

# The `todonotes` package\*

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## Abstract

The `todonotes` package allows you to insert to-do items in your document. At any point in the document a list of all the inserted to-do items can be listed with the `\listoftodos` command.

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\*This document corresponds to `todonotes.dtx`, dated 2010/09/26.

# 1 Introduction

The `todonotes` package makes three commands available to the user: `\todo[]{}{}`, `\missingfigure{}` and `\listoftodos`. `\todo[]{}{}` and `\missingfigure{}` makes it possible to insert notes in your document about things that has to be done later (todonotes ...). I developed the basic functionality of the package while I worked on my bachelor project.

## 1.1 Usage

`\todo` My most common usage of the `todonotes` package, is to insert an `todonotes` somewhere in a latex document. An example of this usage is the command

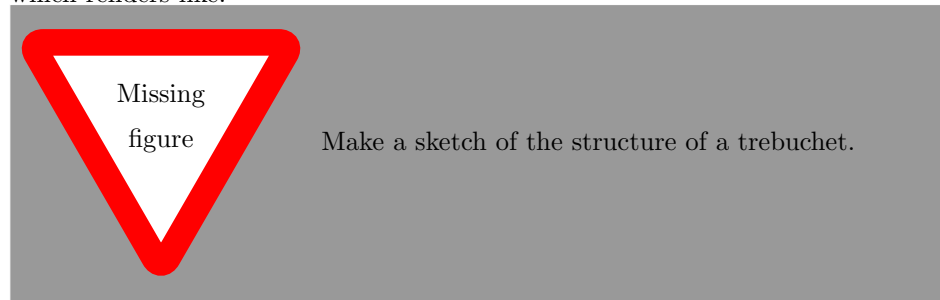
`\todo{Make a cake \ldots}`,

which renders like. The `\todo` command has this structure: `\todo[options]{todo text}`. The `todo text` is the text that will be shown in the todonote and in the list of todos. The optional argument `options`, allows the user to customize the appearance of the inserted todonotes. For a description of all the options see section 1.3.

`\missingfigure` The `\missingfigure` command inserts an image containing an attention sign and the given text. The command takes only one argument `\missingfigure{text}`, a text string that could describe what the figure should consist of. An example of its usage could be

`\missingfigure{Make a sketch of the structure of a trebuchet.}`






















which renders like.



`\listoftodos` The `\listoftodos` command inserts a list of all the todos in the current document. `\listoftodos` takes no arguments. For this document the list of to-do's looks like.

## Todo list

Make a cake ...	2
Figure: Make a sketch of the structure of a trebuchet.	2
And a green note	4
Anything but default colors	4
A note with no line connecting it to the placement in the original text.	5

	A todonote placed in the text . . . . .	5
	Fill those circles . . . . .	5
	A note with a large font size. . . . .	5
	Note with very small font size. . . . .	5
	Short note . . . . .	5
	Short note with prepend . . . . .	5
	Short note with noprepnd . . . . .	5
	Figure: Testing a long text string . . . . .	6
	Figure: Testing a long text string . . . . .	6
	Figure: Add a test image . . . . .	6
	Test of newly defined command. . . . .	9
	Test of newly defined command, requesting a green color. . . . .	9
	1: A numbered todonote. . . . .	10
	2: Another numbered todonote. . . . .	10
	<b>Comment</b> [HSM1]: Testing first time. . . . .	10
	<b>Comment</b> [HSM2]: Testing second time. . . . .	10
	Some lines with a decreased line spacing. This is accomplished using the setspace package that is included in standard latex distributions. . . .	11
	Some lines with a decreased line spacing. This is accomplished without using any special packages. . . . .	11
	Examine this new section . . . . .	12
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	1. Smart notes with links back to the list of todos. . . . .	14

`\todototoc`      The `\todototoc` command adds an entry to the table of contents for list of todos. The command should be placed right before the `\listoftodos` command.

## 1.2 Package options

**disable**      If the option **disable** is passed to the package, the macros usually defined by the package (`\todo`, `\listoftodos` and `\missingfigure`) are defined as macros with no effect, and thus all inserted notes are removed.

**obeyDraft**      When the option **obeyDraft** is given, the package checks if the option **draft** is given (this option is usually given to the documentclass). If the **draft** option is given, the functionality of the package is enabled and otherwise the effect of the package is disabled.

**danish, german, ngerman, french, spanish, catalan, italian, portuguese, dutch**      Use translations of the text strings "List of todos" and "Missing figure". The default is to use none of these options, which results in english text strings. Currently the following languages are supported: catalan, danish, dutch, french, german, ngerman, italian, portuguese and spanish.

**colorinlistoftodos**      Adds a small colored square in front of all items in the Todo list. The color of the square is the same as the fill color of the inserted todonote. This can be useful

if there are different types of todos (insert reference, explain in detail, ...) where the color of the inserted todonote marks the type of todo.

<code>color</code>	These options sets the default colors for the todo command. There is three colors that can be specified. The border color (default <code>bordercolor=black</code> ) around
<code>backgroundcolor</code>	the inserted text, the color behind the inserted text (default <code>backgroundcolor=orange</code> )
<code>linecolor</code>	and the color of the line connecting the inserted textbox with the current location
<code>bordercolor</code>	in the text (default <code>linecolor=orange</code> ). Setting the <code>color</code> option to <code>val</code> passes this value on to the background and line color options. The specified colors must be valid according to the <code>xcolor</code> package.
<code>textwidth</code>	<code>textwidth=length</code> sets the width of a todo item in the margin to <code>length</code> . The width of inline todonotes will allways be the same as the current line width.
<code>textsize</code>	<code>textsize=value</code> sets the default text size of the inserted todonotes to the given value. Value is the "name" of the used font size, eg. if the desired fontsize is <code>\tiny</code> use <code>textsize=tiny</code> . The default value is <code>textsize=normalsize</code> .
<code>prependcaption</code>	The <code>prependcaption</code> option triggers a special behaviour of the <code>caption=val</code> option for the todo command, where the given value <code>val</code> is inserted in the inserted todonote.
<code>shadow</code>	If the <code>shadow</code> option is given, the inserted todonotes will be displayed with a gray shadow. I expect that the option will trigger problems with tikz versions prior to 2.0.
<code>dvistyle</code>	When a document with todonotes is compiled with plain latex (to a dvi-file), there is an issue with the visual appearance <sup>1</sup> . The option <code>dvistyle</code> changes the appearance of the inserted todonotes to avoid this problem.

