The **myTCB-V1** Package

Text and Listing Boxes

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Contents

Introduction

Latex is heavily used in scientific fields, such as electrical engineering, mechanical engineering, and computer science. Especially in these areas, it is sometimes necessary that certain sections of the text are displayed inside a box. This box can, but does not have to, differ from the standard colors of the text.

This is an example box

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

In computer science, for example, it is very often necessary to display sections of configuration or program code.

A simple Python Program

```
1
2   #
3   # Python Example
4   #
5
6   print("Hi, This is an example program")
7
8   i = 0
9
10  while i < 10:
11    print(i)
      i=i+1
```

For this purpose, it is necessary to tell Latex that certain sections should not be interpreted as normal text.

The *myTCB-V1* package provides an environment for text and listing boxes. A text box is a paragraph-making environment that produces normal text (including pictures, etc...) with automatic word splitting, line and page breaking to fit the texts within a specified area. A listing box is a paragraph-making environment that gets LaTeX to print exactly what you type. It transforms LaTeX into a typewriter, where carriage returns and whitespaces will have the same effect as with a typewriter. The output looks exactly as it looks in the input file.

The *myTCB-V1* package loads automatically the packages shown in LaTeX Definition 1.

LaTeX Definition 1

```
\RequirePackage{lipsum}

\RequirePackage{graphicx}
\RequirePackage{wrapfig}

\RequirePackage{xcolor}

\RequirePackage{verbatim}
\RequirePackage{fancyvrb}
\RequirePackage{listings}

\RequirePackage{float}

\RequirePackage{refstyle}

\RequirePackage{tcolorbox}
  \tcbuselibrary{skins,breakable,listings,xparse}
```

To load the package, write `\usepackage{myTCB-V1}` in the preamble of your document. To use this package, it is highly recommended to have the complete LaTeX distribution installed. This will avoid problems with dependencies.

LaTeX Example 1

```
\usepackage{myTCB-V1}
```

The Text Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myBOX`. In this environment there is no list index available and only text boxes are created

LaTeX Example 2

```
\begin{myBOX}{}
  \lipsum[3]
\end{myBOX}
```

Nulla malesuada porttitor diam. Donec felis erat, congue non, volutpat at, tincidunt tristique, libero. Vivamus viverra fermentum felis. Donec nonummy pellentesque ante. Phasellus adipiscing semper elit. Proin fermentum massa ac quam. Sed diam turpis, molestie vitae, placerat a, molestie nec, leo. Maecenas lacinia. Nam ipsum ligula, eleifend at, accumsan nec, suscipit a, ipsum. Morbi blandit ligula feugiat magna. Nunc eleifend consequat lorem. Sed lacinia nulla vitae enim. Pellentesque tincidunt purus vel magna. Integer non enim. Praesent euismod nunc eu purus. Donec bibendum quam in tellus. Nullam cursus pulvinar lectus. Donec et mi. Nam vulputate metus eu enim. Vestibulum pellentesque felis eu massa.

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 3

```
\begin{myBOX}{title={This is myBOX}}
  \lipsum[4]
\end{myBOX}
```

This is myBOX

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

The Text Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myBOXlst`. In this environment there is a list index available and only text boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *MyBOX* and a sequential number.

LaTeX Example 4

```
\begin{myBOXlst}{TITLE1}{}
  \lipsum[4]
\end{myBOXlst}
```

MyBOX 1

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

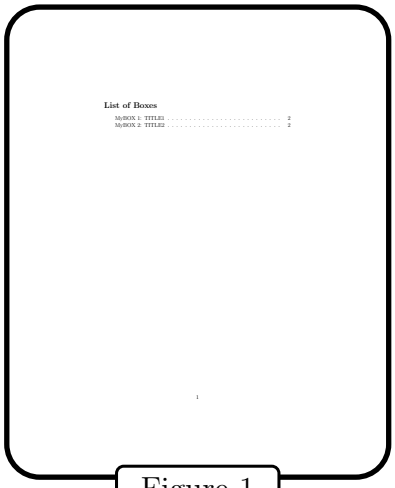


Figure 1

You can create the list index with the command `\listofmyBOX`.

LaTeX Example 5

```
\listofmyBOX
```

This will create a list index which looks like the picture in Figure 1.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 6.

LaTeX Example 6

```
\makeatletter
  \renewcommand{\l@myBOX}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 7.

LaTeX Example 7

```
\makeatletter
  \addtocontents{myBOX}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 8.

