# The tutodoc class Tutorial-style documentation

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The tutodoc class <sup>1</sup> is used by its author to semantically produce documentation of LAT<sub>E</sub>X packages and classes in a tutorial style <sup>2</sup> using 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.

### ያ Break.

• Code formatting just in LATEX: the options system changes as shown next.

#### 🏶 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. For code block environments, tcolorbox options are indicated inside rafters: <tcolorbox options>.
  - 4. The new macro \tdoctcb allows you 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 increases from .75mm to .2pt,.
  - 4. Codes just in LATEX: with the theme color, the background color changes from yellow!4 to gray!5.
  - 5. Changes: with the dark theme, the font of the [Init] text used by the \tdocstartproj macro is identical to that of the environment titles for typing changes.

<sup>&</sup>lt;sup>1</sup>The name comes from "tuto·rial-type doc·umentation".

<sup>&</sup>lt;sup>2</sup>The idea is to produce an efficient PDF file that can be browsed for one-off needs. This is generally what is expected of 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)	•	clrstrip.sty	(2021/08/28)
•	csquotes.sty	(2024/04/04)	•	fontawesome5.sty	(2022/05/02)
•	geometry.sty	(2020/01/02)	•	hyperref.sty	(2024/11/05)
•	inputenc.sty	(2024/02/08)	•	keytheorems.sty	(2024/11/11)
•	marginnote.sty	(2018/08/09)	•	minted.sty	(2024/11/17)
•	tcolorbox.sty	(2024/10/22)			

### II. General formatting imposed

### 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 color 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.<sup>3</sup> 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.

### 1 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.

 $<sup>^3 \</sup>text{Technically},$  we use \BCPdata{language} 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).

### 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 coloured theme: this is the default value. w
- 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.

### 1 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.

 $^{a}$ The 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 as a section with a level at least equal to a \section is opened.

### a. Examples

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

\begin{tdocexa}	
An example	
\end{tdocexa}	Example VI.1. An example
\begin{tdocexa}[Mini title]	Example VI.2 (Mini 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}	
\leavevmode	
\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 remark  Remark VI.5. Another?  Remark VI.6 (Mini title). Useful?
\begin{tdocrem}[Mini title]     Useful?     \end{tdocrem}	

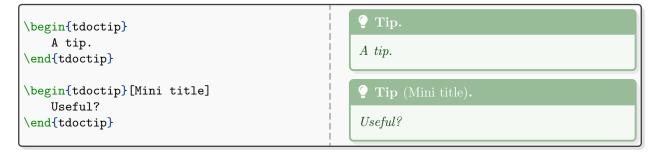
### 2. Flashy content

### 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 manages the spacing in relation to the text.<sup>a</sup>

### a. A tip

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



### 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.

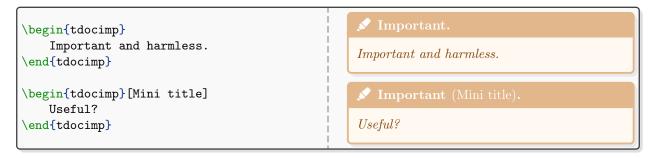
```
\begin{tdoctip}[Little elegant]
    \begin{enumerate}
        \item Point 1.
                                                     1. Point 1.
        \item Point 2.
    \end{enumerate}
                                                    2. Point 2.
\end{tdoctip}
                                                 VERSUS.
VERSUS.
\begin{tdoctip}[More elegant]
                                                  ? Tip (More elegant).
    \begin{enumerate}[wide]
        \item Point 1.
                                                  1. Point 1.
        \item Point 2.
    \end{enumerate}
                                                  2. Point 2.
\end{tdoctip}
```

#### b. Informative note

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

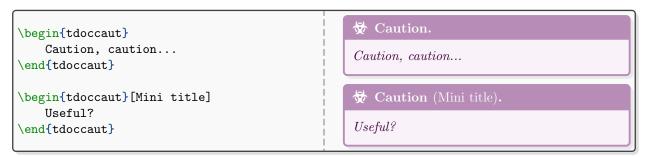
### c. Something important

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}
    Avoid the dangers...
\end{tdocwarn}

\begin{tdocwarn} [Mini title]
    Useful?
\end{tdocwarn}

Useful?

Useful?
```

### VII. Specify packages, classes, macros or environments

Here's what you can type semantically.