### 1.3 Options for the todo command

There are several options that can be given to the `\todo` command. All the options are described here and often I have included examples of the change in visual appearance.

`disable` The `disable` option can be given directly to the todo command. If given the command has no effect.

`color` These options set the color that is used in the current todo command. The color classes is the same as used in the color package options, see section 1.2.  
`backgroundcolor`  
`linecolor` Default values can be set by the color options when the todonotes package is loaded.  
`bordercolor` The todo notes inserted in this paragraph is created with the command

And a green note

`\todo[color=green!40]{And a green note}`. The color of the inserted note could be used to mark different types of tasks (insert references, explain something in detail, ...), this could be streamlined by defining new commands like below.

```
\newcommand{\insertref}[1]{\todo[color=green!40]{#1}}
\newcommand{\explainindetail}[1]{\todo[color=red!40]{#1}}
```

Anything but default colors

An example that uses all of the color options is given below .

```
\todo[linecolor=green!70!white, backgroundcolor=blue!20!white,
```

<sup>1</sup>The problem is placement of text inside the colored boxes.

`bordercolor=red]{Anything but default colors}.`

`line / noline`

A note with no line connecting it to the placement in the original text.

If you want to get rid of the line connecting the inserted note with the place in the text where the note occurs in the latex code, the option `noline` can be used.

```
\todo[noline]{A note with no line ...}
```

`inline / noline`

It is possible to place a `todonote` inside the text instead of placing it in the margin, this could be desirable if the text in the note has a considerable length.

```
\todo[inline]{A todonote placed in the text}
```

A todonote placed in the text

Another usage for the `inline` option is when you want to add a `todonote` to a figure caption.

```
\begin{wrapfigure}{r}[20mm]{40mm}
\begin{tikzpicture}
\draw[red] (0, 0) circle(0.45);
\draw[green] (1, 0) circle(0.45);
\draw[blue] (2, 0) circle(0.45);
\end{tikzpicture}
\caption{A text explaining the image.}
\todo[inline]{Fill those circles \ldots}
\end{wrapfigure}
```

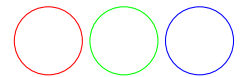


Figure 1: A text explaining the image.

Fill those circles ...

`size`

A note with a large font size.

`size=val` changes the size of the text inside the `todonote`. The commands used to create the notes below are

```
\todo[size=\Large]{A note with a large font size.} and
\todo[inline, size=\tiny]{Note with very small font size.}.
```

Note with very small font size.

`list / nolist`

When the option `nolist` is given, the `todo` item will not appear in the list of todos.

`caption`

A very long and tedious note that cannot be on one line in the list of todos.

The `caption` option enables the user to specify a short description of the `todonote` that are inserted in the list of todos instead of the full `todonote` text.

```
\todo[caption={Short note}]{A very long and tedious note that
cannot be on one line in the list of todos.}.
```

The effect of this option is altered with the package option `prependcaption` or the `prepend / noprepend` option for the `todo` command.

`prepend / noprepend`

Short note with prepend:  
A very long and tedious note that cannot be on one line in the list of todos.

The options `prepend` and `noprepend` can be used for setting whether a given caption should be prepended to the `todonote` or not. Globally this can be set using the `prependcaption` option for the package. Below is the effect of the option shown using the code:

A very long and tedious note that cannot be on one line in the list of todos.

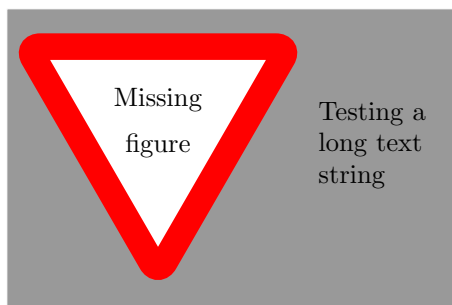
```
\todo[prepend, caption={Short note with prepend}]{A very long and tedious
note that cannot be on one line in the list of todos.}.
\todo[noprepnd, caption={Short note with noprepnd}]{A very long and
tedious note that cannot be on one line in the list of todos.}.
```

`figwidth` The `figwidth=length` option sets the default width of the figure inserted by the `\missingfigure` command. The default value is `\columnwidth`.

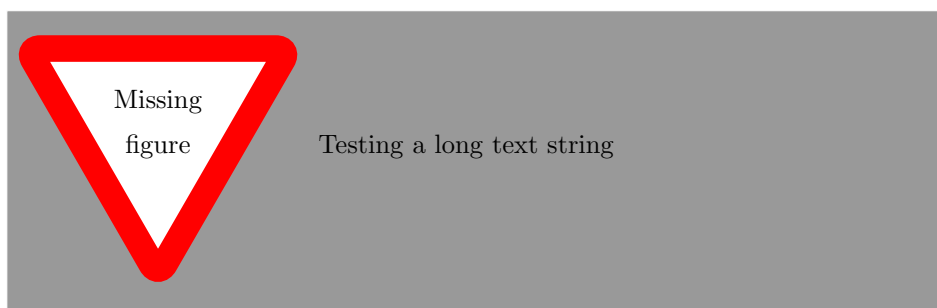
## 1.4 Options for the `missingfigure` command

`figwidth` The `figwidth=length` option sets the width of the figure inserted by the `\missingfigure` command. Length values below `6cm` might trigger some problems with the visual appearance. Try to compare the default of the missing figure command, when the option is given or not.

```
\missingfigure[figwidth=6cm]{Testing a long text string}
```

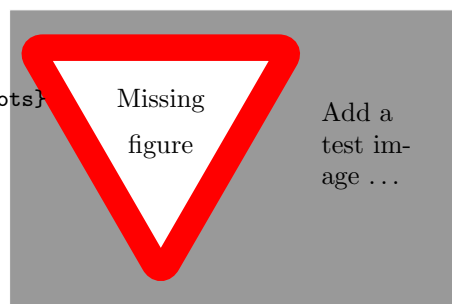


```
\missingfigure{Testing a long text string}
```



Another usage of the option is when `\missingfigure` is used in the `wrapfigure` environment.

```
\begin{wrapfigure}{r}[2cm]{6cm}
\missingfigure[figwidth=6cm]{Add a test image \ldots}
\end{wrapfigure}
```



## 1.5 Options for the listoftodos command

The `\listoftodos` command takes one optional argument, that defines the name of the inserted list of todos.

```
\listoftodos[I can be called anything]
```

## 1.6 Known issues

### 1.6.1 Package loading order

The `todonotes` package requires the following packages.