LaTeX Example 8

```
% copy cmd \listofmyBOX into cmd \oldlistofmyBOX
\let\oldlistofmyBOX\listofmyBOX

% renew cmd \listofmyBOX
\renewcommand\listofmyBOX
{
  \pagestyle{empty} % .... % disable headers/footers
  \oldlistofmyBOX % ..... % call \oldlistofmyBOX
  \clearpage % ........... % create a new page
  \pagestyle{plain} % .... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\boxref{}`.

LaTeX Example 9

```
\begin{myBOXlst}{TITLE2}{label={box:BOXLABEL2}}
  \lipsum[4]
\end{myBOXlst}
```

MyBOX 2

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

LaTeX Example 10

```
This example is shown in \boxref{BOXLABEL2}
```

This example is shown in BOX 2

It is notable that the label has to contain the `box:` prefix in order to reference the label appropriately.

The LaTeX Definition Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `mySTY`. In this environment there is no list index available and only listing boxes are created. The main idea for this environment was to build a box that shows the LaTeX code that is located in the preamble.

LaTeX Example 11

```
\begin{mySTY}{}
\documentclass[12pt,a4paper]{article}
\usepackage{myTCB-V1}
\end{mySTY}
```

```
\documentclass[12pt,a4paper]{article}
\usepackage{myTCB-V1}
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 12

```
\begin{mySTY}{title={How to create a listing style}}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTY}
```

How to create a listing style

```
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
```

By default, the `mySTY` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 13

```
\begin{mySTY}{listing options={keywords={ttfamily, numberstyle}}}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTY}
```

```
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 14

```
\begin{mySTY}{listing options={style=num}}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTY}
```

```
1  \lstdefinestyle{nosynhi}
2  {
3    numberstyle={\scriptsize\ttfamily},
4    keywordstyle={\scriptsize\ttfamily},
5    commentstyle={\scriptsize\ttfamily},
6    stringstyle={\scriptsize\ttfamily},
7  }
```

The LaTeX Definition Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `mySTYlst`. In this environment there is a list index available and only listing boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *LaTeX Definition* and a sequential number. The main idea for this environment was to build a box that shows the LaTeX code that is located in the preamble.

LaTeX Example 15

```
\begin{mySTYlst}{TITLE1}{}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTYlst}
```

LaTeX Definition 1

```
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
```

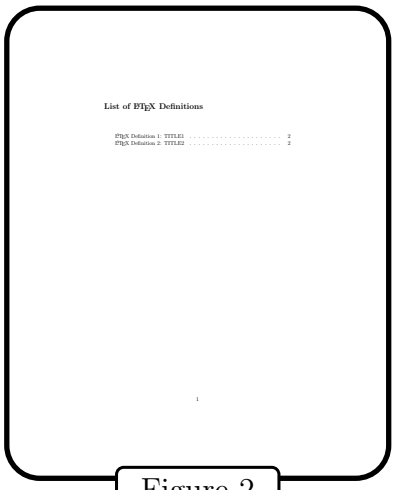


Figure 2

You can create the list index with the command `\listofmySTY`.

LaTeX Example 16

```
\listofmySTY
```

This will create a list index which looks like the picture in Figure 2.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 17.

LaTeX Example 17

```
\makeatletter
  \renewcommand{\l@mySTY}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 18.

LaTeX Example 18

```
\makeatletter
  \addtocontents{mySTY}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 19.

LaTeX Example 19

```
% copy cmd \listofmySTY into cmd \oldlistofmySTY
\let\oldlistofmySTY\listofmySTY

% renew cmd \listofmySTY
\renewcommand\listofmySTY
{
  \pagestyle{empty} % .... % disable headers/footers
  \oldlistofmySTY % ..... % call \oldlistofmySTY
  \clearpage % ........... % create a new page
  \pagestyle{plain} % .... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\styref{}`.

LaTeX Example 20

```
\begin{mySTYlst}{TITLE2}{label={sty:STYLABEL2}}
\lipsum[4]
\end{mySTYlst}
```

LaTeX Definition 2

```
\lipsum[4]
```

LaTeX Example 21

```
This example is shown in \styref{STYLABEL2}
```

This example is shown in LaTeX Definition 2

It is notable that the label has to contain the `sty:` prefix in order to reference the label appropriately.

By default, the `mySTYlst` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 22

```
\begin{mySTYlst}{TITLE3}{listing options={keywords={ttfamily, numberstyle}}}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTYlst}
```

LaTeX Definition 3

```
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 23

```
\begin{mySTYlst}{TITLE4}{listing options={style=num}}
\lstdefinestyle{nosynhi}
{
  numberstyle={\scriptsize\ttfamily},
  keywordstyle={\scriptsize\ttfamily},
  commentstyle={\scriptsize\ttfamily},
  stringstyle={\scriptsize\ttfamily},
}
\end{mySTYlst}
```

LaTeX Definition 4

```
1 \lstdefinestyle{nosynhi}
2 {
3   numberstyle={\scriptsize\ttfamily},
4   keywordstyle={\scriptsize\ttfamily},
5   commentstyle={\scriptsize\ttfamily},
6   stringstyle={\scriptsize\ttfamily},
7 }
```

The LaTeX Example Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myTEXEX`. In this environment there is no list index available and listing boxes are created by default. The main idea for this environment was to build a box that shows the LaTeX code that is located in the body of the document.

LaTeX Example 24