```
\tdoccls{myclass} is for...
                                             \overline{ }
                                                    myclass is for...
\tdocpack{mypackage} is for...
                                             //
                                                    mypackage is for...
\tdocmacro{onemacro} is for...
                                             //
                                                    \onemacro is for...
\tdocenv{env} produces...
                                             //
                                                    \begin{env} ...\end{env} produces...
                                             //
\tdocenv[{[opt1]<opt2>}]{env}
                                                    \begin{env}[opt1]<opt2>...\end{env}
Just \tdocenv*{env}...
                                             //
                                                    Just env...
Finally \tdocenv*[{[opt1]<opt2>}]{env}...
                                                    Finally env...
        % For copy and paste.
```

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

```
& Warning.
```

The optional argument of the \tdocenv macro is copied and pasted a when rendering. This may sometimes require the use of protective braces, as in the example above.

 $^a$ Remember that almost anything is possible from now on.

### 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...

      \tdocprewhy{sup.erbe} means...
      \sup erbe means...

      \emph{\tdocprewhy{sup.er} for...}
      \sup 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** (With default text). It can be useful to show a real rendering directly in a document. <sup>4</sup> This is typed via \begin{tdocshowcase} ... \end{tdocshowcase} as follows.

```
\begin{tdocshowcase}
\bfseries A bit of code \LaTeX.
\bigskip
```

<sup>&</sup>lt;sup>4</sup>Typically when making a demo.

```
\emph{\large End of the awful demo.}
\end{tdocshowcase}
```

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

A bit of code LATEX.

#### 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.

### 2. With framing lines

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

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

Here's the code that was used.<sup>5</sup>

### 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 strip: the transformations used depend on the theme chosen. You should also be aware that behind the scenes, the macro  $\t$  docruler is used.

 $<sup>^5</sup>$ The next section will normalise the a priori strange choice of col-stripe instead of col-rule.

```
\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 LATEX code. This can be done, as the following examples show.  $^6$ 

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

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

Here's the code that was used.

### 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 the use of \tdocshowcaseinput{external.tex} with or without an option.

**Example IX.7** (Without option). Here is the edifying content of the example chosen. Blablobli, blablobli, blablobli, blablobli, blablobli, blablobli...

```
Example IX.8 (Just the framing lines). The option style=rule provides the following.

Start of the real output

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

End of the real output
```

Example IX.9 (A colored stripe). The option style=stripe, col-stripe=red, col-text=LightCoral provides the following.

	_			Star	t of the real output	
Blablobli,	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.  $^8$ 

<sup>&</sup>lt;sup>6</sup>Behind the scenes, the strips are created effortlessly using the clrstrip package.

<sup>&</sup>lt;sup>7</sup>Now we understand why we chose col-stripe instead of col-rule.

<sup>&</sup>lt;sup>8</sup>Code is formatted using the minted and tcolorbox packages.

### 1. "Inline" codes

**Example X.1** (Standard usage). The \tag{tdoclatexin} macro g 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

**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.

```
The \tdoclatexin macro can be used in a footnote: see below.a

asminted = TOP$ has been typed \tdoclatexin+$minted = TOP$+ in this footnote.
```

### 2. Directly typed codes

Example X.3 (Face to face). 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:

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

```
\begin{bmatrix}
\$A = B + C\$ \\
A = B + C
\end{bmatrix}
```

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 taken into account by the environments obtained via tcolorbox.

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

<sup>&</sup>lt;sup>9</sup>The name of the macro \tdoclatexin comes from "in·line LATEX".

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

 $<sup>^{11}</sup>$ std refers to the "standard" behaviour of tcolorbox in relation to the minted library.

<sup>&</sup>lt;sup>12</sup>This documentation uses the options between rafters to obtain correct rendering of code producing shaded frames: see the section 2 on page 6.

This gives:

```
🙎 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}<>
 \string<Strange... Or not!>
\end{tdoclatex}
This gives:
 [Strange... Or not!]
[Strange... Or not!]
OR.
 \string<Strange... Or not!>
 <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).

This produces the following formatting.

Example X.8 (Following).

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

Example X.9 (Only the code).

This produces the following formatting.

Example X.10 (Customise).