- ifthen
- xkeyval
- xcolor
- tikz
- calc
- graphicx (is loaded via the tikz package)

When `todonotes` are loaded in the preamble, the package checks if these packages all are loaded. If that is not the case it loads the missing packages with no options given. If you want to give some specific options to some of these packages, you have to load them *before* the `todonotes` package, otherwise you will get an "Option clash" error when latex works on the document.

### 1.6.2 Wrapping of long lines in list of todos

When a document is compiled with latex (and not pdflatex) long items in the list of todos are not wrapped into several lines, and do instead continue to the right out of the page.

### 1.6.3 Conflicts with the amsart documentclass

The `amsart` document class redefines some internal commands that is used by the `todonotes` package, this will cause an malfunctioning `\listoftodos` command. The following code to circumvent the problem was given by Dan Luecking on `comp.text.tex`

```
\makeatletter
\providecommand\@dotsep{5}
\makeatother
\listoftodos\relax
```

### 1.6.4 Unknown option "remember picture"

If latex throws the error

```
Package tikz Error: I do not know what to do with the option ‘remember picture’.
```

It probably means that your latex installation is outdated, as only newer versions of latex driver for tikz supports the `remember picture` option. For additional info consult "Section 9.2.2 Producing PDF Output" in the tikz manual. <http://www.ctan.org/tex-archive/graphics/pgf/base/doc/generic/pgf/pgfmanual.pdf>

### 1.6.5 Todonotes wrongly placed in the margin

When using some document classes or packages, the todonotes inserted in the page margin can be placed quite oddly. This is often caused by a wrong value of the `\marginparwidth` lenght. Try using the code below in your preamble to see if this cures the problem.

```
\setlength{\marginparwidth}{2cm}
```

## 1.7 Things to improve

This is a list of things I consider to improve sometime in the future. It have not been done yet as I lack the time or skills to implement them. Patches with implementations of these tasks will be appreciated and might be included in the package if it will improve the package quality.

### 1.7.1 Owner information

Option for the todo command.

```
\todo[owner={Fabrice}]{Stuff}
```

Add info on who "owns" the current todo. Idea: Fabrice Niessen

### 1.7.2 Due date

Option for the todo command.

```
\todo[due=2008-12-07]{Stuff}
```

Add info on when the current todo is due. Might be enhanced by a time line of the todos that have a due date assigned. Idea: Fabrice Niessen



### 1.7.3 Mark accomplished todos

```
\todo[done]{Stuff}
```

Idea: Fabrice Niessen

## 1.8 Usage methods

In this section I have collected some different methods to use the `todonotes` package.

### 1.8.1 Define new commands with fixed options

Often there is a need for marking different classes of things to do (add reference, rewrite, ...). One way to do this, is to define some new commands as shown below (idea from Florent B.).

```
\newcommand{\addref}{\todo[color=red!40]{Add reference.}}
\newcommand{\rewrite}[1]{\todo[color=green!40]{#1}}
```

To distinguish between the different types of todos, the `todonotes` package can be loaded with the `colorinlistoftodos` option, which adds small colored squares to the list of todos.

```
\usepackage[colorinlistoftodos]{todonotes}
```

### 1.8.2 Define new commands with arbitrary default options

If you do not like the default values of the standard `todo` command, it is possible to define a new command with the similar functionality of `\todo` with custom default values.

```
\newcommand{\todoredefined}[2]{}
{\todo[color=red, #1]{#2}}
```

Test of newly defined command.

The new command can now be used like shown below

```
\todoredefined{Test of newly defined command.}
\todoredefined[color=green]{Test of newly defined command, requesting a green color.}
```

Test of newly defined command, requesting a green color.

This can be done with all the accepted options for the `\todo` command.

### 1.8.3 Enumerate todonotes

If the inserted todonotes should be enumerated, it is possible to define a new command with the desired behaviour.

```
\newcounter{todocounter}  
\newcommand{\todonum}[2] []  
{\stepcounter{todocounter}\todo[#1]{\thetodocounter: #2}}
```

1: A numbered todonote.

The idea is to define a new counter `todocounter`, and insert the value of the counter in each todonote. The new command can be used like

2: Another numbered todonote.

```
\todonum{A numbered todonote.}  
\todonum{Another numbered todonote.}
```

### 1.8.4 Comments "a la Word"

Fabrice Niessen sent me the following use case. The idea is to define a new command `\mycomment` which adds a counter and optionally the initials of the author to the inserted todonote.

```
\newcounter{mycomment}  
\newcommand{\mycomment}[2] [] {%  
  % initials of the author (optional) + note in the margin  
  \refstepcounter{mycomment}%  
  {%  
    \setstretch{0.7}% spacing  
    \todo[color={red!100!green!33},size=\small]{%  
      \textbf{Comment [\uppercase{#1}]\themycomment]:~#2}%  
    }  
  }  
}
```

**Comment [HSM1]:** Testing first time.

The command `\mycomment[HSM]{Testing first time.}` is displayed like shown in the left margin, and another call of the command is added below `\mycomment[HSM]{Testing second time.}`.

**Comment [HSM2]:** Testing second time.

### 1.8.5 Combination with the fixme package

Thomas Arildsen has mailed me this use case. Check the documentation for the `fixme` package, as the code below relies directly on it (the `\FDUser` command is augmented when `\begin{document}` is reached).

```
\usepackage[user,nomargin]{fixme}  
\usepackage{todonotes}  
\newcommand{\FXUser}[2]{\todo[inline,size=\small]{\bfseries #1:} #2}}
```

### 1.8.6 Altering the line spacing of todonotes

The `setspace` package lets you alter the line spacing of smaller sections of your document. The primary construct is the `spacing` environment, which is demonstrated below.

```
\begin{spacing}{0.5}
Some lines with a decreased line spacing. This is accomplished
using the setspace package that is included in standard latex
distributions.
\end{spacing}
```

Some lines with a decreased line spacing. This is accomplished using the `setspace` package that is included in standard latex distributions.