```
\begin{myTEXEX}{}
\begin{figure}[H]
  \begin{tikzpicture}
    \draw (0,0) to (0,2);
    \draw (0,2) to (1,3.5);
    \draw (1,3.5) to (2,2);
    \draw (2,2) to (2,0);
    \draw (2,0) to (0,0);
    \draw (0,0) to (2,2);
    \draw (0,2) to (2,0);
    \draw (0,2) to (2,2);
  \end{tikzpicture}
\end{figure}
\end{myTEXEX}
```

```
\begin{figure}[H]
  \begin{tikzpicture}
    \draw (0,0) to (0,2);
    \draw (0,2) to (1,3.5);
    \draw (1,3.5) to (2,2);
    \draw (2,2) to (2,0);
    \draw (2,0) to (0,0);
    \draw (0,0) to (2,2);
    \draw (0,2) to (2,0);
    \draw (0,2) to (2,2);
  \end{tikzpicture}
\end{figure}
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 25

```
\begin{myTEXEX}{title={A TIKZ Picture}}
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
\end{myTEXEX}
```

A TIKZ Picture

```
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
```

By default, the `myTEXEX` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 26

```
\begin{myTEXEX}{title={A TIKZ Picture}, listing options={keywords={tikzpicture}}}
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
\end{myTEXEX}
```

A TIKZ Picture

```
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 27

```
\begin{myTEXEX}{listing options={style=num, keywords={tikzpicture}}}
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
\end{myTEXEX}
```

```
1 \begin{figure}[H]
2   \begin{tikzpicture}
3   [...]
4   \end{tikzpicture}
5 \end{figure}
```

If you want to show the result of the LaTeX code in the same box, you can do this in different ways.

LaTeX Example 28

```
\begin{myTEXEX}{listing and text}
\lipsum[4]
\end{myTEXEX}
```

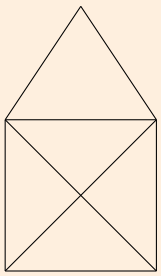
```
\lipsum[4]
```

Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

LaTeX Example 29

```
\begin{myTEXEX}{listing side text, center lower}
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
\end{myTEXEX}
```

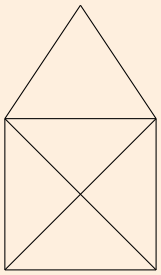
```
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
```



LaTeX Example 30

```
\begin{myTEXEX}{listing outside text, center lower}
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
\end{myTEXEX}
```

```
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
```



The LaTeX Example Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myTEXEXlst`. In this environment there is a list index available and listing boxes are created by defalt. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *LaTeX Example* and a sequential number. The main idea for this environment was to build a box that shows the LaTeX code that is located in the body of the document.

LaTeX Example 31

```
\begin{myTEXEXlst}{TITLE1}{}
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
\end{myTEXEXlst}
```

LaTeX Example 1

```
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
```

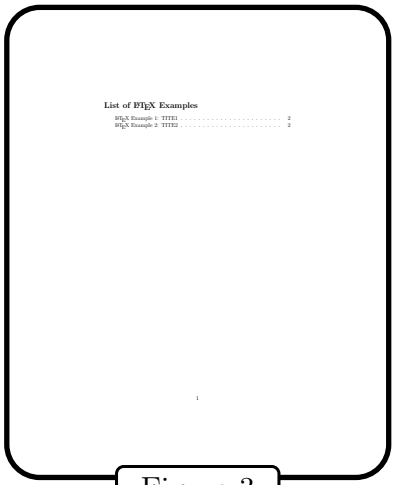


Figure 3

You can create the list index with the command `\listofmyTEXEX`.

LaTeX Example 32

```
\listofmyTEXEX
```

This will create a list index which looks like the picture in Figure 3.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 33.

LaTeX Example 33

```
\makeatletter
  \renewcommand{\l@myTEXEX}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 34.

LaTeX Example 34

```
\makeatletter
  \addtocontents{myTEXEX}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 35.

LaTeX Example 35

```
% copy cmd \listofmyTEXEX into cmd \oldlistofmyTEXEX
\let\oldlistofmyTEXEX\listofmyTEXEX

% renew cmd \listofmyTEXEX
\renewcommand\listofmyTEXEX
{
  \pagestyle{empty} % .... % disable headers/footers
  \oldlistofmyTEXEX % .... % call \oldlistofmyTEXEX
  \clearpage % ........... % create a new page
  \pagestyle{plain} % .... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\texexref{}`.

LaTeX Example 36

```
\begin{myTEXEXlst}{TITLE2}{label={texex:TEXEXLABEL5}}
\lipsum[4]
\end{myTEXEXlst}
```

LaTeX Example 2

```
\lipsum[4]
```

LaTeX Example 37

```
This example is shown in \texexref{TEXEXLABEL5}
```

This example is shown in LaTeX Example 2

It is notable that the label has to contain the `texex:` prefix in order to reference the label appropriately.

