

# tlc-article Getting Started Guide

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August 26, 2022

## Abstract

The `tlc-article` ‘Getting Started Guide’ covers how to install `tlc-article` both globally and locally, describes the general use case, how to customize your `tlc-article` environment, describes the commands `tlc-article` implements, and reveals the packages `tlc-article` depends upon.

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# 1 Installation

This section describes how to install `tlc-article` either globally to make it available to your  $\text{\LaTeX}$  environment or locally to the document you are authoring. And, this section identifies the prerequisites you must meet in order to clone a repository from GitHub.com and install software on your computer.

## 1.1 Prerequisites

The following prerequisites are needed.

### Administrative privilege

You will need administrative privileges to install `tlc-article` globally because ‘sudo’ is used.

### SSH key

You will need your private key to access GitHub.com. Please refer to <http://help.github.com/articles/generating-an-ssh-key> for instructions on ‘Generating an SSH key’.

### Enable your SSH key

The following instructions enable your SSH key so you to not have to enter the passphrase for each git command.

```
1 eval `ssh-agent -s`  
2 ssh-add ~/.ssh/your-private-key
```

## 1.2 Local installation

A local installation is done by installing `tlc-article` into `/the/path/to/your/document`. Assuming your document is located at `$HOME/mydoc` the following shell commands will make `tlc-article` available to your document.

```
1 cd $HOME  
2 git clone git@GitHub.com:Traap/tlc-article.git  
3 cd tlc-article  
4 mkdir $HOME/mydoc  
5 cp -v tlc-article.cls $HOME/mydoc/.
```

### 1.3 Global installation

A global installation is done by installing `tlc-article` into your `/path/to/your/texmf` directory. Assuming a TeXLive installation exists at `$(kpsewhich -var-value TEXMFLOCAL)` the following shell commands will make `tlc-article` available to your  $\text{\LaTeX}$  environment.

```
1 cd $HOME
2 git clone git@GitHub.com:Traap/tlc-article.git
3 cd tlc-article
4 sudo mkdir -p $(kpsewhich -var-value TEXMFLOCAL)/tex/latex/tlc-article
5 sudo cp -v tlc-article.cls $(kpsewhich -var-value TEXMFLOCAL)/tex/latex/tlc-article/.
6 sudo mktexlsr $(kpsewhich -var-value TEXMFLOCAL)
```

**Note:** You may remove your local installation by removing `tlc-article`.

## 2 General Use Case

The goal of `tlc-article` is to simplify document layout. `tlc-article` orchestrates a logical arrangement for document header, footer, author, abstract, table of contents, and margins. The following sections outline the default implementation for each part `tlc-article` organizes.

**Note** This document was typeset using the instructions provided throughout this section.

### 2.1 Document Layout



Figure 1: Document Layout

### 2.2 Document Class `tlc-article`

`tlc-article` extends the article document class. `tlc-article` provide options directly to the article document class. As an example, the Author can specify the font as follows:

```
1 \documentclass[12pt]{tlc-article}
```

### 2.3 Title, Author & Abstract

`tlc-article` has a macro `tlcTitlePageAndTableOfContents` that can be used to set the document title, document author, document abstract, and establish the Table of Contents. The sample below reveals how to use `tlcTitlePageAndTableOfContents`.

```
1 \tlcTitlePageAndTableOfContents
2   {Document Title}
3   {Document Author}
4   {Document Abstract}
```

## 2.4 Table of Contents

The Table of Contents immediately follows the document abstract on page 1, uses dark blue for content, dots separate table of contents sections and page number, and uses roman numerals.

## 2.5 Header & Footer

fancyhdr is used to render the header and the footer. The Author can override `tlc-article` by providing an implementation in `data/header-footer.tex` or augment `tlc-article` application by providing `data/version.csv`. The sections below show the placement `tlc-article` uses when writing objects, and where the objects are defined.