Using the `spacing` environment we can define a new `todonote` command using the code below:

```
\newcommand{\smalltodo}[2] []
{\todo[caption={#2}, #1]
{\begin{spacing}{0.5}#2\end{spacing}}}
```

Some lines with a decreased line spacing. This is accomplished using the `setspace` package that is included in standard latex distributions.

Todonotes with decreased line spacing can now be inserted as follows

```
\smalltodo[size=\footnotesize]{
Some lines with a decreased line spacing. This is accomplished
using the setspace package that is included in standard latex
distributions.}
```

A different approach is given by Vitaly.

```
\newcommand{\tinytodo}[2] []
{\todo[caption={#2}, size=\small, #1]{\renewcommand{\baselinestretch}{0.5}\selectfont#2\par}}
```

Some lines with a decreased line spacing. This is accomplished without using any special packages.

It looks like seen here.

```
\tinytodo{
Some lines with a decreased line spacing. This is accomplished
without using any special packages.}
```

### 1.8.7 Marking new / old sections

Sometimes a whole section has to be marked by some means. You might want to try the following.

```
\todo[inline, caption={Some text}]{
\begin{minipage}{\linewidth}
Some text that might differ from the text given to the caption
option.
}
```

```
\end{minipage}
}
```

It is important to add the `caption={text}` option, otherwise latex will try to embed a minipage in the table of contents which triggers an error. Inside the minipage environment almost anything could be placed, except for other todo commands.

```
\todo[inline, caption={Examine this new section}]{
\begin{minipage}{\linewidth}
Some text.
\begin{align}
\sin(\theta)^2 + \cos(\theta)^2 = 1
\end{align}
A formula and a list
\begin{itemize}
\item An item
\end{itemize}
\end{minipage}
}
```

The example above renders like

Some text.

$$\sin(\theta)^2 + \cos(\theta)^2 = 1 \quad (1)$$

A formula and a list

- An item

### 1.8.8 Link to list of todos

Using the `hyperref` package it is possible to add a link from the inserted todonotes to the list of todos. The example were supplied by Andreas Plank.

```
% Define a counter for the inserted todonotes.
\newcounter{todoListItems}
\newcommand{\todoTrans}[2][ ]{
  % Increment counter
  \addtocounter{todoListItems}{1}
  \todo[%
    caption={\protect\hypertarget{todo\thetodoListItems}{Translation},
    #1]
  {
    #2 \hfill
    \hyperlink{todo\thetodoListItems}{\uparrow}
  }
}
```

The idea behind the code is to embed a `hypertarget` in each entry in the list of todos. In the `todonotes` a link to the entry in the list of todos is inserted as an arrow that points upwards. Using the `\todoTrans` command like below, the following two notes have been inserted.

```
\todoTrans{papiersflyver}  
\todoTrans[inline]{damplokomotiv}
```

papiersflyver



damplokomotiv



### 1.8.9 Numbered todonotes

The inserted todonotes can be argumented with the current subsubsection number. The code is shown below.

```
\newcommand{\ntodo}[2] [] {\todo[#1]{\thesubsubsection{}. #2}}
```

1.8.9. A numbered todo.

By changing `\thesubsubsection` to `\thesection`, the current section number can be inserted instead of the subsubsection number. The result looks like. Which were generated by the code

```
\ntodo{A subsection numbered todo.}.
```

Small notes with links back to the list of todos.

### 1.8.10 Combining several modifications

Manduca have combined several of the modifications above into a highly specialized todo command. He uses the code:

Smart notes with links back to the list of todos.

```
\newcounter{todoListItems}  
\newcommand{\sstodo}[2] []  
{\addtocounter{todoListItems}{1}  
\todo[caption={\protect\hypertarget{todo\thetodoListItems}{}\thesection. #2}, #1]  
{\begin{spacing}{1} \hfill \hyperlink{todo\thetodoListItems}{#2} \end{spacing} }}
```

Using this approach it is possible to customize the behavior of the inserted notes to a very high degree.

## 2 Implementation

Identifies the package and loads the packages dependences.

```
1 \ProvidesPackage{todonotes}[2010/09/26]
2 \RequirePackage{ifthen}
3 \RequirePackage{xkeyval}
4 \RequirePackage{xcolor}
5 \RequirePackage{tikz}
6 \RequirePackage{calc}
```

Some default values are set

```
7 \newcommand{\@todonotes@text}{}%
8 \newcommand{\@todonotes@backgroundcolor}{orange}
9 \newcommand{\@todonotes@linecolor}{orange}
10 \newcommand{\@todonotes@bordercolor}{black}
11 \newcommand{\@todonotes@textwidth}{\marginparwidth}
12 \newcommand{\@todonotes@textsize}{\normalsize}
13 \newcommand{\@todonotes@figwidth}{\columnwidth}

14 \AtBeginDocument{
15 \ifx\undefined\phantomsection
16 \newcommand{\phantomsection}{}
17 \fi
18 }
```

### 2.1 Declaration of options for the package

In this part the various options for the package are defined.