By default, the `myTEXEXlst` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 38

```
\begin{myTEXEXlst}{TITLE2}{listing options={keywords={tikzpicture}}}
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
\end{myTEXEXlst}
```

LaTeX Example 3

```
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 39

```
\begin{myTEXEXlst}{TITLE2}{listing options={style=num, keywords={tikzpicture}}}
\begin{figure}[H]
  \begin{tikzpicture}
  [...]
  \end{tikzpicture}
\end{figure}
\end{myTEXEXlst}
```

LaTeX Example 4

```
1  \begin{figure}[H]
2    \begin{tikzpicture}
3    [...]
4    \end{tikzpicture}
5  \end{figure}
```

If you want to show the result of the LaTeX code in the same box, you can do this in different ways.

LaTeX Example 40

```
\begin{myTEXEXlst}{TITLE2}{listing and text}
\lipsum[4]
\end{myTEXEXlst}
```

LaTeX Example 5

```
\lipsum[4]
```

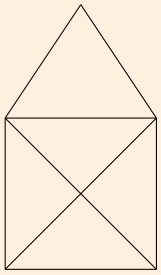
Quisque ullamcorper placerat ipsum. Cras nibh. Morbi vel justo vitae lacus tincidunt ultrices. Lorem ipsum dolor sit amet, consectetuer adipiscing elit. In hac habitasse platea dictumst. Integer tempus convallis augue. Etiam facilisis. Nunc elementum fermentum wisi. Aenean placerat. Ut imperdiet, enim sed gravida sollicitudin, felis odio placerat quam, ac pulvinar elit purus eget enim. Nunc vitae tortor. Proin tempus nibh sit amet nisl. Vivamus quis tortor vitae risus porta vehicula.

LaTeX Example 41

```
\begin{myTEXEXlst}{TITLE2}{listing side text, center lower}
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
\end{myTEXEXlst}
```

LaTeX Example 6

```
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
```

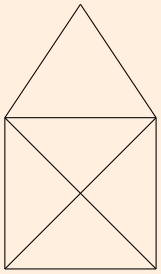


LaTeX Example 42

```
\begin{myTEXEXlst}{TITLE2}{listing outside text, center lower}
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
\end{myTEXEXlst}
```

LaTeX Example 7

```
\begin{tikzpicture}
  \draw (0,0) to (0,2);
  \draw (0,2) to (1,3.5);
  \draw (1,3.5) to (2,2);
  \draw (2,2) to (2,0);
  \draw (2,0) to (0,0);
  \draw (0,0) to (2,2);
  \draw (0,2) to (2,0);
  \draw (0,2) to (2,2);
\end{tikzpicture}
```



The Coding Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myCODEEX`. In this environment there is no list index available and only listing boxes are created. The main idea for this environment was to build a box that illustriates program code. The programming language should always be passed as an argument (`listing options={language=python}`), even if it is an optional argument.

LaTeX Example 43

```
\begin{myCODEEX}{listing options={language=python}}
if a == 5:
  print("HALLO")
\end{myCODEEX}
```

```
if a == 5:
  print("HALLO")
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 44

```
\begin{myCODEEX}{title={A simple Python Program}, listing options={language=python}}
if a == 5:
  print("HALLO")
\end{myCODEEX}
```

A simple Python Program

```
if a == 5:
  print("HALLO")
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 45

```
\begin{myCODEEX}{listing options={language=python, style=num}}
if a == 5:
  print("HALLO")
\end{myCODEEX}
```

```
1 if a == 5:
2   print("HALLO")
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 46

```
\begin{myCODEEX}{listing options={language=python, style=num, firstnumber=88}}
if a == 5:
  print("HALLO")
\end{myCODEEX}
```

```
88      if a == 5:
89        print("HALLO")
```

The Coding Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myCODEEXlst`. In this environment there is a list index available and only listing boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *Code Example* and a sequential number. The main idea for this environment was to build a box that illustriates program code. The programming language should always be passed as an argument (`listing options={language=python}`), even if it is an optional argument.

LaTeX Example 47

```
\begin{myCODEEXlst}{TITLE1}{listing options={language=python}}
if a == 5:
  print("HALLO")
\end{myCODEEXlst}
```

Code Example 1

```
if a == 5:
  print("HALLO")
```

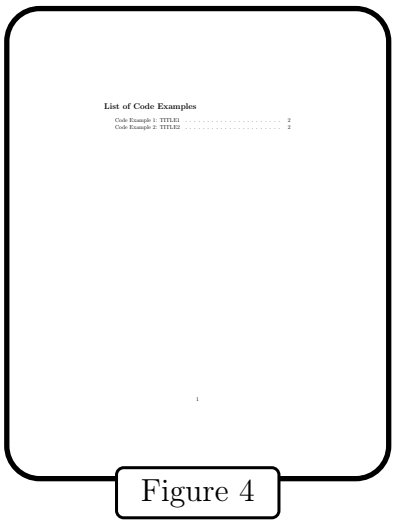


Figure 4

You can create the list index with the command `\listofmyCODEEX`.

LaTeX Example 48

```
\listofmyCODEEX
```

This will create a list index which looks like the picture in Figure 4.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 49.

LaTeX Example 49

```
\makeatletter
  \renewcommand{\l@myCODEEX}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Exam-

ple 50.

LaTeX Example 50

```
\makeatletter
  \addtocontents{myCODEEX}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 51.

