The tutodoc class Tutorial-style documentation

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Dec 18, 2024 - Version 1.7.1

The tutodoc class ¹ is used by its author to semantically produce documentation of IAT_EX packages and classes in a tutorial style ² with a sober rendering for reading on screen. **Remark :** this documentation is also available in French.

Last changes

🗲 Fix.

• Documentation: references to tools to indicate changes have been incorrectly written as characteristics of highlighted colored content.

P Break.

- The \tdocenv macro and its starred version no longer offer an option.
- LATEX showcases: the default layout is more sober, and there are options for having just the rulers, or the colored stripe. See just after.

New.

- Formatting of computer codes in addition to those specifically in LATEX.
 - 1. Creation of \begin{tdoccode} ... \end{tdoccode} and \tdoccodein.
 - 2. For macros for inline code, and environments for blocks of code, minted options are indicated inside square brackets in the traditional way: [minted options].
 - $3. \ {\rm For \ code \ block \ environments, \ tcolorbox \ options \ are \ indicated \ inside \ rafters: \ {\tt ccolorbox \ options}{\tt >}.}$
 - 4. The new macro \tdoctcb allows to use shortcuts for regularly used tcolorbox styles.
- \bullet Documentation: a new section presents tools for formatting computer codes other than those in LATEX.

C Update.

- Sub-sub-sections are numbered in lower case.
- Themes.
 - 1. Less space consumed.
 - 2. Shadows have better coloring.
 - 3. For all themes except the draft one, the radius of the arcs of the corners of the frames has changed from .75mm to .2pt,.
 - 4. Use case in LATEX: with the theme color, the background color changes from yellow!4 to gray!5.
 - 5. Latest changes: with the dark theme, the [Init] text produced by the \tdocstartproj macro uses the same font as the environment titles to indicate changes.

¹The name comes from "tuto \cdot rial-type doc \cdot umentation".

 $^{^{2}}$ The idea is to produce an efficient PDF file that can be browsed for one-off needs. This is generally what is expected for a coding documentation.

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I. Dependencies

tutodoc admits the following dependencies (the dates in brackets are those of the versions used during the latest tests).

- scrartcl.cls (2024/10/24)
- csquotes.sty (2024/04/04)
- geometry.sty (2020/01/02)
- inputenc.sty (2024/02/08)
- marginnote.sty (2018/08/09)
- tcolorbox.sty (2024/10/22)

• clrstrip.sty	(2021/08/28)
• fontawesome5.sty	(2022/05/02)
• hyperref.sty	(2024/11/05)
• keytheorems.sty	(2024/11/11)
• minted.sty	(2024/11/17)

II. General settings

1. Font size and page geometry

The scrartcl class is loaded via the fontsize = 10pt option, and the geometry package manages the page dimensions.

😤 Warning.

The macros for dating and versioning presented in the section XII on page 16 require fixed settings for page geometry and font size.

2. Titles and table of contents

The selected settings are directly visible in this documentation.

3. Dynamic links

The hyperref package is imported, if it hasn't already been, and the settings chosen are just for the colors of links relating to citations, files, internal links, and finally url (this colors will depend on the theme chosen).

III. What language is used by the tutodoc class?

This documentation loads the babel package via \usepackage[english]{babel} a package that tutodoc does not load. On the other hand, the tutodoc class identifies en as the main language used by babel.³ As this language is included in the list of languages taken into account, see below, the tutodoc class will produce the expected effects.

• en : English.

es : Spanish.

• fr : French.

i Note.

Packages babel and polyglossia are taken into account.

😵 Caution.

If the choice of main language is not made in the preamble, the mechanism used will fail with unintended side effects (see warning that follows).

😤 Warning.

When a language is not supported by tutodoc, a warning message is issued, and English is selected as the language for tutodoc.

 $^{^3{\}rm Technically},$ we use <code>\BCPdata{language</code>} which returns a language in short format.

IV. What does that mean in "English"?

The macro \tdocinEN and its starred version are useless for English speakers because they have the following effects.

```
Cool and top stand for \tdocinEN*{cool} and \tdocinEN{top}.
Cool and top stand for "cool" and "top" in English.
```

The macro \tdocinEN and its starred version are based on \tdocquote : for example, "*semantic*" is obtained via tdocquote{semantic}.

i Note.

As the text "in English" is translated into the language detected by tutodoc, the macro \tdocinEN and its starred version become useful for non-English speakers.

V. Choose your theme

To modify the general layout, there is the tutodoc class option theme = <choice> where <choice> can take the following values.

- bw: a black-and-white theme with some shades of grey.
- color: a colored theme, this is the default value.
- dark: a dark theme ideal for resting the eyes.
- draft: a theme for a printout such as to look for content errors that aren't necessarily easy to spot in front of a screen.

i Note.

At the end of this document, after the change history, you'll find a gallery of use cases for these different themes : go to appendix page 26.

VI. Highlighting content

i Note.

The environments presented in this section a add a short title indicating the type of information provided. This short text will always be translated into the language detected by the **tutodoc** class.

^aThe formatting comes from the keytheorems package.

1. Content in the reading flow

💉 Important.

All the environments presented in this section share the same counter, which will be reset to zero as soon *\section* is used.

a. Examples

Numbered examples are indicated via \begin{tdocexa}...\end{tdocexa}, which offers an optional argument for adding a small title. Here are two possible uses.

\begin{tdocexa}	
An example	
\end{tdocexa}	Example VI.1. An example
\begin{tdocexa}[Small title]	Example VI.2 (Small title). Useful?
Useful?	
\end{tdocexa}	

🖓 Tip.