**Note:** `tlc-article` ignores `data/version.csv` when `data/header-footer.tex` is defined.

### Header

**lhead** When `data/logo.png` is found, logo.

**chead** Document Title

**rhead** When `data/version.csv` is present, status, date, and version columns.

### Footer

**lfoot** When `data/version.csv` is present, institution column.

**cfoot** When `data/version.csv` is present, permission column.

**rfoot** Page 1 of N.

### Rule width

A 0.1pt rule width is placed below the document header and above the document footer.

### 3 Customization

This section describes how `tlc-article` can be customized by using the file-hooks `tlc-article` checks for. `tlc-article` default implementation will be used when the file-hooks are not found.

**Note:** `tlc-article` consumes `data/additional-layout.tex` & `data/header-footer.tex` during the preamble compilation phase.

#### 3.1 `data/additional-layout.tex`

`tlc-article` will use whatever L<sup>A</sup>T<sub>E</sub>X definitions are found in `data/additional-layout.tex` when it exists. The file-check is shown below:

```
1 \IfFileExists{data/additional-layout.tex}{%
2   {\input{data/additional-layout.tex}}
3 }
```

#### 3.2 `data/header-footer.tex`

In the absence of `data/header-footer.tex`, `tlc-article` has a builtin header and footer strategy that is base on *fancyhdr*, *titling*, and *lastpage* L<sup>A</sup>T<sub>E</sub>X packages. The default implementation is show below:

```
1
2 \IfFileExists{\tlc@headerFooter}%
3 {% use the customer header and footer defined by \tlc@headerFooter
4   \input{\tlc@headerFooter}%
5 }%
6 {% Else : user default header and footer
7   \useDefaultHeaderFooter%
8 }%
9
10 \newcommand{\useDefaultHeaderFooter}{%
11   \useLogoFile%           Typeset Logo in the left side of the header.
12   \thead{\large{\thetitle}}% Typeset title in center of the header.
13   \useVersionFile%        Typeset version info in right side of the header.
14   \useRuler%              Typeset header and footer with a ruler.
15 }%
16
17 \newcommand{\useLogoFile}{%
18   \IfFileExists{\tlc@logoFile}%
19   {%
20     \lhead{\includegraphics[width=3cm,height=1cm]{\tlc@logoFile}}%
21   }%
22   {% Else: no operation because tlc@logoFile does not exist.
23   }%
24 }%
25
26 \newcommand{\useVersionFile}{%
27   \IfFileExists{\tlc@versionFile}%
28   {%
29     % document status, document date and document version.
30     \rhead{\tiny \tlc@status \ \ \tlc@date \ \ \tlc@version}%
31     %
32     % document owner. This maybe a person or company name.
33     \lfoot{\tiny \tlc@institution}%
34     %
35     % document license. This maybe a license or word like confidential.
36     \cfoot{\tiny \tlc@permission}%
37   }%
38   {% Else: no operation because tlc@versionFile does not exist.
39   }%
40 }%
41
42 \newcommand{\useRuler}{%
43   \renewcommand{\headrulewidth}{0.1pt}%
44   \setlength\headheight{34.0pt}%
45   \rfoot%
46   {\tiny
47     {Page \thepage~of~\pageref{LastPage}}%
48   }%
49   \renewcommand{\footrulewidth}{0.1pt}%
50 }%
51
52 }
```

The default implementation can be overridden by defining `data/header-footer.tex`.

**Note:** When `data/header-footer.tex` exists and is empty, your document will be typeset with the defaults from document-class `article`.

### 3.3 `data/version.csv`

`tlc-article` will populate the builtin header and footer with information extracted from `data/version.csv` when it is present. `data/version.csv` is a comma-separated-variable file that uses the pipe character as the field delimiter. `data/version.csv` uses the following column names:

#### **version**

The version value is typeset in the rhead area. This field is used to convey the version the document was at the date it reached its current state.

#### **date**

The date value is typeset in the rhead area. This field is used to communicate when the document transitioned into its current state.

#### **status**

The status value is typeset in the rhead area. This field is used to convey the document state such as Approved, Draft, Effective, or Obsolete.

#### **instatution**

The institution value is typeset in the lfoot area. This field is used to tell the reader the author name or company name.

#### **permission**

The permission value is typeset in the cfoot area. This field is used to identify confidentiality or a particular license.