```
\tdoclatexinput[style = igor, showspaces]<\tdoctcb{code}>%
{examples-listing-latex-xyz.tex}
```

This produces the following formatting.

```
\[ \frac{\cappa_Just_one_demo}{\sum_z_=_1\sum_} \]
```

### 4. Imported codes put into practice

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

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

This gives:

xyz = 1

### i Note.

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

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

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

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.
$x y z = 1$
```

What comes next is colorful...

xyz=1 Finished rendering.

### XI. Presenting computer code

Some packages offer functions that require to code a little in Lua.<sup>13</sup> 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.<sup>14</sup>



The tools in this section can also be used to present  $\LaTeX$  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  $\LaTeX$  cases.

### 1. "Inline" codes

The \tdoccodein macro expects two arguments: the 1<sup>st</sup> indicates the programming language, and the 2<sup>nd</sup> 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.<sup>15</sup>

<sup>&</sup>lt;sup>13</sup>For mathematics, these include luacas and tkz-elements.

<sup>&</sup>lt;sup>14</sup>As 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.
<sup>15</sup>A background color is deliberately used to subtly highlight the formatted codes. For example, typing tdoccodein{py}{funny = "ah"\*3} will produce funny = "ah"\*3.

### 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 offered by \begin{tdoclatex} ...\end{tdoclatex}: see the section ?? on page ??. In the following examples, the LATEX codes for tutodoc are displayed in verbatim mode because the coloring of LATEX codes is not correct. 16

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 "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).

 $<sup>^{16}\</sup>mathrm{Note}$  that the coloring of the LATeX codes is lexically correct, but semantically wrong.

```
\end{tdoccode}
```

This gives:

```
io.write("Who are you?")
local name = io.read()

if name == "" then
    print("Ah, not very chatty today!")

else
    print("Hello " .. name .. ".")
    print("Amazing! Actually, not at all...")
end
```

### 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 By simply using \tdoccodeinput, you can easily obtain a rendering like the following.

```
main :: I0 ()
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).

```
\tdoccodeinput[style = solarized-light, linenos]%
<leftrule = 22pt, colback = orange!5, colframe = red!35>%
{tex}{examples-listing-full-hello-you.tex}
```

This gives:

```
| NewDocumentCommand{\helloyou}{m}{%
| \IfBlankTF{#1}{%
| Ah, not very chatty today!
| }{%
| Hello #1.
| Amazing! Actually, not at all...%
| }%
| }
```

### 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 either date something, or version it, in which case the version number can be dated.

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

This gives:

2023-09-24

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

This gives:

10.2.0-beta 2023-12-01

10.2.0-alpha

**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,

2024-11-23

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

This gives:

This is what it looks like without vertical movement.

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.

<sup>a</sup>Technically, checking the validity of a date using LATEX3 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. 17

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.} \ \ \ \ \ \ \ \ \ 1st version of the project.

Example XII.6 (For new features).

 \text{begin{tdocnew}}
 ♠ New.

 \text{item Info 1...}
 ♠ Info 1...

 \text{item Info 2...}
 ♠ Info 2...

Example XII.7 (For updates).

 $<sup>^{17}\</sup>mathrm{The}$  user doesn't need all the technical details.

\begin{tdocupdate}	€ Update.	
\item Info 1	• Info 1	
\item Info 2 \end{tdocupdate}	• Info 2	

### Example XII.8 (For breaks).

\begin{tdocbreak}	🐉 Break.	
\item Info 1	• Info 1	
\item Info 2\ \end{tdocbreak}	• Info 2	

### Example XII.9 (For problems).

\begin{tdocprob}	O Problem.
\item Info 1	• Info 1
\item Info 2	• Info 2
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	

### Example XII.10 (For fixes).

$oxed{egin{array}{c} oxed{begin{tdocfix}}}$	<b>₽</b> Fix.
\item Info 1	• Info 1
\item Info 2	• Info 2
$\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	

### Example XII.11 (Roadmap).

\begin{tdoctodo}	<b>⊘</b> Todo.	
\item Info 1	• Info 1	
\item Info 2\end{tdoctodo}	• Info 2	

### Example XII.12 (Technical information).

\begin{tdoctech} \item Info 1 \item Info 2	<ul><li>☐ Technical information.</li><li>Info 1</li><li>Info 2</li></ul>
$\ensuremath{\ }$	11150 Z

### Example XII.13 (Selectable themes with an icon).

\begin{tdoctopic}{To hide}<\faEyeSlash> % An icon from fontawesome5.	<b>№ To hide.</b> • Info 1
\\item Info 1\\item Info 2\\end{tdoctopic}	• Info 2

### Example XII.14 (Selectable themes without icons).

\begin{tdoctopic}{End of icons} \item Info 1	End of icons.  ● Info 1
\item Info 2\end{tdoctopic}	• Info 2

### b. De la couleur si besoin

### c. Color if necessary

It may be useful to highlight certain changes: this can only be done by modifying the content color.

### Example XII.15 (A flashy first version).

$\t tdocstartproj[DarkOrchid]\%$	2 Princhtles colored services 1
{Brightly colored version 1.}	$\clubsuit$ Brightly colored version 1.

### Example XII.16 (Outstanding fixes).

### 3. The what and the when

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