It can sometimes be useful to return to the line at the start of the content. The code below shows how to proceed (this trick also applies to the tdocrem environment presented next). Note in passing that the numbering follows that of the previous example as desired.

\begin{tdocexa}		
\begin{enumerate}	Example VI.3.	
\item Point 1.	1. Point 1.	
\item Point 2.	2. Point 2.	
\end{enumerate}		
\end{tdocexa}		

b. Some remarks

Everything happens via \begin{tdocrem}...\end{tdocrem}, which works identically to the tdocexa environment, as shown in the following example.

\begin{tdocrem}	
Just one remark	
\end{tdocrem}	
<pre>\begin{tdocrem} Another? \end{tdocrem}</pre>	Remark VI.4. Just one remarkRemark VI.5. Another?Remark VI.6 (Small title). Useful?
<pre>\begin{tdocrem}[Small title] Useful? \end{tdocrem}</pre>	

2. Flashy content

i Note.
The formatting proposed here is the default one, but others are possible by changing the theme: see the gallery of use cases in the appendix page 26. As for the icons, they are obtained via the fontawesome5 package, and the \tdocicon macro which manages the spacing relatively to the text. ^a ^a For example, \fbox{tdocicon{faBed}{Fatigued}} produces Image.

a. A tip

The tdoctip environment is used to give tips. Here's how to use it.

<pre>\begin{tdoctip} A tip. \end{tdoctip}</pre>	🔮 Tip.
	A tip.
<pre>\begin{tdoctip}[Small title] Useful? \end{tdoctip}</pre>	? Tip (Small title).
	Useful?

🥊 Tip.

Sometimes, highlighted content can be reduced to a list. In this case, the formatting can be improved as follows where we use the wide option from the enumitem package imported by this documentation.



b. Informative note

The tdocnote environment is used to highlight useful information. Here's how to use it.

<pre>\begin{tdocnote} Something useful to tell you \end{tdocnote}</pre>	Note. Something useful to tell you	
<pre>\begin{tdocnote}[Small title] Useful? \end{tdocnote}</pre>	i Note (Small title).	
	Useful?	

c. Something important

The tdocimp environment is used to indicate something important but harmless.



d. Caution about a delicate point

The tdoccaut environment is used to indicate a delicate point to the user. Here's how to use it.



e. Warning of danger

The tdocwarn environment is used to warn the user of a trap to avoid. Here's how to use it.

```
      \begin{tdocwarn}
      & Warning.

      Avoid the dangers...
      Avoid the dangers...

      \end{tdocwarn}
      & Warning (Small title]

      Useful?
      & Warning (Small title).

      Useful?
      Useful?
```

VII. Specify packages, classes, macros or environments

Here's what you can type semantically.

```
      \tdoccls{myclass} is for...
      myclass is for...

      \tdocpack{mypackage} is for...
      mypackage is for...

      \tdocmacro{onemacro} is for...
      \onemacro is for...

      \tdocenv{env} produces...
      \

      Just \tdocenv*{env}...
      Just env...
```

Remark VII.1. Unlike \tdoclatexin, the \tdocmacro, \tdocenv and \tdocenv* macros don't color the text they produce. In addition, \tdocenv{monenv} produces \begin{monenv}...\end{monenv} with break-able spaces to allow line breaks if required.

VIII. Origin of a prefix or suffix

To explain the names chosen, there is nothing like indicating and explaining the short prefixes and suffixes used. This is easily done as follows.

\tdocpre{sup} relates to \\	sup relates to
<pre>\tdocprewhy{sup.erbe} means \\</pre>	sup•erbe means
<pre>\emph{\tdocprewhy{sup.er} for}</pre>	$sup \cdot er$ for

Remark VIII.1. The choice of a full stop to split a word allows words with a hyphen to be used, as in \tdocprewhy{bric.k-breaker} which gives bric.k-breaker.

IX. A real-life rendering

It is sometimes useful to render code directly in the documentation. This requires the rendering to be dissociable from the explanatory text.

1. A minimalist rendering by default

Example IX.1. It can be useful to show a real rendering directly in a document.⁴ This is typed via the environment tdocshowcase as follows.

```
\begin{tdocshowcase}
   \bfseries A bit of code \LaTeX.
   \bigskip
   \emph{\large End of the awful demo.}
   \end{tdocshowcase}
```

This results in the following rendering, which is a combination of low vertical spacing and simple import.

End of the awful demo.

Remark IX.2. The section 4 on page 13 explains how to obtain, via the macro \tdoclatexshow, a code followed by its actual rendering as in the previous example.

⁴Typically when making a demo.

😤 Warning.

With the default settings, if the code to be formatted begins with an opening bracket, we must use one of the following tricks.

```
\begin{tdocshowcase}[]
    [This works...]
\end{tdocshowcase}
OR.
\begin{tdocshowcase}
    \string[This also works...]
\end{tdocshowcase}
This will produce the following.
[This works...]
OR.
[This also works...]
```

2. With framing lines

To make the formatted IATEX code more visible, you can use the **rule** style, as in the following examples.

Example IX.3. The option style = rule provides the following where the automatically added texts will adapt to the language found by tutodoc.

Start of the real output

End of the real output

- My end

Example IX.4 (Editable text and colours). You can easily obtain the following horror. My beginning

Here's the code that was used.⁵

i Note.

In the previous example, the text uses the proposed darkened orange. However, the red is used as a base to obtain the colors used for the framing lines: the transformations used depend on the theme chosen.^a You should also be aware that behind the scenes, the macro \tocruler is used, it works as follows.

\tdocruler[red]{A decorated pseudo-title}
A decorated pseudo-title

^aFor example, the themes bw and draft ignore the key col-stripe!

3. With colored stripe

There are situations where you need to be able to clearly identify an example of formatted L^{ATEX} code. This can be done, as the following examples show.⁶

⁵The next section will justify the a priori strange choice of col-stripe instead of col-rule.

 $^{^6\}mathrm{Behind}$ the scenes, the strips are created effort lessly using the <code>clrstrip</code> package.

Example IX.5. The style = stripe option provides the following.