LaTeX Example 51

```
% copy cmd \listofmyCODEEX into cmd \oldlistofmyCODEEX
\let\oldlistofmyCODEEX\listofmyCODEEX

% renew cmd \listofmyCODEEX
\renewcommand\listofmyCODEEX
{
  \pagestyle{empty} % .... % disable headers/footers
  \oldlistofmyCODEEX % ... % call \oldlistofmyCODEEX
  \clearpage % ........... % create a new page
  \pagestyle{plain} % .... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\codeexref{}`.

LaTeX Example 52

```
\begin{myCODEEXlst}{TITLE1}{label={codeex:CODEEXLABEL5}, listing options={language=python}}
if a == 5:
  print("HALLO")
\end{myCODEEXlst}
```

Code Example 2

```
if a == 5:
  print("HALLO")
```

LaTeX Example 53

```
This example is shown in \codeexref{CODEEXLABEL5}
```

This example is shown in Code Example 2

It is notable that the label has to contain the `codeex:` prefix in order to reference the label appropriately.

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 54

```
\begin{myCODEEXlst}{TITLE1}{listing options={language=python, style=num}}
if a == 5:
  print("HALLO")
\end{myCODEEXlst}
```

Code Example 3

```
1  if a == 5:
2    print("HALLO")
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 55

```
\begin{myCODEEXlst}{TITLE1}{listing options={language=python, style=num, firstnumber=88}}
if a == 5:
  print("HALLO")
\end{myCODEEXlst}
```

Code Example 4

```
88  if a == 5:
89    print("HALLO")
```

The Configuration Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myCONFIGEX`. In this environment there is no list index available and only listing boxes are created. The main idea for this environment was to build a box that shows configuration.

LaTeX Example 56

```
\begin{myCONFIGEX}{}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 57

```
\begin{myCONFIGEX}{title={A simple Tracking Object}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

A simple Tracking Object

```
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 58

```
\begin{myCONFIGEX}{listing options={style=num}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
1 track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2 track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 59

```
\begin{myCONFIGEX}{listing options={style=num, firstnumber=88}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
88  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
89  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

By default, the `myCONFIGEX` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 60

```
\begin{myCONFIGEX}{listing options={style=num, keywords={track}}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

You can even use LaTeXCode within the `myCONFIGEX` environment with the default escapecharacter `&`.

LaTeX Example 61

```
\begin{myCONFIGEX}{listing options={style=num}}
track at-vie03c-rrINET type &{\color{red}route}& reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

This can be changed with the optional `listing options={escapechar=\|}` argument.

LaTeX Example 62

```
\begin{myCONFIGEX}{listing options={style=num, escapechar=\|}}
track at-vie03c-rrINET type |{\color{red}route}| reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEX}
```

```
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

The Configuration Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myCONFIGEXlst`. In this environment there is a list index available and only listing boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *Configuration Example* and a sequential number. The main idea for this environment was to build a box that shows configuration.

LaTeX Example 63

```
\begin{myCONFIGEXlst}{TITLE1}{}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 1

```
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

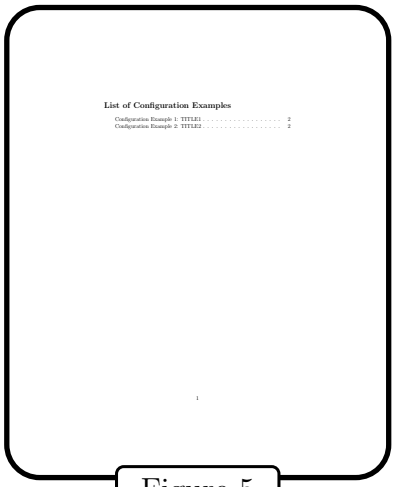


Figure 5

You can create the list index with the command `\listofmyCONFIGEX`.

LaTeX Example 64

```
\listofmyCONFIGEX
```

This will create a list index which looks like the picture in Figure 5.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 65.

LaTeX Example 65

```
\makeatletter
  \renewcommand{\l@myCONFIGEX}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 66.

LaTeX Example 66

```
\makeatletter
  \addtocontents{myCONFIGEX}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 67.

LaTeX Example 67

```
% copy cmd \listofmyCONFIGEX into cmd \oldlistofmyCONFIGEX
\let\oldlistofmyCONFIGEX\listofmyCONFIGEX

% renew cmd \listofmyCONFIGEX
\renewcommand\listofmyCONFIGEX
{
  \pagestyle{empty} % ..... % disable headers/footers
  \oldlistofmyCONFIGEX % ... % call \oldlistofmyCONFIGEX
  \clearpage % ............. % create a new page
  \pagestyle{plain} % ..... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\configexref{}`.

LaTeX Example 68

```
\begin{myCONFIGEXlst}{TITLE1}{label={configex:CONFIGEXLABEL5}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 2

```
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

LaTeX Example 69

```
This example is shown in \configexref{CONFIGEXLABEL5}
```

This example is shown in Configuration Example 2

It is notable that the label has to contain the `configex:` prefix in order to reference the label appropriately.

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 70