```
\begin{tdoctech}[date
                           = 2024-10-29
                 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
                          = 2025-11-307
    \item Info...
\end{tdoctopic}
```

This gives:

### 2024-10-29

### **A** Technical information.

• Info...

1.2.3

C Update.

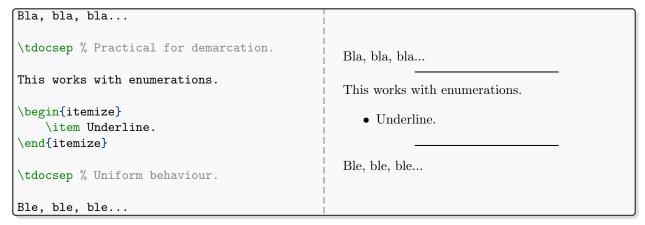
• Info...

4.5.6 2025-11-30 To hide.

• Info...

### XIII. Ornament

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



### 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

### 1 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.<sup>a</sup>

<sup>a</sup>The existence of a French version is simply a consequence of the native language of the author of tutodoc.

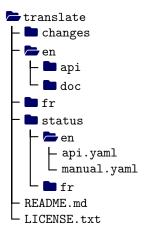


Figure 1: Simplified view of the translation folder

The translations are roughly organized as in figure 1 where only the folders important for the translations have been "opened". <sup>18</sup> 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.

<sup>&</sup>lt;sup>18</sup>This was the organization on October 5, 2024, but it's still relevant today.

#### 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 word 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 tutodoccode.

```
// #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  $\operatorname{doc}$  folder is reserved for documentation. It contains files of type TEX 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. 19

#### Method 1: git.

- 1. Obtain 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 a it copy of the en folder, with the short name of the language documented in the page "IIETF language tag" from Wikipedia.
- 3. Once the translation is complete in the it folder, you'll need to communicate 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 in tutodoc you'll need to use the LATEX3 programming paradigm.

 $<sup>^{19}\</sup>mathrm{As}$  mentioned above, there is no real need for the  $\mathtt{doc}$  documentation folder.

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

### XV. History

1.7.1 2024-12-17

### Fix.

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

#### پا Break.

• Code formatting just in LATEX: the options system changes as shown next.

### 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. For code block environments, tcolorbox options are indicated inside rafters: <tcolorbox options>.
  - 4. The new macro \tdoctcb allows you 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.
  - For all themes except the draft one, the radius of the arcs of the corners of the frames increases from .75mm to .2pt,.
  - 4. Codes just in LATEX: with the theme color, the background color changes from yellow! 4 to gray! 5.
  - 5. Changes: with the dark theme, the font of the [Init] text used by the \tdocstartproj macro is identical to that of the environment titles for typing changes.

1.7.0 2024-12-04

### P Break.

- 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 colour 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. CSS-like: use of one file per theme with a name like tutodoc-bw.css.cls.
  - 2. Locale: use of names like tutodoc-en.loc.cls.

 $1.6.2 \\ 2024-10-30$ 

#### New.

- 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.

1.6.1 2024-10-28

### Technical information.

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

1.6.0 2024-10-27

### ₽ Break.

- The showcase environment and its descendants: the color key has been renamed col-stripe.
- The macro \tdoclinkcolor has been renamed 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 col-text key can also be used to change the text color.
- The new functionalities have been documented.

### C Update.

#### 🔑 Fix.

• The Spanish translations were not included in the previous version! Don't laugh too hard...