	Start of the real output
Bla, bla, bla, bla, bla, bla, bla, bla, b	bla, bla, bla
	End of the real output

Example IX.6 (Editable text and colors). You can easily produce a beautiful horror like the one below.

Mon début

🗖 Ma fin à moi

Here's the code that was used.⁷

4. By importing the LATEX code

To obtain renderings by importing the code from an external file, instead of typing it, simply use the macro **\tdocshowcaseinput** whose option uses the same syntax as that of the environment **tdocshowcase**, and the mandatory argument corresponds to the path of the file. Here are some examples of use.

Example IX.7 (Standard use).

```
\tdocshowcaseinput{examples-showcase-external.tex}
```

This gives:

Blablobli, blablobli, blablobli, blablobli, blablobli, blablobli...

Example IX.8 (With framing lines).

\tdocshowcaseinput[style = rule]{examples-showcase-external.tex}

This gives:

Start of the real output

Blablobli, blablobli, blablobli, blablobli, blablobli, blablobli...

End of the real output

Example IX.9 (A colored stripe).

This gives:

Start of the real output

Blablobli, blablobli, blablobli, blablobli, blablobli...

End of the real output

X. Use cases in LATEX

Documenting a package, or class, is best done through use cases showing both the code and the corresponding result.⁸

⁷Now we understand why we chose col-stripe instead of col-rule.

 $^{^8\}mathrm{Code}$ is formatted using the minted and <code>tcolorbox</code> packages.

1. "Inline" codes

Example X.1 (Standard use). The \tdoclatexin macro⁹ can be used to type code in line in a similar way to \verb, or as a standard macro (see the handling of braces in the latter case below). Here are some examples of use.¹⁰

```
1: \tdoclatexin/$a^b = c$\tloclatexin/$a^b = c$2: \tdoclatexin+\tdoclatexin/$a^b = c$/+ \loclatexin/$a^b = c$/+ \loclatexin{$a^b = c$/+ \loclatexin{$
```

Example X.2 (Possible options). As the \tdoclatexin macro is based on minted, you can use all the options taken into account by minted. Here are some examples.

ſ	1: \tdoclatexin[style = bw]{ \$ a^b = c \$ } \\	1. 0. 0
	2: \tdoclatexin[style = igor,	$1: $a^b = c$$
	showspaces]{ <mark>\$</mark> a^b = c <mark>\$</mark> }	2: \$a^b_=_c\$

i Note.

The \tdoclatexin macro can be used in a footnote as shown below.^a

^a\$minted = TOP\$ has been typed \tdoclatexin+\$minted = TOP\$+ in this footnote.

2. Directly typed codes

Example X.3 (Side by side). Displaying a code and its rendering side by side is done as follows where the macro \tdoctcb allows you to just type tdoctcb{sbs} instead of listing side text (sbs is for "s.ide b.y s.ide", while tcb is the standard abbreviation for tcolorbox). Note the use of rafters, not square brackets (more on this later).

```
\begin{tdoclatex}<\tdoctcb{sbs}>
$A = B + C$
\end{tdoclatex}
```

This gives :

\$A = B + C\$

Example X.4 (Following). \begin{tdoclatex}...\end{tdoclatex} produces the following result (this default setting is also obtained by using \tdoctcb{std}).¹¹

```
\$A = B + C\$
A = B + C
```

Example X.5 (Just the code). Via \tdoctcb{code}, we'll just get the code as below.

```
\$A = B + C\$
```

Example X.6 (Customise). The tdoclatex environment accepts two types of optional argument.

- 1. Between classic square brackets, you can use any option taken into account by minted.
- 2. Between rafters, you can use any option managed by the environments obtained via tcolorbox.

For example, the following modifications can be made if required.¹²

⁹The name of the macro $\toclatexin comes from "in·line <math>\text{MTE}X$ ".

 $^{^{10}\}mathrm{A}$ background color is deliberately used to subtly highlight the <code>\LaTeX</code> codes.

¹¹std refers to the "standard" behaviour of tcolorbox in relation to the minted library.

 $^{^{12}}$ This documentation uses the options between rafters to obtain correct rendering of code producing shaded frames: see the section 2 on page 6.

```
top = 10pt>
% Sometimes useful, but don't overuse it!
$A = B + C$
% End of this demonstration.
\end{tdoclatex}
```

This gives :

Local modifications

			h.
1	%_Sometimes_useful,_but_don't_overuse_it!		L
2	$\$A_=_B_+_C\$$	A = B + C	
3	%_End_of_this_demonstration.		

😤 Warning.

To obtain the default formatting for a code beginning with a bracket or a rafter, you'll need to do a bit of fiddling, as shown below.

```
\begin{tdoclatex}[]
[Strange... Or not!]
\end{tdoclatex}
OR.
\begin{tdoclatex}<>
<Strange... Or not!>
\end{tdoclatex}
```

This gives :

[Strange... Or not!] [Strange... Or not!]

OR.

```
Strange... Or not!>
```

Another method is to use the *\string* primitive, as shown below.

```
\begin{tdoclatex}
\string[Strange... Or not!]
\end{tdoclatex}
OR.
\begin{tdoclatex}
\string<Strange... Or not!>
\end{tdoclatex}
```

This gives :

```
[Strange... Or not!]
[Strange... Or not!]
```

OR.

```
<Strange... Or not!>
```

```
<Strange... Or not!>
```

3. Imported codes

For the following codes, consider a file with the relative path examples-listing-xyz.tex, and with the following contents.

```
% Just one demo.
x y z = 1
```

The \tdoclatexinput macro, shown below, expects the path of a file and offers the same system of options between square brackets, or rafters, as the environment tdoclatex.

Example X.7 (Side by side).

\tdoclatexinput<\tdoctcb{sbs}>{examples-listing-latex-xyz.tex}

This produces the following formatting.

% Just one demo. **\$x y z = 1\$**

xyz = 1

Example X.8 (Following).