```
\begin{myCONFIGEXlst}{TITLE1}{listing options={style=num}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 3

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 71

```
\begin{myCONFIGEXlst}{TITLE1}{listing options={style=num, firstnumber=88}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 4

```
88  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
89  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

By default, the `myCONFIGEX` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 72

```
\begin{myCONFIGEXlst}{TITLE1}{listing options={style=num, keywords={track}}}
track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 5

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

You can even use LaTeXCode within the `myCONFIGEX` environment with the default escapecharacter `&`.

LaTeX Example 73

```
\begin{myCONFIGEXlst}{TITLE1}{listing options={style=num}}
track at-vie03c-rrINET type &{\color{red}route}& reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 6

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

This can be changed with the optional `listing options={escapechar=\|}` argument.

LaTeX Example 74

```
\begin{myCONFIGEXlst}{TITLE1}{listing options={style=num, escapechar=\|}}
track at-vie03c-rrINET type |{\color{red}route}| reachability route ipv4 217.25.120.21/32
track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
\end{myCONFIGEXlst}
```

Configuration Example 7

```
1  track at-vie03c-rrINET type route reachability route ipv4 217.25.120.21/32
2  track at-vie09c-rrINET type route reachability route ipv4 217.25.120.11/32
```

The File Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myFILE`. In this environment there is no list index available and only listing boxes are created. The main idea for this environment was to build a box that shows file content.

LaTeX Example 75

```
\begin{myFILE}{}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILE}
```

```
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 76

```
\begin{myFILE}{title={A simple Apache Configuration}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILE}
```

A simple Apache Configuration

```
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 77

```
\begin{myFILE}{listing options={style=num}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILE}
```

```
1 <VirtualHost 192.168.1.1 172.20.30.40>
2   DocumentRoot "/www/server1"
3   ServerName server.example.com
4 </VirtualHost>
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 78

```
\begin{myFILE}{listing options={style=num, firstnumber=88}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILE}
```

```
88    <VirtualHost 192.168.1.1 172.20.30.40>
89      DocumentRoot "/www/server1"
90      ServerName server.example.com
91    </VirtualHost>
```

By default, the `myFILE` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 79

```
\begin{myFILE}{listing options={style=num, keywords={ServerName}}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILE}
```

```
1     <VirtualHost 192.168.1.1 172.20.30.40>
2       DocumentRoot "/www/server1"
3       ServerName server.example.com
4     </VirtualHost>
```

You can even use LaTeXCode within the `myFILE` environment with the default escapecharacter `&`.

LaTeX Example 80

```
\begin{myFILE}{listing options={style=num}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName &{\color{red}server.example.com}&
</VirtualHost>
\end{myFILE}
```

```
1     <VirtualHost 192.168.1.1 172.20.30.40>
2       DocumentRoot "/www/server1"
3       ServerName server.example.com
4     </VirtualHost>
```

This can be changed with the optional `listing options={escapechar=\|}` argu-

ment.

LaTeX Example 81

```
\begin{myFILE}{listing options={style=num, escapechar=\|}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName |{\color{red}server.example.com}|
</VirtualHost>
\end{myFILE}
```

```
1    <VirtualHost 192.168.1.1 172.20.30.40>
2      DocumentRoot "/www/server1"
3      ServerName server.example.com
4    </VirtualHost>
```

The File Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myFILElst`. In this environment there is a list index available and only listing boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *File Example* and a sequential number. The main idea for this environment was to build a box that shows file content.

LaTeX Example 82

```
\begin{myFILElst}{TITLE1}{}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILElst}
```

File Example 1

```
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
```

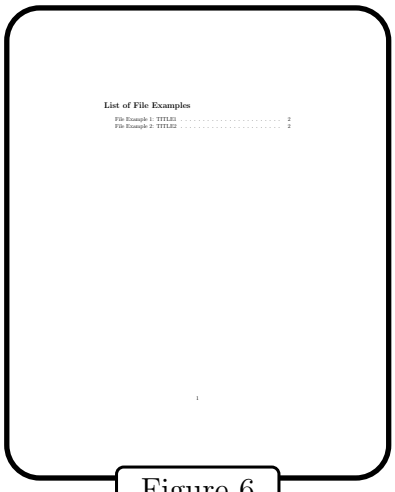


Figure 6

You can create the list index with the command `\listofmyFILE`.

LaTeX Example 83

```
\listofmyFILE
```

This will create a list index which looks like the picture in Figure 6.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 84.

LaTeX Example 84

```
\makeatletter
  \renewcommand{\l@myFILE}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Exam-

ple 85.

LaTeX Example 85

```
\makeatletter
  \addtocontents{myFILE}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 86.

LaTeX Example 86

```
% copy cmd \listofmyFILE into cmd \oldlistofmyFILE
\let\oldlistofmyFILE\listofmyFILE

% renew cmd \listofmyFILE
\renewcommand\listofmyFILE
{
  \pagestyle{empty} % ...... % disable headers/footers
  \oldlistofmyFILE % ....... % call \oldlistofmyFILE
  \clearpage % ............. % create a new page
  \pagestyle{plain} % ...... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\fileref{}`.