Define the default text strings and set localization options for the danish and german languages.

```
19 \newcommand{\@todonotes@todolistname}{Todo list}
20 \newcommand{\@todonotes@MissingFigureText}{Figure}
21 \newcommand{\@todonotes@MissingFigureUp}{Missing}
22 \newcommand{\@todonotes@MissingFigureDown}{figure}
23 \newcommand{\@todonotes@SetTodoListName}[1]
24   {\renewcommand{\@todonotes@todolistname}{#1}}
25 \newcommand{\@todonotes@SetMissingFigureText}[1]
26   {\renewcommand{\@todonotes@MissingFigureText}{#1}}
27 \newcommand{\@todonotes@SetMissingFigureUp}[1]
28   {\renewcommand{\@todonotes@MissingFigureUp}{#1}}
29 \newcommand{\@todonotes@SetMissingFigureDown}[1]
30   {\renewcommand{\@todonotes@MissingFigureDown}{#1}}
31 \newif{\if@todonotes@reverseMissingFigureTriangle}
32 \DeclareOptionX{catalan}{
33   \@todonotes@SetTodoListName{Llista de feines pendents}%
34   \@todonotes@SetMissingFigureText{Figura}%
35   \@todonotes@SetMissingFigureUp{Figura}%
36   \@todonotes@SetMissingFigureDown{pendent}%
37 }
38 \DeclareOptionX{danish}{%
```

```

39 \@todonotes@SetTodoListName{G\o{}rem\aa{}lsliste}%
40 \@todonotes@SetMissingFigureText{Figur}%
41 \@todonotes@SetMissingFigureUp{Manglende}%
42 \@todonotes@SetMissingFigureDown{figur}%
43 }
44 \DeclareOptionX{dutch}{%
45 \@todonotes@SetTodoListName{Lijst van onafgewerkte taken}%
46 \@todonotes@SetMissingFigureText{Figuur}%
47 \@todonotes@SetMissingFigureUp{Ontbrekende}%
48 \@todonotes@SetMissingFigureDown{figuur}%
49 }
50 \DeclareOptionX{english}{%
51 \@todonotes@SetTodoListName{Todo list}%
52 \@todonotes@SetMissingFigureText{Figure}%
53 \@todonotes@SetMissingFigureUp{Missing}%
54 \@todonotes@SetMissingFigureDown{figure}%
55 }
56 \DeclareOptionX{french}{%
57 \@todonotes@SetTodoListName{Liste des points \`a traiter}%
58 \@todonotes@SetMissingFigureText{Figure}%
59 \@todonotes@SetMissingFigureUp{Figure}%
60 \@todonotes@SetMissingFigureDown{manquante}%
61 \@todonotes@reverseMissingFigureTrianglefalse
62 }
63 \DeclareOptionX{german}{%
64 \@todonotes@SetTodoListName{Liste der noch zu erledigenden Punkte}%
65 \@todonotes@SetMissingFigureText{Abbildung}%
66 \@todonotes@SetMissingFigureUp{Fehlende}%
67 \@todonotes@SetMissingFigureDown{Abbildung}%
68 }
69 \DeclareOptionX{italian}{%
70 \@todonotes@SetTodoListName{Elenco delle cose da fare}%
71 \@todonotes@SetMissingFigureText{Figura}%
72 \@todonotes@SetMissingFigureUp{Figura}%
73 \@todonotes@SetMissingFigureDown{mancante}%
74 }
75 \DeclareOptionX{ngerman}{%
76 \@todonotes@SetTodoListName{Liste der noch zu erledigenden Punkte}%
77 \@todonotes@SetMissingFigureText{Abbildung}%
78 \@todonotes@SetMissingFigureUp{Fehlende}%
79 \@todonotes@SetMissingFigureDown{Abbildung}%
80 }
81 \DeclareOptionX{portuguese}{%
82 \@todonotes@SetTodoListName{Lista de tarefas pendentes}%
83 \@todonotes@SetMissingFigureText{Figura}%
84 \@todonotes@SetMissingFigureUp{Figura}%
85 \@todonotes@SetMissingFigureDown{pendente}%
86 }
87 \DeclareOptionX{spanish}{%
88 \@todonotes@SetTodoListName{Lista de tareas pendientes}%

```



```

89 \@todonotes@SetMissingFigureText{Figura}%
90 \@todonotes@SetMissingFigureUp{Figura}%
91 \@todonotes@SetMissingFigureDown{pendient}%
92 }

```

Create a counter, for storing the number of inserted todos.

```

93 \newcounter{@todonotes@numberoftodonotes}

```

Toggle whether the package should obey the global draft option.

```

94 \newif{\if@todonotes@obeyDraft}
95 \DeclareOptionX{obeyDraft}{\@todonotes@obeyDrafttrue}
96 \newif{\if@todonotes@isDraft}
97 \DeclareOptionX{draft}{\@todonotes@isDrafttrue}

```

Make it possible to disable the functionality of the package. If this option is given, the commands `\todo{}` and `\listoftodos` are defined as commands with no effect. (But you can still compile you document with these commands).

```

98 \newif{\if@todonotes@disabled}
99 \DeclareOptionX{disable}{\@todonotes@disabledtrue}

```

Show small boxes in the list of todos with the color of the inserted todonotes.

```

100 \newif{\if@todonotes@colorinlistoftodos}
101 \DeclareOptionX{colorinlistoftodos}{\@todonotes@colorinlistoftodostrue}

```

The default style behaves bad when compiled with latex (some text placement problems). The `dvistyle` option, changes the visual behavior to avoid this text placement problem.

```

102 \newif{\if@todonotes@dviStyle}
103 \DeclareOptionX{dvistyle}{\@todonotes@dviStyletrue}

```

Create a color option.

```

104 \define@key{todonotes.sty}%
105   {color}{
106     \renewcommand{\@todonotes@backgroundcolor}{#1}
107     \renewcommand{\@todonotes@linecolor}{#1}}

```

Make the background color of the notes as an option.

```

108 \define@key{todonotes.sty}%
109   {backgroundcolor}{\renewcommand{\@todonotes@backgroundcolor}{#1}}

```

Make the line color of the notes as an option.

```

110 \define@key{todonotes.sty}%
111   {linecolor}{\renewcommand{\@todonotes@linecolor}{#1}}

```

Make the color of the notes box color as an option.

```

112 \define@key{todonotes.sty}%
113   {bordercolor}{\renewcommand{\@todonotes@bordercolor}{#1}}

```

Set whether short captions given as arguments to the `todo` command should be included in the inserted todonote.

```

114 \newif{\if@todonotes@prependcaptionglobal}
115 \@todonotes@prependcaptionglobalfalse
116 \DeclareOptionX{prependcaption}{\@todonotes@prependcaptionglobaltrue}

```

Make the text width as an option.

```
117 \define@key{todonotes.sty}%
118     {textwidth}{\renewcommand{\@todonotes@textwidth}{#1}}
```

Make the text size as an option. It requires some magic with the `\csname` and `\endcsname` macros, as commands cannot be taken as options for a package.

```
119 \define@key{todonotes.sty}%
120     {textsize}{\renewcommand{\@todonotes@textsize}{\csname #1\endcsname}}
```