\tdoclatexinput{examples-listing-latex-xyz.tex}

This produces the following formatting, which also corresponds to the option \tdoctcb{std}.

```
% Just one demo.

$x y z = 1$

xyz = 1
```

Example X.9 (Only the code).

\tdoclatexinput<\tdoctcb{code}>{examples-listing-latex-xyz.tex}

This produces the following formatting.

% Just one demo. <mark>\$x y z = 1\$</mark>

Example X.10 (Customise).

This produces the following formatting.

```
%_Just_one_demo.
$x_y_z_=1$
xyz = 1
```

4. Imported codes put into practice

i Note.

The default texts take into account the language detected by tutodoc.

Example X.11 (Showcase). The following comes from \tdoclatexshow{examples-listing-xyz.tex}.

```
% Just one demo.
$x y z = 1$
```

This gives :

xyz = 1

Example X.12 (Changing the explanatory text). Using the key explain, you can use a custom text. Thus, \tdoclatexshow[explain = Here is the rendering.]{examples-listing-xyz.tex} will give the following.

```
% Just one demo.
% y z = 1$
```

Here is the rendering.

xyz = 1

Example X.13 (The options available). In addition to the explanatory text, it is also possible to use all the options of tdocshowcase environment, see IX on page 8. Here is an example to illustrate this.

This will produce the following.

% Just one demo. **\$**x y z = 1<mark>\$</mark>

What comes next is coloured...

xyz = 1

Rendering hereafter.

Finished rendering.

XI. Presenting computer code

Some packages offer functions that require to code a little in Lua.¹³ For these projects, the documentation must be able to present lines of code; this is why tutodoc makes it easy to do this, and much more.¹⁴

💉 Important.

The tools in this section can also be used to present $\mathbb{A}T_E X$ code, but they should not be used for simple use cases, as the macros and environments presented next are for studying code, not just for using it: see the section X on page 10 to use the right tools for formatting $\mathbb{A}T_F X$ use cases.

1. "Inline" codes

The \tdoccodein^{15} macro expects two arguments: the 1st indicates the programming language, and the 2nd gives the code to be formatted. It is possible to use an option identical to that proposed by \tdoclatexin : see the section 1 on page 11. Here are some possible use cases.¹⁶

 $^{^{13}\}mathrm{For}$ mathematics, these include <code>luacas</code> and <code>tkz-elements</code>.

¹⁴As code formatting is done via the packages minted and tcolorbox, the macros and environments presented in this section allow code to be formatted in all the languages supported by Pygments, a Python project used behind the scenes by minted. ¹⁵The name of the macro \tdoccodein comes from "*in·line code*".

¹⁶A background color is used to subtly highlight the formatted codes. For example, typing \tdoccodein{py}{funny = "ah"*3} will produce funny = "ah"*3.

i Note.

2. Codes typed directly

Code can be typed directly into a document via $\begin{tdoccode} ... \end{tdoccode}$ which expects an argument indicating the programming language, and any options between parenthesis and/or square brackets identical to those proposed by $\begin{tdoclatex} ... \end{tdoclatex}$: see the section X on page 10.¹⁷

Example XI.1 (Standard feature).

```
\begin{tdoccode}{pl}
print "Who are you? ";
my $name = <STDIN>;
chomp($name);
if ($name eq "") {
    print "Ah, not very chatty today!";
} else {
    print "Hello $name";
    print "Hello $name";
    print "Amazing! Actually, not at all...";
} \end{tdoccode}
```

This gives :

```
print "Who are you? ";
my $name = <STDIN>;
chomp($name);
if ($name eq "") {
    print "Ah, not very chatty today!";
} else {
    print "Hello $name";
    print "Amazing! Actually, not at all...";
```

Example XI.2 (One-off rendering customization).

This gives :

 $^{^{17}\}mathrm{Note}$ that the coloring of the $\mathrm{I\!A}T\!\!\!\!\mathrm{E}\!\mathrm{X}$ codes is lexically correct, but semantically wrong.

```
io.write("Who are you?")
1
    local name = io.read()
2
3
   if name == "" then
4
        print("Ah, not very chatty today!")
5
6
   else
7
        print("Hello " .. name .. ".")
8
        print("Amazing! Actually, not at all...")
9
    end
10
```

3. Imported codes

The tdoccodeinput macro expects the language and path of a file to be formatted, and possibly options similar to those offered by the tdoccode environment.

Example XI.3 (Standard features).

\tdoccodeinput{hs}{examples-listing-full-hello-you.hs}

This gives:

```
main :: IO ()
main = do
    putStr "Who are you? "
    name <- getLine
    if name == ""
        then putStrLn "Ah, not very chatty today!"
else do
        putStrLn ("Hello " ++ name ++ ".")
        putStrLn "Amazing! Actually, not at all..."</pre>
```

Example XI.4 (Customize rendering on occasion).

This gives:

```
\NewDocumentCommand{\helloyou}{m}{%
1
        \IfBlankTF{#1}{%
2
            Ah, not very chatty today!
3
        }{%
4
            Hello #1.
5
6
            Amazing! Actually, not at all...%
7
       }%
8
   2
9
```

XII. Indicate changes

To make it easier to monitor a project, it is essential to provide a history indicating the changes made when a new version is published.

1. When?

You can date and/or version something.

Example XII.1 (Dating new features). The \tdocdate macro is used to indicate a date in the margin, as in the following example.

This gives :

Example XII.2 (Versioning new features, possibly with a date). Associating a version number with a new feature is done using the \tdocversion macro, with the color and date being optional arguments.

This gives :

10.2.0-beta 2023-12-01

Example XII.3 (Caution with paragraph titles). The following example shows that a date and/or version must be placed just after a paragraph title, and not before it.

This gives :

1.2.3 2024-11-23 A well-versioned title. Blah, blah. Stay, stay,

2024-11-23

Example XII.4 (Adjust vertical shift). If required, you can modify the vertical offset used to place dates and versions in the margin, the default value being (-8 pt).