LaTeX Example 87

```
\begin{myFILElst}{TITLE1}{label={file:FILELABEL5}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
  </VirtualHost>
\end{myFILElst}
```

File Example 2

```
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
  </VirtualHost>
```

LaTeX Example 88

```
This is shown in \fileref{FILELABEL5}
```

This is shown in File Example 2

It is notable that the label has to contain the `file:` prefix in order to reference the label appropriately.

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 89

```
\begin{myFILElst}{TITLE1}{listing options={style=num}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILElst}
```

File Example 3

```
1  <VirtualHost 192.168.1.1 172.20.30.40>
2    DocumentRoot "/www/server1"
3    ServerName server.example.com
4  </VirtualHost>
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 90

```
\begin{myFILElst}{TITLE1}{listing options={style=num, firstnumber=88}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILElst}
```

File Example 4

```
88  <VirtualHost 192.168.1.1 172.20.30.40>
89    DocumentRoot "/www/server1"
90    ServerName server.example.com
91  </VirtualHost>
```

By default, the `myFILE` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 91

```
\begin{myFILElst}{TITLE1}{listing options={style=num, keywords={ServerName}}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName server.example.com
</VirtualHost>
\end{myFILElst}
```

File Example 5

```
1  <VirtualHost 192.168.1.1 172.20.30.40>
2    DocumentRoot "/www/server1"
3    ServerName server.example.com
4  </VirtualHost>
```

You can even use LaTeXCode within the `myFILE` environment with the default es-

capecharacter `&`.

LaTeX Example 92

```
\begin{myFILElst}{TITLE1}{listing options={style=num}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName &{\color{red}server.example.com}&
</VirtualHost>
\end{myFILElst}
```

File Example 6

```
1  <VirtualHost 192.168.1.1 172.20.30.40>
2    DocumentRoot "/www/server1"
3    ServerName server.example.com
4  </VirtualHost>
```

This can be changed with the optional `listing options={escapechar=\|}` argument.

LaTeX Example 93

```
\begin{myFILElst}{TITLE1}{listing options={style=num, escapechar=\|}}
<VirtualHost 192.168.1.1 172.20.30.40>
  DocumentRoot "/www/server1"
  ServerName |{\color{red}server.example.com}|
</VirtualHost>
\end{myFILElst}
```

File Example 7

```
1  <VirtualHost 192.168.1.1 172.20.30.40>
2    DocumentRoot "/www/server1"
3    ServerName server.example.com
4  </VirtualHost>
```

The Output Environment without a List Index

The *myTCB-V1* package has a predefined environment, which is called `myOUT`. In this environment there is no list index available and only listing boxes are created. The main idea for this environment was to build a box that shows the output of a command.

LaTeX Example 94

```
\begin{myOUT}{}
This file was created automatically from
a shell script
\end{myOUT}
```

```
This file was created automatically from
a shell script
```

A title can be submitted as an optional argument, which appears in the upper right corner of the box.

LaTeX Example 95

```
\begin{myOUT}{title={A simple Command Output}}
This file was created automatically from
a shell script
\end{myOUT}
```

A simple Command Output

```
This file was created automatically from
a shell script
```

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 96

```
\begin{myOUT}{listing options={style=num}}
This file was created automatically from
a shell script
\end{myOUT}
```

```
1 This file was created automatically from
2 a shell script
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 97

```
\begin{myOUT}{listing options={style=num, firstnumber=88}}
This file was created automatically from
a shell script
\end{myOUT}
```

```
88  This file was created automatically from
89  a shell script
```

By default, the `myOUT` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 98

```
\begin{myOUT}{listing options={style=num, keywords={ServerName}}}
This file was created automatically from
a shell script
\end{myOUT}
```

```
1  This file was created automatically from
2  a shell script
```

You can even use LaTeXCode within the `myOUT` environment with the default escapecharacter `&`.

LaTeX Example 99

```
\begin{myOUT}{listing options={style=num}}
This file was created &{\color{red}automatically}& from
a shell script
\end{myOUT}
```

```
1  This file was created automatically from
2  a shell script
```

This can be changed with the optional `listing options={escapechar=\|}` argument.

LaTeX Example 100

```
\begin{myOUT}{listing options={style=num, escapechar=\|}}
This file was created |{\color{red}automatically}| from
a shell script
\end{myOUT}
```

```
1  This file was created automatically from
2  a shell script
```

The Output Environment with a List Index

The *myTCB-V1* package has a predefined environment, which is called `myOUTlst`. In this environment there is a list index available and only listing boxes are created. A title (`TITLE1`) must be passed as a mandatory argument. This title does not appear on the box, instead it is found in the list index. The box itself is titled with *OUTPUT Example* and a sequential number. The main idea for this environment was to build a box that shows the output of a command.

