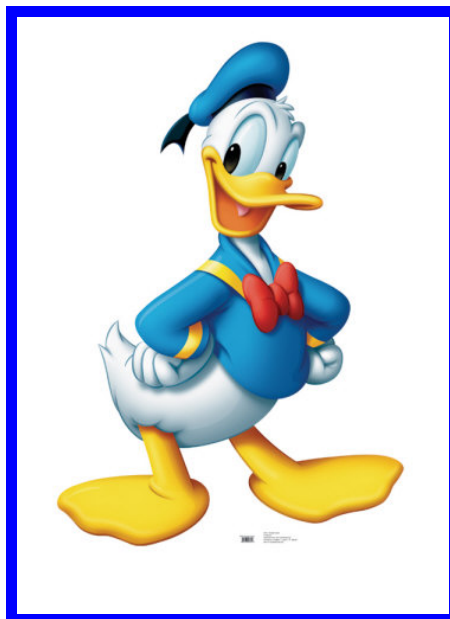
where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.

Example 4 – framed picture which is centered

```

\begin{mdfamed}[userdefinedwidth=6cm,align=center,
    linecolor=blue,linewidth=4pt]
\includegraphics[width=\linewidth]{donald-duck}
\end{mdfamed}

```



Example 5 – theorem with separate header and the help of TikZ (complex)

```

\makeatletter
\newcounter{theo}[section]
\newcommand*\newmdframedtitleenv[1]{%
  \@afterindentfalse
  {\parindent\z@
    \setlength{\parfillskip}{\z@ plus 1fil}%
    \mdraggedtitle\nobreak%
    \makebox[\linewidth][l]{%
      \hspace*{-1\mdf@innerleftmargin@length}%
      \rlap{\color{white}%
        \hspace*{-1\mdf@middlelinewidth@length}%
        \rule[\mdf@middlelinewidth@length]{\dimexpr\linewidth+1\mdf@innerleftmargin@length%
          +\mdf@innerrightmargin@length%
          +2\mdf@middlelinewidth@length\relax}{\dimexpr\ht\strutbox+.3333em\relax}%
        }%
      \rlap{\color{blue!20}%
        \rule{\dimexpr\linewidth+\mdf@innerleftmargin@length%
          +\mdf@innerrightmargin@length\relax}{\mdf@middlelinewidth@length}}%
      \hspace*{-1\mdf@middlelinewidth@length}%
      \tikz[remember picture,baseline]{%
        \node[,draw=none,text=black,fill=blue!20,]{%
          \mdf@frametitlefont\strut Theorem~\thetheo#1};\relax%
        }%
      \par\kern.5\baselineskip}%
    \@afterheading}
\newenvironment{theo}[1][]{%
  \let\mdframedtitleenv\newmdframedtitleenv%
  \stepcounter{theo}%
  \ifstrepty{#1}%
    {\mdfsetup{frametitle={\strut}}}%
    {\mdfsetup{frametitle={:#1}}}%
  \begin{mdframed}[innertopmargin=0pt,linecolor=blue!20,%
    linewidth=2pt,topline=false,]%
  {\end{mdframed}}
\begin{theo}[Inhomogeneous Linear]
\ExampleText
\end{theo}

\begin{theo}
\ExampleText
\end{theo}

```

Theorem 1: Inhomogeneous Linear

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \tag{4}$$

where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.

Theorem 2

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \tag{5}$$

where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.

Example 6 – hide only a part of a line

The example below is inspired by the following post on StackExchange [Theorem decorations that stay with theorem environment](#)

```
\makeatletter
\newlength{\interruptlength}
\setlength{\interruptlength}{2.5ex}
\newrobustcmd{\overlaplines}{%
\appto\md@frame@leftline@single{%
\llap{\color{white}%
\rule[\dimexpr-\mdfboundingboxdepth%
\ifbool{mdf@bottomline}{-\mdf@middlelinewidth@length}{\%
+\interruptlength\relax}%
{\mdf@middlelinewidth@length}%
{\dimexpr\mdfboundingboxtotalheight%
+\ifbool{mdf@bottomline}{\mdf@middlelinewidth@length}{0pt}%
+\ifbool{mdf@topline}{\mdf@middlelinewidth@length}{0pt}}%
-2\interruptlength\relax}%
}%
}%
\appto\md@frame@rightline@single{%
\rlap{\color{white}%
\hspace*{\mdfboundingboxwidth}%
\hspace*{\mdf@innerrightmargin@length}%
\rule[\dimexpr-\mdfboundingboxdepth%
\ifbool{mdf@bottomline}{-\mdf@middlelinewidth@length}{\%
+\interruptlength\relax}%
{\mdf@middlelinewidth@length}%
{\dimexpr\mdfboundingboxtotalheight%
+\ifbool{mdf@bottomline}{\mdf@middlelinewidth@length}{0pt}%
+\ifbool{mdf@topline}{\mdf@middlelinewidth@length}{0pt}}%
-2\interruptlength\relax}%
}%
}%
}%
\makeatother
\overlaplines

\begin{mdframed}[linecolor=blue,linewidth=8pt]
\ExampleText
\end{mdframed}
```

An *inhomogeneous linear* differential equation has the form

$$L[v] = f, \tag{6}$$

where L is a linear differential operator, v is the dependent variable, and f is a given non-zero function of the independent variables alone.