This is what it looks like without vertical shift.

\paragraph{A home-made setting.}%
\tdocversion{1.2.3}[2024-10-29]<0pt>

This gives :

This is what it looks like without vertical shift.

1.2.3 2024-10-29

💉 Important

1. The \tdocdate and \tdocversion macros require two compilations.

2. The final rendering of the dates takes into account the language detected by tutodoc: for example, if French is selected, the dates will be displayed in the format DD/MM/YYYY.

😽 Caution.

Only the use of the digital format YYYY-MM-DD is verified,^a and this is a choice! Why? Quite simply because dating and versioning explanations should be done semi-automatically to avoid any human bugs.

 $^a\mathrm{Technically},$ checking the validity of a date using $\mathrm{IAT}_{\mathrm{E}}\mathrm{X3}$ presents no difficulty.

2. What's new?

tutodoc offers the macro \tdocstartproj and different environments to indicate quickly and clearly what has been done during the changes made, or to come.¹⁸

i Note.

For icons, see the note at the beginning of the section 2 on page 6.

a. Sobriety first

Example XII.5 (Just for the very first version).

 $tdocstartproj{1st version of the project.}$ f 1st version of the project.

Example XII.6 (For new features).

\begin{tdocnew}	♥ New.	٦
\item Info 1	• Info 1	- 1
\item Info 2 \end{tdocnew}	• Info 2	

Example XII.7 (For updates).

 $^{^{18}\}mathrm{The}$ user doesn't need all the technical details.

\begin{tdocupdate}	C Update.	
litem Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdocupdate}		
Example XII.8 (For breaks).		
\begin{tdocbreak}	ဖို Break.	
\item Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdocbreak}		
Example XII.9 (For problems).		
\begin{tdocprob}	O Problem.	
\item Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdocprob}		
Example XII.10 (For fixes).		
\begin{tdocfix}	🖋 Fix.	
\item Info 1	• Info 1	
\item Info 2	I Info 0	
\end{tdocfix}	• Info 2	
Example XII.11 (Roadmap).		
\begin{tdoctodo}	🖉 Todo.	
\item Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdoctodo}		
Example XII.12 (Technical information).		
\begin{tdoctech}	Technical information.	
\item Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdoctech}	• 111/0 2	
Example XII.13 (Selectable themes with an icon).		
<pre>\begin{tdoctopic}{To hide}<\faEyeSlash></pre>	💘 To hide.	
% An icon from fontawesome5.	• Info 1	
litem Info 1		
\item Info 2	• Info 2	
\end{tdoctopic}		
Example XII.14 (Selectable themes without icons)		
\begin{tdoctopic}{End of icons}	End of icons.	
litem Info 1	• Info 1	
\item Info 2	• Info 2	
\end{tdoctopic}		
b. Color if necessary		
-		
It may be useful to highlight some changes: this can	only be done by modifying the content color	

Example XII.15 (A flashy first version).

\tdocstartproj[DarkOrchid]%	Prichtly colored version 1
{Brightly colored version 1.}	$\mathbf{\mathring{v}}$ Brightly colored version 1.

Example XII.16 (Outstanding fixes).

```
\begin{tdocfix}[col = CadetBlue]
    \item Info...
\end{tdocfix}
Fix.
Info...
```

3. The what and the when

The optional keys col-chges, date and version allow to date and/or version a change of a particular type. Here are some examples of use.

```
= 2024 - 10 - 29,
\begin{tdoctech}[date
                 col-chges = red]
    \item Info...
\end{tdoctech}
\begin{tdocupdate}[version = 1.2.3,
                    col-chges = ForestGreen,
                    col
                              = ForestGreen]
    \item Info...
\end{tdocupdate}
\begin{tdoctopic}{To hide}<\faEyeSlash>%
                  [version = 4.5.6,
                  date
                           = 2025 - 11 - 30]
    \item Info...
\end{tdoctopic}
```

This gives :

```
2024-10-29 L Technical information.
```

 \bullet Info...

<u>1.2.3</u> **C** Update. • Info...

4.5.6 **X** To hide. 2025-11-30

• Info...

XIII. Ornament

Let's finish this documentation with a small formatting tool that can be very useful.

Bla, bla, bla	
\tdocsep % Practical for demarcation.	Bla, bla, bla
This works with enumerations.	This works with enumerations.
<pre>\begin{itemize} \item Focus. \end{itemize}</pre>	• Focus.
\tdocsep % Uniform behaviour.	Ble, ble, ble
Ble, ble, ble	1

XIV. Contribute

i Note.

You don't need to be a coder to take part in translations, including those that are useful for the running of tutodoc.

1. Complete the translations

i Note.

The author of tutodoc manages the French and English versions of the translations.

😾 Caution.

Although we're going to explain how to translate the documentation, it doesn't seem relevant to do so, as English should suffice these days.^a

 a The existence of a French version is simply a consequence of the native language of the author of tutodoc.



Figure 1: Simplified view of the translation folder

The translations are roughly organized as in figure 1 where just the important folders for the translations have been "opened".¹⁹ A little further down, the section e explains how to add new translations.

a. The fr and en folders

These two folders, managed by the author of tutodoc, have the same organization; they contain files that are easy to translate even if you're not a coder.

b. The changes folder

This folder is a communication tool where important changes are indicated without dwelling on minor modifications specific to one or more translations.

c. The status folder

This folder is used to keep track of translations from the project's point of view. Everything is done via well-commented YAML files, readable by a non-coder.

d. The README.md and LICENSE.txt files

The LICENSE.txt file is aptly named, while the README.md file takes up in English the important points of what is said in this section about new translations.

 $^{^{19}\}mathrm{This}$ was the organization on October 5, 2024.

e. New translations

💉 Important.