The exaction methods are shown below.

```

1 % Extract document status, document date and document version from
2 % \tlc@versionFile.
3 % Argument:
4 % 1 - the column name to extract from the data file.
5 \newcommand{\tlcVersionPart}[1]{
6   \csvreader[separator=pipe]
7     {\tlc@versionFile}{
8       1=\version,
9       2=\date,
10      3=\status,
11      4=\instatution,
12      5=\permission
13    }{#1}
14 }%
15
16 % Define extractions macros when \tlc@versionFile exists.
17 \IfFileExists{\tlc@versionFile}
18 {
19   \def\tlc@version{\tlcVersionPart{\version}}
20   \def\tlc@date{\tlcVersionPart{\date}}
21   \def\tlc@status{\tlcVersionPart{\status}}
22   \def\tlc@instatution{\tlcVersionPart{\version}}
23   \def\tlc@permission{\tlcVersionPart{\version}}
24 }
25 {% Else: no operation because tlc@versionFile does not exist.
26 }
```

### 3.4 data/logo.png

tlc-article will typeset the lhead area with data/logo.png when it is present. Make sure your logo's height is not larger than 34pt to avoid 'Package Fancyhdr Warning: headheight is to small' warning.

tlc-article file-check is shown below:

```

1 % Typeset the logo in the left side of the document header. Otherwise no
2 % operation because tlc@logoFile does not exist.
3
4 \newcommand{\useLogoFile}{%
5   \IfFileExists{tlc@logoFile}%
6   {%
7     \lhead{\includegraphics[width=3cm,height=1cm]{tlc@logoFile}}%
8   }%
9   {%
10    % Else: no operation because tlc@logoFile does not exist.
11  }%
12 }%
```

## 4 Definitions & Commands

### 4.1 tlcBeginLandscape

Page layout is rotated 90° clockwise resulting in a landscape page orientation. Landscape orientation remains active until tlcEndLandScape.

### 4.2 tlcEndLandScape

Page layout is returned to portrait orientation when tlcEndLandScape is reached.

### 4.3 tlcDarkblue

tlcDarkblue is used throughout this document to render text using rgb{0,0,0.5}. tlcDarkblue is safe to use within your document.

### 4.4 tlcTitlePageAndTableOfContents

tlcTitlePageAndTableOfContents creates the document layout shown in Figure 1. Section 2.3 shows an example implementation.

tlcTitlePageAndTableOfContents command is shown below:

```

1 % Each document uses the same author name, title page and table of contents.
2 %
3 % Arguments:
4 %   1 - the title
5 %   2 - the author
6 %   3 - the abstract
7
8 \newcommand{\tlcTitlePageAndTableOfContents}[3]{%
9   \title{#1}%
10  \author{#2}%
11  \maketitle%
12  \ifthenelse{\equal{#3}{}}{% Check for Empty string.
13    }{% Do nothing. Parameter is empty.
14    {\begin{abstract}#3\end{abstract}}%
15  \tableofcontents%
16  \thispagestyle{fancy}%
17  \clearpage%
18 }%
```



## 4.5 newcolumn type: L, C & R

New `newcolumn` type: L, C & R are Left, Center, and Right, respectively are designed to use with `longtable`. Data is wrapped within a table cell. The parameter defines the column width. As an example, `L{3.14159cm}` yields a left aligned, ragged right, wrapped text within a 3.14159cm wide cell.

```
1 \newcolumntype{L}[1]{>{\raggedright\let\newline\\\arraybackslash}p{#1}}
2 \newcolumntype{C}[1]{>{\centering\let\newline\\\arraybackslash}p{#1}}
3 \newcolumntype{R}[1]{>{\raggedleft\let\newline\\\arraybackslash}p{#1}}
```

## 4.6 data/additional-layout.tex

`data/additional-layout.tex` is an architectural hook the Author can use to provide packages and commands not provided by `tlc-article` and to design implementations that are specific to your document.

<http://github.com/Traap/autodoc> is a documentation framework that extends `tlc-article`.

## 4.7 data/header-footer.tex

`data/header-footer.tex` is an architectural hook the Author should use to completely override header and footer layouts provided by `tlc-article`.