Add option for shadows behind the inserted notes

```
121 \newif{\if@todonotes@shadowenabled}
122 \@todonotes@shadowenabledfalse
123 \DeclareOptionX{shadow}{\@todonotes@shadowenabledtrue}
124 \usetikzlibrary{shadows}}
```

Add option for the default width of the figure inserted with `\missingfigure`.

```
125 \define@key{todonotes.sty}%
126     {figwidth}{\renewcommand{\@todonotes@figwidth}{#1}}
```

Make the text width as an option.

```
127 % Finally process the given options.
128 %     \begin{macrocode}
129 \ProcessOptionsX*
```

If the `obeyDraft` is given, check whether the `draft` option is given and enable or disable the functionality of this package. The `disable` option will overrule the effect of `obeyDraft`.

```
130 \if@todonotes@disabled
131 \else
132 \if@todonotes@obeyDraft
133 \@todonotes@disabledtrue
134 \if@todonotes@isDraft
135 \@todonotes@disabledfalse
136 \fi
137 \fi
138 \fi
```

## 2.2 Options for the todo command

In this part the various options for commands in the package are defined. Set an arbitrarily fill color

```
139 \newcommand{\@todonotes@currentlinecolor}{}%
140 \newcommand{\@todonotes@currentbackgroundcolor}{}%
141 \newcommand{\@todonotes@currentbordercolor}{}%
142 \define@key{todonotes}{color}{%
143     \renewcommand{\@todonotes@currentlinecolor}{#1}%
144     \renewcommand{\@todonotes@currentbackgroundcolor}{#1}}%
145 \define@key{todonotes}{linecolor}{%
146     \renewcommand{\@todonotes@currentlinecolor}{#1}}%
147 \define@key{todonotes}{backgroundcolor}{%
148     \renewcommand{\@todonotes@currentbackgroundcolor}{#1}}%
```

```

149 \define@key{todonotes}{bordercolor}{%
150     \renewcommand{\@todonotes@currentbordercolor}{#1}}%
    Set a relative font size
151 \newcommand{\@todonotes@sizecommand}{}%
152 \define@key{todonotes}{size}{\renewcommand{\@todonotes@sizecommand}{#1}}%
    Should the todo item be disabled?
153 \newif\if@todonotes@localdisable%
154 \define@key{todonotes}{disable}[]{\@todonotes@localdisabletrue}%
155 \define@key{todonotes}{nodisable}[]{\@todonotes@localdisablefalse}%
    Should the todo item be included in the list of todos?
156 \newif\if@todonotes@appendtolistoftodos%
157 \define@key{todonotes}{list}[]{\@todonotes@appendtolistoftodostrue}%
158 \define@key{todonotes}{nolist}[]{\@todonotes@appendtolistoftodosfalse}%
    Should the todo item be displayed inline?
159 \newif\if@todonotes@inlinenote%
160 \define@key{todonotes}{inline}[]{\@todonotes@inlinenotetrue}%
161 \define@key{todonotes}{noinline}[]{\@todonotes@inlinenotefalse}%
162 \newif\if@todonotes@prependcaption%
163 \define@key{todonotes}{prepend}[]{\@todonotes@prependcaptiontrue}%
164 \define@key{todonotes}{nopprepend}[]{\@todonotes@prependcaptionfalse}%
    Should the note in the margin be connected to the insertion point in the text?
165 \newif\if@todonotes@line%
166 \define@key{todonotes}{line}[]{\@todonotes@linetrue}%
167 \define@key{todonotes}{noline}[]{\@todonotes@linefalse}%
    Should the text in the list of todos be different from the text in the todonote?
168 \newcommand{\@todonotes@caption}{}%
169 \newif\if@todonotes@captiongiven%
170 \define@key{todonotes}{caption}%
171     {\renewcommand{\@todonotes@caption}{#1}}%
172     \@todonotes@captiongiventrue}%
173 \define@key{todonotes}{nocaption}[]{\@todonotes@captiongivenfalse}%
    Change the current figure width.
174 \newcommand{\@todonotes@currentfigwidth}{\@todonotes@figwidth}
175 \define@key{todonotes}%
176     {figwidth}{\renewcommand{\@todonotes@currentfigwidth}{#1}}
    Preset values of the options
177 \presetkeys%
178     {todonotes}%
179     {linecolor=\@todonotes@linecolor,%
180     backgroundcolor=\@todonotes@backgroundcolor,%
181     bordercolor=\@todonotes@bordercolor,%
182     nodisable,%
183     noinline,%
184     nocaption,%

```

```

185     figwidth=\@todonotes@figwidth,%
186     line, list, size=\@todonotes@textsize}{}%

```

## 2.3 The main code part

Here is the actual macros defined. If the option "disable" was passed to the package define empty commands.

```

187 \if@todonotes@disabled%
188     \newcommand{\listoftodos}[1][]{%}
189     \newcommand{\@todo}[2][]{\ignorespaces}
190     \newcommand{\missingfigure}[2][]{%}
191 \else % \if@todonotes@disabled

```

Define the \listoftodos command and define the appearance of the list of todos.

```

192 \newcommand{\listoftodos}[1][\@todonotes@todolistname]
193     {\ifdefined\chapter\chapter*{#1}\else\section*{#1}\fi \@starttoc{tdo}}
194 \newcommand{\l@todo}
195     {\@dottedtocline{1}{0em}{2.3em}}

```

Define styles used by the todo command

```

196 \tikzstyle{notestylera} = [
197     draw=\@todonotes@currentbordercolor,
198     fill=\@todonotes@currentbackgroundcolor,
199     line width=0.5pt,
200     text width = \@todonotes@textwidth - 1.6 ex - 1pt,
201     inner sep = 0.8 ex,
202     rounded corners=4pt]

```

Add shadows and rounded corners to the inserted todonotes.

```

203 \if@todonotes@shadowenabled
204 \tikzstyle{notestyle} = [notestylera,
205     general shadow={shadow xshift=.5ex, shadow yshift=-.5ex,
206         opacity=1,fill=black!50}]
207 \else
208 \tikzstyle{notestyle} = [notestylera]
209 \fi
210 \tikzstyle{notestyleleft} = [
211     notestyle,
212     left]
213 \tikzstyle{connectstyle} = [
214     thick,
215     draw=\@todonotes@currentlinecolor]
216 \tikzstyle{inlinenotestyle} = [
217     notestyle,
218     text width=\linewidth - 1.6 ex - 1 pt]