The api folder contains translations relating to the functionalities of tutodoc. Here you'll find TXT files for editing with a text or code editor, but not with a document processor. The content of these files uses commented lines in English to explain what tutodoc will do; these lines begin with //. Here's an extract from such a file, where translations are made after each = sign, without touching the preceding, as this initial piece is used internally by the tutodoc code.

```
// #1: year in format YYYY like 2023.
// #2: month in format MM like 04.
// #3: day in format DD like 29.
date = #1-#2-#3
// #1: the idea is to produce one text like
// "this word means #1 in English".
in_EN = #1 in english
```

i Note.

The doc folder is reserved for documentation. It contains TEX files that can be compiled directly for real-time validation of translations.

😤 Warning.

Only start from one of the fr and en folders, as these are the responsibility of the tutodoc author.

Let's say you want to add support for Italian from files written in English.²⁰

Method 1 : use of git.

- 1. Recover the entire project folder via https://github.com/bc-tools/for-latex/tree/tutodoc. Do not use the main branch, which is used to freeze the latest stable versions of projects in the single https://github.com/bc-tools/for-latex repository.
- 2. In the tutodoc/contrib/translate folder, create an it copy of the en folder, with the short name of the language documented in the page "*HETF language tag*" from Wikipedia.
- 3. Once the translation is complete in the it folder, share it via https://github.com/bc-tools/ for-latex/tree/tutodoc using a classic git push.

Method 2 : communicate by e-mail.

- 1. By e-mail with the subject "tutodoc CONTRIB en FOR italian", request a version of the English translations (note the use of the English name for the new language). Be sure to respect the subject of the e-mail, as the author of tutodoc automates the pre-processing of this type of e-mail.
- 2. You will receive a folder named italian containing the English version of the latest translations. This folder will be the place for your contribution.
- 3. Once the translation is complete, you will need to compress your italian file in zip or rar format before sending it by e-mail with the subject "tutodoc CONTRIB italian".

2. Improving the source code

💉 Important

If you want to participate to tutodoc, you'll need to use the LATEX3 programming paradigm.

 $^{^{20}\}mathrm{As}$ mentioned above, there is no real need for the doc folder.

Participation as a coder is made via the repository https://github.com/bc-tools/for-latex/tree/tutodoc corresponding to the tutodoc development branch.

😵 Caution.

Do not use the main branch, which is used to freeze the latest stable versions of projects in the mono repository https://github.com/bc-tools/for-latex.

XV. History

1.7.1 **⊁** Fix. 2024-12-18

• Documentation: references to tools to indicate changes have been incorrectly written as characteristics of highlighted colored content.

P Break.

- The \tdocenv macro and its starred version no longer offer an option.
- LATEX showcases: the default layout is more sober, and there are options for having just the rulers, or the colored stripe. See just after.

New.

- Formatting of computer codes in addition to those specifically in IAT_EX .
 - 1. Creation of $\begin{tdoccode} \dots \end{tdoccode} and \tdoccodein.$
 - 2. For macros for inline code, and environments for blocks of code, minted options are indicated inside square brackets in the traditional way: [minted options].
 - 3. For code block environments, tcolorbox options are indicated inside rafters: <tcolorbox options>.
 - 4. The new macro \tdoctcb allows to use shortcuts for regularly used tcolorbox styles.
- Documentation: a new section presents tools for formatting computer codes other than those in LATEX.

C Update.

- Sub-sub-sections are numbered in lower case.
- Themes.
 - 1. Less space consumed.
 - 2. Shadows have better coloring.
 - 3. For all themes except the draft one, the radius of the arcs of the corners of the frames has changed from .75mm to .2pt,.
 - 4. Use case in LATEX: with the theme color, the background color changes from yellow!4 to gray!5.
 - 5. Latest changes: with the dark theme, the [Init] text produced by the \tdocstartproj macro uses the same font as the environment titles to indicate changes.

P Break.

1.7.0 2024-12-04

- Format: the scrartcl class replaces the venerable article. This implies better placement of the margin notes with the options retained for loading scrartcl.
- LATEX code: the macro \tdocinlatex has been renamed \tdoclatexin.
- Color key names will be hyphenated where necessary: this implies the following changes.
 - 1. Indicate the latest changes: the colchges option of the environments has been renamed col-chges.
 - 2. Showcases: for the environment tdocshowcase and the macro \tdocshowcaseinput, the colstripe and coltext options have been renamed col-stripe and col-text.

🗲 Fix.

• Admonitions: for the **\newkeytheorem** used with the **draft** theme, **postheadhook** = **\leavevmode** has been added (this is necessary because the content can naturally be of the list type).

🟶 New.

- Documentation: addition of a section listing dependencies.
- Class options.
 - 1. Options not specific to tutodoc are passed on to the class in charge of general formatting.
 - 2. The scrartcl options fontsize and DIV can't be used because their values are fixed by tutodoc.
- The macro \tdocinEN respects the English linguistic rules.
- Indicate the latest changes.
 - 1. Add the environment \begin{tdoctodo} ... \end{tdoctodo}.
 - 2. Each environment has a new option col for the color of the content indicating changes.

C Update.

- draft theme and changes: the environments for the latest changes stop to use icons.
- Documentation: the theme gallery uses a better fake example.

Technical information.

- Simplified organisation of configuration files in the final project.
 - 1. Use of one file per theme with a name like tutodoc-*.css.cls.
 - 2. Locale: use of names like tutodoc-*.loc.cls.

New. 2024-10-30

- The macros \tdocdate and \tdocversion has a new final optional argument <voffset> to choose a specific vertical offset.
- Better environments to indicate the changes made.
 - 1. The new optional keys col, date and version allow to date and version a change of a specific topic.
 - 2. Use of \paragraph for the title.

C Update.

- Version and changes: the font of the margin notes will always have a normal shape.
- Ornament: use of a \cleaders to avoid orphean rules at the bottom of a page.