## 4.8 data/version.csv

`data/version.csv` is by used `tlc-article` to populate the document header & footer. Refer to section 3.3 for `data/version.csv` definitions. `data/version.csv` is not used by `tlc-article` when `data/header-footer.tex` is define. However, you might want to use the version hook by defining `data/version.csv` and using the commands below to extract data from `data/version.csv` in your `data/header-footer.tex`.

1. `tlc@version`
2. `tlc@date`
3. `tlc@status`
4. `tlc@instatution`
5. `tlc@permission`

## 4.9 data/logo.png

`tlc-article` places `data/logo.png` in your header when defined.

## 4.10 tlcDebug

The `tlcDebug` command can assist you when encounter compilation errors using `tlc-article`.

```

1 % We define tlcDebug to aid our users when they are debugging their document.
2 % tlcDebug should be placed at the end of your document to allow LaTeX to
3 % fully expand all macros and definitions.
4
5 \newcommand{\tlcDebug}{%
6   \clearpage%
7   \section{tlc-article Debug}%
8   \subsection{tlc-article default files}%
9   \begin{description}[align=right, leftmargin=*, labelindent=5cm]%
10    \item[tlc@location:] \tlc@location%
11    \item[tlc@additionalLayout:] \tlc@additionalLayout%
12    \item[tlc@headerFooter:] \tlc@headerFooter%
13    \item[tlc@versionFile:] \tlc@versionFile%
14    \item[tlc@logoFile:] \tlc@logoFile%
15    \item[tlc@versionFile:] \tlc@versionFile%
16   \end{description}%
17   %
18   \subsection{tlc-article file hooks}%
19   \begin{description}[align=right, leftmargin=*, labelindent=5cm]%
20    \item[tlc@additionalLayout:] \tlcIsDefined{\tlc@additionalLayout}%
21    \item[tlc@headerFooter:] \tlcIsDefined{\tlc@headerFooter}%
22    \item[tlc@logoFile:] \tlcIsDefined{\tlc@logoFile}%
23    \item[tlc@versionFile:] \tlcIsDefined{\tlc@versionFile}%
24   \end{description}%
25   %
26   \subsection{tlc-article header and footer hooks}%
27   \begin{description}[align=right, leftmargin=*, labelindent=5cm]%
28    \item[tlc@version:] \tlc@version%
29    \item[tlc@date:] \tlc@date%
30    \item[tlc@status:] \tlc@status%
31    \item[tlc@institution:] \tlc@institution%
32    \item[tlc@permission:] \tlc@permission%
33   \end{description}%
34 }%
```

## 5 Required Packages

This section documents the dependencies of the required package `tlc-article` has. Package names are listed in alphabetical order. A complete description for each package is found at <http://www.ctan.org/>. At this writing, you can type in the package name and press the search button to learn more about each package.

Name	Description
<code>a4paper</code>	Provides support for A4 paper sizes, superseding a $\text{\LaTeX}$ 2.09 package of the same name (the package was developed from a now-extinct package called <code>a4dutch</code> ).
<code>acronym</code>	This package ensures that all acronyms used in the text are spelled out in full at least once. It also provides an environment to build a list of acronyms used. The package is compatible with pdf bookmarks.
<code>appendix</code>	The appendix package provides various ways of formatting the titles of appendices. Also (sub)appendices environments are provided that can be used, for example, for per chapter/section appendices.
<code>array</code>	An extended implementation of the <code>array</code> and <code>tabular</code> environments which extends the options for column formats, and provides ‘programmable’ format specifications.
<code>bookmark</code>	This package implements a new bookmark (outline) organization for package <code>hyperref</code> .
<code>catchfile</code>	This package catches the contents of a file and puts it in a macro.
<code>csvsimple</code>	The package provides a simple $\text{\LaTeX}$ interface for the processing of files with comma separated values (CSV); it relies on the key value syntax supported by <code>pgfkeys</code> to simplify usage.
<code>enumitem</code>	This package provides user control over the layout of the three basic list environments: <code>enumerate</code> , <code>itemize</code> and <code>description</code> .
<code>fancyhdr</code>	The package provides extensive facilities, both for constructing headers and footers, and for controlling their use (for example, at times when $\text{\LaTeX}$ would automatically change the heading style in use).
<code>fontenc</code>	The package allows the user to select font encodings, and for each encoding provides an interface to ‘font-encoding specific’ commands for each font.
<code>geometry</code>	The package provides an easy and flexible user interface to customize page layout, implementing autocentering and auto-balancing mechanisms so that the users have only to give the least description for the page layout.
<code>glossaries</code>	The <code>glossaries</code> package supports acronyms and multiple glossaries, and has provision for operation in several languages.
<code>graphicx</code>	The package builds upon the <code>graphics</code> package, providing a key-value interface for optional arguments to the ‘ <code>includegraphics</code> ’ command. This interface provides facilities that go far beyond what the <code>graphics</code> package offers on its own.