LaTeX Example 101

```
\begin{myOUTlst}{TITLE1}{}
This file was created automatically from
a shell script
\end{myOUTlst}
```

Output Example 1

This file was created automatically from
a shell script

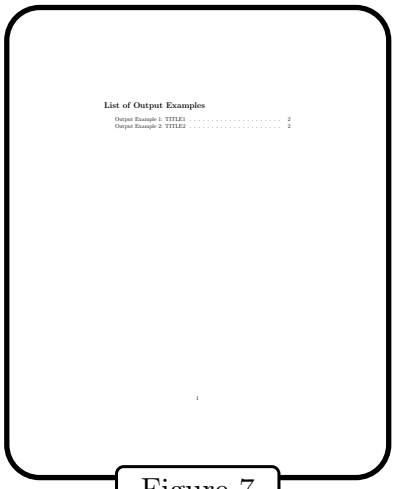


Figure 7

You can create the list index with the command `\listofmyOUT`.

LaTeX Example 102

```
\listofmyOUT
```

This will create a list index which looks like the picture in Figure 7.

If you want to change the horizontal spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 103.

LaTeX Example 103

```
\makeatletter
  \renewcommand{\l@myOUT}{\@dottedtocline{1}{0mm}{0mm}}
\makeatother
```

If you want to change the vertical spacing of the list entries, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 104.

LaTeX Example 104

```
\makeatletter
  \addtocontents{myOUT}{\protect\vspace{12mm}}
\makeatother
```

If you want to get rid of the page numbers in the list index, you can do this quite simple with the following code in the preamble, which is illustrated in LaTeX Example 105.

LaTeX Example 105

```
% copy cmd \listofmyOUT into cmd \oldlistofmyOUT
\let\oldlistofmyOUT\listofmyOUT

% renew cmd \listofmyOUT
\renewcommand\listofmyOUT
{
  \pagestyle{empty} % ..... % disable headers/footers
  \oldlistofmyOUT % ........ % call \oldlistofmyOUT
  \clearpage % ............. % create a new page
  \pagestyle{plain} % ..... % enable headers/footers; use fancy if you use fancyhdr
}
```

A label can be specified as an optional argument. The box can then be referenced in the text with `\outref{}`.

LaTeX Example 106

```
\begin{myOUTlst}{TITLE1}{label={out:OUTLABEL5}}
This file was created automatically from
a shell script
\end{myOUTlst}
```

Output Example 2

```
This file was created automatically from
a shell script
```

LaTeX Example 107

```
This is shown in \outref{OUTLABEL5}
```

This is shown in Output Example 2

It is notable that the label has to contain the `out:` prefix in order to reference the label appropriately.

If you want to enable line numbering, you can simpy do so with the optional argument `listing options={style=num}`.

LaTeX Example 108

```
\begin{myOUTlst}{TITLE1}{listing options={style=num}}
This file was created automatically from
a shell script
\end{myOUTlst}
```

Output Example 3

```
1  This file was created automatically from
2  a shell script
```

If you want to start with a different line number, you can simpy do so with the optional argument `listing options={firstnumber=88}`.

LaTeX Example 109

```
\begin{myOUTlst}{TITLE1}{listing options={style=num, firstnumber=88}}
This file was created automatically from
a shell script
\end{myOUTlst}
```

Output Example 4

```
88  This file was created automatically from
89  a shell script
```

By default, the `myOUT` environment does not have syntax highlighting. You can highlight some keywords with the optional `listing options={keywords={}}` argument.

LaTeX Example 110

```
\begin{myOUTlst}{TITLE1}{listing options={style=num, keywords={was}}}
This file was created automatically from
a shell script
\end{myOUTlst}
```

Output Example 5

```
1  This file was created automatically from
2  a shell script
```

You can even use LaTeXCode within the `myOUT` environment with the default escapecharacter `&`.

LaTeX Example 111

```
\begin{myOUTlst}{TITLE1}{listing options={style=num}}
This file was created &{\color{red}automatically}& from
a shell script
\end{myOUTlst}
```

Output Example 6

```
1  This file was created automatically from
2  a shell script
```

This can be changed with the optional `listing options={escapechar=\|}` argument.

LaTeX Example 112

```
\begin{myOUTlst}{TITLE1}{listing options={style=num, escapechar=\|}}
This file was created |{\color{red}automatically}| from
a shell script
\end{myOUTlst}
```

Output Example 7

```
1  This file was created automatically from
2  a shell script
```

References

[Car03] http://users.ece.utexas.edu/~garg/dist/listings.pdf.

[Dan22] https://ctan.math.illinois.edu/macros/latex/contrib/refstyle/refstyle.pdf.

[Den23] https://texdoc.org/serve/fancyvrb/0.

[Ove23] https://www.overleaf.com/learn.

[Rai22] https://mirror.kumi.systems/ctan/macros/latex/required/tools/verbatim.pdf.

[She95] http://webhome.phy.duke.edu/~rgb/General/latex/ltx-79.html.

[Tho23] https://texdoc.org/serve/tcolorbox.pdf/0.

[Uwe22] https://mirror.kumi.systems/ctan/macros/latex/contrib/xcolor/xcolor.pdf.