1.6.0

2024-10-27

1.6.2

Technical information.

• The naming rules of CTAN need the use of CSS files named tutodoc-*.css.cls.sty.

P Break.

- The showcase environment and its descendants: the color key has been renamed colstripe.
- The macro \tdoclinkcolor becomes the color tutodoc@link@color for internal use.

New.

- The theme class option allows you to choose different formatting themes.
- Change log: addition of the tdoctech environment for technical information.
- The showcase environment and its descendants: the coltext key can also be used to change the text color.
- The new functionalities have been documented.

C Update.

• Change log: the tdocupdate environment uses the icon C instead of 🗱.

🖌 Fix.

- The Spanish translations were not included in the previous version! Don't laugh too loud...
- 1.5.02024-10-19

Technical information.

• Version 3 of minted is taken into account.

P Break.

- The tutodoc class replaces the now-defunct tutodoc package (for the moment, the young class offers no specific options).
- The \tdocruler macro is now used via \tdocruler[<color>]{<text>} (remember that the old syntax was \tdocruler{<text>}{<color>}).

New.

- The class is usable in Spanish.
- The documentation contains a new section explaining how to contribute.

🖌 Fix.

- The \tdocdate macro did not handle date format and formatting.
- Colored frames did not color text after a page break.

1.4.0 2024-09-28

- The tdoccaution environment has been renamed tdoccaut for simplified input.
- Content highlighting: examples and remarks, indicated via the tdocexa and tdocrem environments, are numbered using a common counter.
- The unused macro **\tdocxspace** has been deleted.

🏶 New.

P Break.

- Change log: the **\tdocstartproj** macro is used to manage the case of the first public version.
- Code factorization: the **\tdocicon** macro is responsible for adding icons in front of text.

C Update.

- Colors: the \tdocdarkcolor and \tdoclightcolor macros offer an optional argument.
 - 1. \tdocdarkcolor: the amount of color in relation to black can be optionally defined.
 - 2. \tdoclightcolor: the transparency rate can be optionally defined.
- Content highlighting: reduced space around content in colored frames.
- Versioning: better vertical spacing thanks to \vphantom.

🛚 🏶 New.

• Star version of \tdocenv to display only the environment name.



1.3.1

2024-09-26

🗕 Technical information.

• Version 3 of minted cannot be used for the moment as it contains bugs: see https://github.com/gpoore/ minted/issues/401. We therefore force temporarily the use of version 2 of minted.

ဖို Break.

• The tdocimportant environment has been renamed tdocimp for simplified input.

New.

- Change log: proposed environments use icons.
- Content highlighting: colored frames with icons are proposed for the following environments.
 - 1. tdoccaution2. tdocimp3. tdocnote4. tdoctip5. tdocwarn

C Update.

- \tdocversion
 - 1. The version number is above the date.
 - 2. The spacing is better managed when the date is absent.

🗲 Fix.

• Content highlighting: the French translations of "caution" and "danger" were incorrect.



1.2.0-a

2024-08-23

New.

Fix.

- Change log: two new environments.
 - 1. \begin{tdocbreak} ... \end{tdocbreak} for breaking changes which are not backward compatible.
 - 2. \begin{tdocprob} ... \end{tdocprob} for identified problems.
- \tdoclatexin: a light yellow is used as the background color.

1.0.1 2023-12-08

- \tdocenv: spacing is now correct, even if the babel package is not loaded with the French language.
- \begin{[}...\end{[}[nostripe]]tdocshowcase : page breaks around "*framing*" lines should be rare from now on.



First public version of the project.

Appendix – Theme gallery

i Note.

Each example is a PDF directly inserted into this document (so don't be surprised by the page numbers).

The "bw" theme

I. Liens

A very big link, but at least we can see it.

II. **ETEX** listings

Typing inline code such as $E = m c^2 \ln q \ln \sqrt{14}$ is useful, as is showing use cases such as the following one.

```
Formatted \LaTeX\ code is great: E = m c^2 or pi \neq \frac{3}{14}.
Formatted LATEX code is great: E = mc^2 or pi \neq \frac{3}{14}.
```

There's also a less invasive side-by-side mode. Nice! No ?

Formatted \LaTeX\ code is great: \\	Formatted LATEX code is great:
$E = m c^{2} or \ i \in \sqrt{14}$.	$E = mc^2 \text{ or } \pi \neq \frac{3}{14}.$

III. Highlighting, versioning and dating

1. tdocexa, tdocrem

 $\frac{1.7.0}{2024-12-04}$ In the flow of the text, it is always useful to be able to provide examples and comments to supplement the main content.

Example III.1. What to say¹? I don't know, but it's nice. No?

Remark III.2. What to say²? I don't know, but it's nice. No?

2. tdocnote, tdoctip...

Depending on the context of use, it is sometimes necessary to be able to highlight content by indicating its degree of importance.

```
    Note.
    What to say<sup>a</sup>? I don't know, but it's nice. No ?
```

^aLet's not forget the footnotes...

♀ Tip.

What to say? I don't know, but it's nice. No ?

💉 Important.

What to say? I don't know, but it's nice. No ?

😽 Caution.

What to say? I don't know, but it's nice. No ?

😤 Warning.

What to say? I don't know, but it's nice. No ?

 $^{^1\}mathrm{Let}\ensuremath{'\!\mathrm{s}}$ not forget the footnotes...

 $^{^2 \}mathrm{Let's}$ not forget the footnotes...

3. tdocbreak, tdocfix...

♣ A new demonstration section...

Ø Todo.

• A gallery would be welcome...

In a change log, it is important to visualise the types of changes clearly. This makes it easier for the user to read!

ဖို Break.	🗲 Fix.	Interview New.	O Problem.
• Infos	• Infos	• Infos	• Infos
L Technical information.	C Update.	🖉 Todo.	
• Infos	• Infos	• Infos	

2/2

The "color" theme

I. Liens

A very big link, but at least we can see it.