```

\@todo Define the \@todo command.

```

219 \newcommand{\@todo}[2][]{%}

```

Use the global value for determining the default prepend behavior.

```

220 \if@todonotes@prependcaptionglobal%

```

```

221 \@todonotes@prependcaptiontrue%
222 \else%
223 \@todonotes@prependcaptionfalse%
224 \fi%

```

Store the original text for later usage and parse the given options.

```

225 \renewcommand{\@todonotes@text}{#2}%
226 \renewcommand{\@todonotes@caption}{#2}%
227 \setkeys{todonotes}{#1}%

```

If the option `disable` is given to the command, no output is generated.

```

228 \if@todonotes@localdisable%
229 \else%

```

Add the item to the list of todos. When the option `colorinlistoftodos` is given to the package a small colored square is added in front of the text.

```

230 \addtocounter{todonotes@numberoftodonotes}{1}%
231 \if@todonotes@appendtolistoftodos%
232     \phantomsection%
233     \if@todonotes@captiongiven%
234     \else%
235         \renewcommand{\@todonotes@caption}{#2}%
236     \fi%
237     \@todonotes@addElementToListOfTodos
238 \fi%

```

Prepend the short caption given if it is requested

```

239 \if@todonotes@captiongiven%
240     \if@todonotes@prependcaption%
241         \renewcommand{\@todonotes@text}{\@todonotes@caption: #2}%
242     \fi%
243 \fi%

```

Place the todonote as indicated by the options (`inline` or in a `marginpar`), below is the code for the inline placement.

```

244 \if@todonotes@inlinenote%
245     \@todonotes@drawInlineNote
246 \else%
247     \@todonotes@drawMarginNoteWithLine
248 \fi %\if@todonotes@inlinenote
249 \fi %\if@todonotes@localdisable
250 \ignorespaces%
251 }%

```

**drawMarginNoteWithLine** Define helper function `drawMarginNoteWithLine`.

```

252 \newcommand{\@todonotes@drawMarginNoteWithLine}{%

```

When the todonote should be placed inside a `marginpar`, the code below is applied. First is the current location in the document stored, this enables us later to connect this point with the inserted todonote.

```

253 \begin{tikzpicture}[remember picture, baseline=-0.75ex]%
254     \node [coordinate] (inText) {};%

```

```

255 \end{tikzpicture}%
256 \marginpar[{} Draw note in left margin
257   \@todonotes@drawMarginNote%
258   \@todonotes@drawLineToLeftMargin%

```

In the book documentclass (which is a twoside layout), the `\marginpar` macro takes two arguments `\marginpar[left]{right}`. If both arguments are given, latex will decide in which side the margin note has to be inserted, and then use the corresponding commands.

```

259 }]{% Draw note in right margin
260   \@todonotes@drawMarginNote%
261   \@todonotes@drawLineToRightMargin%
262 }%
263 }%

```

`addElementToListOfTodos` Define helper function `addElementToListOfTodos`.

```

264 \newcommand{\@todonotes@addElementToListOfTodos}{%
265   \if@todonotes@colorinlistoftodos%
266     \addcontentsline{tdo}{todo}{\protect{%
267       \colorbox{\@todonotes@currentbackgroundcolor}%
268         {\textcolor{\@todonotes@currentbackgroundcolor}{o}}}%
269     \ \@todonotes@caption}}%
270   \else%
271     \addcontentsline{tdo}{todo}{\protect{\@todonotes@caption}}%
272   \fi}%

```

`drawInlineNote` Define helper function `drawInlineNote`.

```

273 \newcommand{\@todonotes@drawInlineNote}{%
274   \if@todonotes@dviStyle%
275     {\par\noindent\begin{tikzpicture}[remember picture]%
276       \draw node[inlinenotestyle] {};\end{tikzpicture}\par}%
277     {\noindent \@todonotes@sizecommand \@todonotes@text}%
278     {\par\noindent\begin{tikzpicture}[remember picture]%
279       \draw node[inlinenotestyle] {};\end{tikzpicture}\par}%
280   \else%
281     {\par\noindent\begin{tikzpicture}[remember picture]%
282       \draw node[inlinenotestyle] {\@todonotes@sizecommand \@todonotes@text};%
283       \end{tikzpicture}\par}%
284   \fi}%

```

`drawMarginNote` Define helper function `drawMarginNote`.

```

285 \newcommand{\@todonotes@drawMarginNote}{%
286   \if@todonotes@dviStyle%
287     \begin{tikzpicture}[remember picture]%
288       \draw node[notestyle] {};%
289     \end{tikzpicture}\\
290     \begin{minipage}{\@todonotes@textwidth}%
291       \@todonotes@sizecommand \@todonotes@text%
292     \end{minipage}\\
293     \begin{tikzpicture}[remember picture]%

```

```

294         \draw node[notestyle] (inNote) {};%
295     \end{tikzpicture}%
296 \else%
297     \begin{tikzpicture}[remember picture]%
298         \draw node[notestyle] (inNote)%
299             {\@todonotes@sizecommand \@todonotes@text};%
300     \end{tikzpicture}%
301 \fi}%

```

**drawLineToRightMargin** Define helper function drawLineToRightMargin.

```

302 \newcommand{\@todonotes@drawLineToRightMargin}{%
303 \if@todonotes@line%
304 \begin{tikzpicture}[remember picture, overlay]%
305     \draw[connectstyle]%
306         ([yshift=-0.2cm] inText)%
307         -| ([xshift=-0.2cm] inNote.west)%
308         -| (inNote.west);%
309 \end{tikzpicture}%
310 \fi}%

```

**drawLineToLeftMargin** Define helper function drawLineToLeftMargin.

```

311 \newcommand{\@todonotes@drawLineToLeftMargin}{%
312 \if@todonotes@line%
313 \begin{tikzpicture}[remember picture, overlay]%
314     \draw[connectstyle]%
315         ([yshift=-0.2cm] inText)%
316         -| ([xshift=0.2cm] inNote.east)%
317         -| (inNote.east);%
318 \end{tikzpicture}%
319 \fi}%