Name	Description
hyperref	The package is used to handle cross-referencing commands in L <sup>A</sup> T <sub>E</sub> X to produce hypertext links in the document.
ifthen ifthenelse, which can use a wide array of tests.	The package's basic command is
inputenc	The package translates various standard and other input encodings into a L <sup>A</sup> T <sub>E</sub> X internal language. The internal language is expressed entirely in T <sub>E</sub> X's base encoding (standard ASCII printable characters, carriage control tokens and T <sub>E</sub> X control sequences, the latter mostly defined by L <sup>A</sup> T <sub>E</sub> X).
lastpage	Reference the number of pages in your L <sup>A</sup> T <sub>E</sub> X document through the introduction of a new label which can be referenced like 'gpagerefLastPage' to give a reference to the last page of a document.
listings	The package enables the user to typeset programs (programming code) within L <sup>A</sup> T <sub>E</sub> X; the source code is read directly by T <sub>E</sub> X – no frontend processor is needed.
lmodern	Latin modern fonts
longtable	Longtable allows you to write tables that continue to the next page. You can write captions within the table (typically at the start of the table), and headers and trailers for pages of table.
makecell	This package supports common layouts for tabular column heads in whole documents, based on one-column tabular environment.
multicol	Multicol defines a multcols environment which typesets text in multiple columns (up to a maximum of 10), and (by default) balances the end of each column at the end of the environment.
parskip	Simply changing 'gparskip' and 'parindent' leaves a layout that is untidy; this package (though it is no substitute for a properly-designed class) helps alleviate this untidiness.
pdf-pie	This package provides the means to draw pie (and variant charts) using PGF/TikZ.
pdfscape	The package adds PDF support to the landscape environment of package lscape, by setting the PDF /Rotate page attribute.
pdfpages	This package simplifies the inclusion of external multipage PDF documents in L <sup>A</sup> T <sub>E</sub> X documents.
spverbatim	The spverbatim package provides an 'gspverb' macro that is analogous to 'verb' and an spverbatim environment that is analogous to verbatim with the difference being that 'spverb' and spverbatim allow L <sup>A</sup> T <sub>E</sub> X to break lines at space characters.
tabularx	The package defines an environment tabularx, an extension of tabular which has an additional column designator, X, which creates a paragraph-like column whose width automatically expands so that the declared width of the environment is filled.

Name	Description
textcomp	The package supports the Text Companion fonts, which provide many text symbols (such as baht, bullet, copyright, musicalnote, onequarter, section, and yen), in the TS1 encoding.
titling	The titling package provides control over the typesetting of the ‘gmaketitle’ command and ‘thanks’ commands, and makes the ‘title’, ‘author’ and ‘date’ information permanently available.
tocloft	Provides control over the typography of the Table of Contents, List of Figures and List of Tables, and the ability to create new ‘List of ...’. The ToC ‘gparskip’ may be changed.
todonotes	The package lets the user mark things to do later, in a simple and visually appealing way. The package takes several options to enable customization / fine-tuning of the visual appearance.
xcolor	The package starts from the basic facilities of the color package, and provides easy driver-independent access to several kinds of color tints, shades, tones, and mixes of arbitrary colors.