II. **ETEX** listings

Typing inline code such as $E = m c^2 \ln q \ln (14)$ is useful, as is showing use cases such as the following one.

```
Formatted \LaTeX\ code is great: E = m c^2 or pi \ pi \ 14.
Formatted LaTeX code is great: E = mc^2 or pi \neq \frac{3}{14}.
```

There's also a less invasive side-by-side mode. Nice! No ?

Formatted \LaTeX\ code is great: \\	Formatted IAT _E X code is great:
<pre>\$E = m c^2\$ or \$\pi \neq \frac{3}{14}\$.</pre>	$E = mc^2 \text{ or } \pi \neq \frac{3}{14}.$

III. Highlighting, versioning and dating

1. tdocexa, tdocrem

1.7.0 2024-12-04

In the flow of the text, it is always useful to be able to provide examples and comments to supplement the – main content.

Example III.1. What to say¹? I don't know, but it's nice. No?

Remark III.2. What to say²? I don't know, but it's nice. No?

2. tdocnote, tdoctip...

Depending on the context of use, it is sometimes necessary to be able to highlight content by indicating its degree of importance.

```
Note.
What to say ? I don't know, but it's nice. No ?
<sup>a</sup>Let's not forget the footnotes...
? Tip.
What to say? I don't know, but it's nice. No ?
✓ Important.
What to say? I don't know, but it's nice. No ?
✓ Caution.
What to say? I don't know, but it's nice. No ?
✓ Warning.
What to say? I don't know, but it's nice. No ?
```

¹Let's not forget the footnotes...

 $^{^2 \}mathrm{Let's}$ not forget the footnotes...

3. tdocbreak, tdocfix...

♣ A new demonstration section...

Ø Todo.

• A gallery would be welcome...

In a change log, it is important to visualise the types of changes clearly. This makes it easier for the user to read!

ဖို Break.	🗲 Fix.	Interview New.	O Problem.
• Infos	• Infos	• Infos	• Infos
L Technical information.	C Update.	🖉 Todo.	
• Infos	• Infos	• Infos	

2/2

The "dark" theme

I. Liens

A very big link, but at least we can see it.

II. **LATEX** listings

Typing inline code such as $E = m c^2 \left(\frac{pi \sqrt{p} \sqrt{14}}{s} \right)$ is useful, as is showing use cases such as the following one.

Formatted \LaTeX\ code is great: $E = m c^2 s$ or $pi \neq \frac{3}{14}$. Formatted LATeX\ code is great: $E = mc^2$ or $pi \neq \frac{3}{14}$. There's also a less invasive side-by-side mode. Nice! No ? Formatted \LaTeX\ code is great: $\langle \rangle$ Formatted LATEX code is great: $E = m c^2 s$ or $pi \neq \frac{3}{14}$. $E = mc^2$ or $\pi \neq \frac{3}{14}$.

III. Highlighting, versioning and dating

1. tdocexa, tdocrem

1.7.0 2024-12-04

In the flow of the text, it is always useful to be able to provide examples and comments to supplement the main content.

Example III.1. What to say ¹? I don't know, but it's nice. No ?

Remark III.2. What to say²? I don't know, but it's nice. No?

2. tdocnote, tdoctip...

Depending on the context of use, it is sometimes necessary to be able to highlight content by indicating its degree of importance.



¹Let's not forget the footnotes...

²Let's not forget the footnotes...

3. tdocbreak, tdocfix...

 \clubsuit A new demonstration section...

Ø Todo.

• A gallery would be welcome...

In a change log, it is important to visualise the types of changes clearly. This makes it easier for the user to read!

ဖို Break.	🗲 Fix.	New.	Oroblem.
• Infos	• Infos	• Infos	• Infos
Technical information.	C Update.	Ø Todo.	
• Infos	• Infos	• Infos	

2/2

The "draft" theme

I. Liens

A very big link, but at least we can see it.

II. LATEX listings

Typing inline code such as $E = m c^2 \ln q \ln (14)$ is useful, as is showing use cases such as the following one.

Formatted $LaTeX \subset s great:$ = m c^2\$ or \$pi \neq $frac{3}{14}$.

Formatted LATEX code is great: $E = mc^2$ or $pi \neq \frac{3}{14}$.

There's also a less invasive side-by-side mode. Nice! No ?

Formatted \LaTeX code is great: \$E = m c^2\$ or \$\pi \neq \frac{3}{14}\$. Formatted LATEX code is great: $E = mc^2$ or $\pi \neq \frac{3}{14}$.

III. Highlighting, versioning and dating

1. tdocexa, tdocrem

 $\frac{1.7.0}{2024-12-04}$ In the flow of the text, it is always useful to be able to provide examples and comments to supplement the main content.

Example III.1. What to say¹? I don't know, but it's nice. No ? **Remark III.2.** What to say²? I don't know, but it's nice. No ?

2. tdocnote, tdoctip...

Depending on the context of use, it is sometimes necessary to be able to highlight content by indicating its degree of importance.

Note III.3. What to say³? I don't know, but it's nice. No? Tip III.4. What to say? I don't know, but it's nice. No? Important III.5. What to say? I don't know, but it's nice. No? Caution III.6. What to say? I don't know, but it's nice. No? Warning III.7. What to say? I don't know, but it's nice. No?

3. tdocbreak, tdocfix...

^[Init] A new demonstration section...

Todo.

• A gallery would be welcome...

In a change log, it is important to visualise the types of changes clearly. This makes it easier for the user to read!

Break.	Fix.	New.	Problem.
• Infos	• Infos	• Infos	• Infos
Technical information.	Update.	Todo.	
• Infos	• Infos	• Infos	

 $^{^1\}mathrm{Let's}$ not forget the footnotes...

 $^{^2 \}mathrm{Let's}$ not forget the footnotes...

³Let's not forget the footnotes...