```

**\missingfigure** Defines the \missingfigure macro.

```

320 \newcommand{\missingfigure}[2][]{%
321 \setkeys{todonotes}{#1}%
322 \addcontentsline{tdo}{todo}{\@todonotes@MissingFigureText: \protect{#2}}%
323 \par
324 \noindent
325 \begin{tikzpicture}
326 \draw[fill=black!40, draw = white, line width=0pt]
327     (-2, -2.5) rectangle +(\@todonotes@currentfigwidth, 4cm);
328 \draw (2, -0.3) node[right, text
329     width=\@todonotes@currentfigwidth-4.5cm] {#2};
330 \draw[red, fill=white, rounded corners = 5pt, line width=10pt]
331     (30:2cm) -- (150:2cm) -- (270:2cm) -- cycle;
332 \draw (0, 0.3) node {\@todonotes@MissingFigureUp};
333 \draw (0, -0.3) node {\@todonotes@MissingFigureDown};
334 \end{tikzpicture}
335 }% Ending \missingfigure command
336 \fi % Ending \@todonotes@ifdisabled

```

`\todototoc` Inserts a reference to the list of todos in the table of contents. If `chapter` is defined, `chapter` is used as level otherwise will `section` be used. The `\todototoc` command respects the `disable` option.

```

337 \newcommand{\todototoc}
338 {
339     \if@todonotes@disabled
340     \else
341     \addcontentsline{toc}{\ifundefined{chapter}{section}{chapter}}{\@todonotes@todolistname}
342     \fi
343 }

```

`\todo` Define the `\todo` command as a redirection to `\@todo`.

```

344 \newcommand{\todo}[2] [] {\@todo[#1]{#2}}

```

## Change History

0.1	General: The first version of the package . . . . . 1	/ previous section, subsection or figure using the phantomsection macro. . . . . 1
0.2	General: Updated the option handling of the package . . . . . 1	0.4 General: Modified the behaviour of the inline todonotes, to avoid empty lines around the inline todonotes. . . . . 1
0.2.1	General: Slightly modified by Kjell Magne Fauske to support notes in the left margin (for documentstyle book). . . . . 1	0.4.1 General: Added the option <code>colorinlistoftodos</code> which inserts a small box with the used fillcolor of the todonotes in the list of todos. . . 1
0.2.2	General: Added a missingfigure command . . . . . 1	0.4.2 General: Fixed a bug with the disable option to the package. . . . 1
0.2.3	General: Made a dependency on the calc package . . . . . 1	0.5 General: Created a dtx file containing both source code and documentation of the package . . . . 1
0.3	General: Delayed the requirements for the hyperref package until begin document and added an optional argument to the todo command for adding inline todonotes (Idea from Patrick Toche) . . . . . 1	0.5.1 General: Updated the documentation . . . . . 1
0.3.1	General: Added some options to the todo macro (Idea: Patrick Toche) and made the listoftodos point at the inserted todos and not only the current	0.5.2 General: Fixed a bug that prevented the usage of the option french for babel. Bug report by Thomas Braun. . . . . 1
		0.6 General: Added the caption option to the todo command. . . . . 1



0.6.1	General: Added a new usecase with decreased line spacing. . . . .	1	code from Joan Queralt. Found an untranslated textstring "Figure" in the source. Added a figwidth option to the missing-figure command, patch by Paul Ivanov. . . . .	1
0.6.2	General: Added a usecase by Fabrice Niessen. . . . .	1		
0.7	General: Added language options on request from Peter Zimmermann. . . . .	1	0.8.1	General: Added a space between the colored square and the text in the list of todos. Added a new usecase for marking old / new sections. Made the name of listoftodos changeable. . . . .
0.7.1	General: Reworked the color options for both the whole package and the todo command. General code clean up. Added the prependcaption package option. . . . .	1	0.8.2	General: Italian translation by Gustavo Cevolani. Removed the dependence on the hyperref package. . . . .
0.7.2	General: Avoid to change the font-size inside the list of todos, fixing a bug revealed by Vladimir Zhuravlev. . . . .	1	0.8.3	General: Added a use case for linking to the list of todos, idea from Andreas Plank. Introduced a package option for listening to the draft option given to the document class. . . . .
0.7.3	General: The localization options (danish and german) and the disable options, were all flawed by naming inconsistencies that made then break the package. This have been fixed. . . . .	1	0.8.4	General: Fixed a bug related to the obeyDraft option. . . . .
0.7.4	General: Fixed a bug related to the caption option for the todo command. Introduced a counter of the number of inserted todos. . .	1	0.8.5	General: Added two new usecases (enumeration of inserted todonotes and how to set custom default values). Changed the order of the use case examples. . . . .
0.7.5	General: Fixed a typo in a macroname. . . . .	1	0.8.6	General: Added a portuguese translation by Og DeSouza. . . . .
0.7.6	General: Added a textsize option for the package and the prepend / noprepnd option for the todo command. . . . .	1	0.8.7	General: Updated portuguese translation. Added a ngerman alias for the german translation suggested by Michael Niedermair. . . . .
0.8	General: Added three new translations french, spanish and catalan thanks to Richard Dominique and Joan Queralt. Improved the visual appearence of the inserted notes (rounded corners and optional shadows) with		0.8.8	General: Added a new usecase from Vitaly. Fixed a bug reported by Oscar Gustafsson. Explained why the placement of todonotes

	in the margin fails in certain custom document classes. . . . .	1		for the list of todos heading. . .	1
0.8.9	General: Added a dutch translation by Ruben Ruben Vermeersch. . .	1	0.9.3	General: Make an internal defini- tion of the todo command, for easing redefinition of the com- mand behaviour. . . . .	1
0.9.0	General: Added a english option as suggested by Marco Berghoff. . .	1	0.9.4	General: Make the disable option work on a local scale as sug- gested by Stefan Pinnow. . . . .	1
0.9.1	General: Added the todotoc com- mand by idea from Sven Au- gustin. . . . .	1	0.9.5	General: Code simplification by ex- tracting functionality to smaller macros. . . . .	1
0.9.2	General: Use chapter (if available)				