1.5.0 2024-10-19

#### ⚠ 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

### P Break.

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

### New.

- 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.

1.3.1 2024-09-26

### New.

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

#### 1.3.0 2024-09-25

#### ☐ 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.

### P 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. tdoccaution
- 2. tdocimp

3. tdocnote

4. tdoctip

5. tdocwarn

#### 1.2.0-a 2024-08-23

### 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.

#### 1.1.0 2024-01-06

### New.

- 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

#### Fix.

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

#### 1.0.0 2023-11-29

**\$** First public version of the project.

# Appendix – Theme gallery



Each example is exactly a two pages long PDF and has been inserted directly 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. LATEX listings

Typing in on-line code such as  $E = m c^2 \neq \frac{3}{14}$  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: \\ $E = m c^2$ or $\pi \neq \frac{3}{14}$. Formatted LATeX code is great: 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 say <sup>1</sup>? I don't know, but it's nice. No?

Remark III.2. What to say <sup>2</sup>? 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.

What to say a? 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?

<sup>&</sup>lt;sup>1</sup>Let's not forget the footnotes...

 $<sup>^2</sup>$ Let's not forget the footnotes...

3.	tdocbreak,	tdocfix
•	taccoi carr,	LUCCIINIII

 $\mbox{\mbox{\mbox{\$}}}$  A new demonstration section...

### Ø Todo.

 $\bullet\,$  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.	O Problem.
• Infos	• Infos	• Infos	• Infos
■ Technical information.	C Update.	Ø Todo.	
• Infos	• Infos	• Infos	

## The "color" theme

### I. Liens

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

### II. LATEX listings

Typing in on-line code such as  $E = m c^2 \neq \sqrt{14}$  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 \ \rhoi \ 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 <sup>1</sup>? I don't know, but it's nice. No?

Remark III.2. What to say <sup>2</sup>? 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.

```
What to say a? 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?

<sup>&</sup>lt;sup>1</sup>Let's not forget the footnotes...

<sup>&</sup>lt;sup>2</sup>Let's not forget the footnotes...

3.	tdocbreak,	tdocfix
•	taccoi carr,	LUCCIINIII

 $\mbox{\mbox{\mbox{\$}}}$  A new demonstration section...

### Ø Todo.

 $\bullet\,$  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.	O Problem.
• Infos	• Infos	• Infos	• Infos
■ Technical information.	C Update.	Ø Todo.	
• Infos	• Infos	• Infos	

# The "dark" theme

### I. Liens

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

### II. LATEX listings

Typing in on-line code such as  $E = m c^2 \neq \frac{14}{14}$  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: \\ $E = m c^2$ 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 <sup>1</sup>? I don't know, but it's nice. No?

Remark III.2. What to say <sup>2</sup>? 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.

```
What to say a? 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 ?

 $<sup>^1\</sup>mathrm{Let's}$  not forget the footnotes...

 $<sup>^2</sup>$ Let's not forget the footnotes...

_				
<b>つ</b>	1 -1	break,	1 - I C	• • •
-	TAAC	nroak	TAACT	IV
Э.	LUUL	DI Can.	LUUCI	$1 \wedge \dots$

- $\mbox{\bf \$}$  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!

🧗 Break.	Fix.	♦ New.	<b>O</b> Problem.
• Infos	• Infos	• Infos	• Infos
▲ Technical information.	C Update.	Ø Todo.	
• Infos	• Infos	• Infos	

# The "draft" theme

### I. Liens

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

### II. LATEX listings

Typing in on-line code such as E = m c^2 \neq \pi \neq \frac{3}{14} is useful, as is showing use cases such as the following one.

```
Formatted \Delta \times \mathbb{S} = m c^2\ or \pi \simeq \mathbb{S}_{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 \pi \sqrt{2} or \pi \sqrt{3}{14}.
                                                        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 say <sup>1</sup>? I don't know, but it's nice. No? Remark III.2. What to say <sup>2</sup>? 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 say <sup>3</sup>? 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...

• 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	

 $<sup>^1\</sup>mathrm{Let's}$  not forget the footnotes...

<sup>&</sup>lt;sup>2</sup>Let's not forget the footnotes...

 $<sup>^3{\</sup>rm Let's}$  not forget the footnotes...