

The **tableof** package

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Abstract

The **tableof** package allows to tag the table of contents entries.

The `\tableof{comma,separated,list,of,tags}` command displays a table of contents containing only the entries having all the listed tags. There is a complementary command `\tablenotof`. They may be used multiple times.

1 Commands

1.1 `\toftagstart` and `\toftagstop`

These commands have a mandatory argument which is a comma separated list of tags. The tags need not have been predeclared.

```
\toftagstart{kitchenware,weaponry,gastronomy}
\section{Dealing with knives}
\subsection{This is tagged, too}
\section{Hunting rabbits}
\toftagstop{weaponry}
\section{Eating rabbits}
```

1.2 `\toftagthis` and `\tofuntagthis`

The `\toftagthis` command tags with the values from its argument (a comma separated list) only the next object found in the `.toc` file. The command should be located *before* and not *after* the to-be-tagged TOC entry. The `\tofuntagthis` command untags the next entry.

```
\toftagstart{kitchenware,rabbits}
\section{Knives and rabbits}
  \tofuntagthis{kitchenware}
\subsection{Hunting rabbits}
\subsection{Best knives for cooking}
\subsection{Eating rabbits}
\toftagstart{ecology}
  \toftagthis{climate}
\section{Knives and global climate}
\toftagstop{kitchenware}
\section{The rabbit in the wild}
  \toftagthis{climate}
\subsection{Impact of the rabbit on global climate}
```

1.3 `\tableof`

This command has a mandatory argument which is a comma separated list of tags. It displays, exactly as would appear in the table of contents, the corresponding tagged entries from the `.toc` file. Its title needs to be explicitly set up by additional code.

```
\section*{Table of entries tagged with weaponry AND with hunting}
\tableof{weaponry,hunting}
```

There is a starred variant:

```
\section*{Table of entries tagged with weaponry OR with hunting}
\tableof*{weaponry,hunting}
```

1.4 `\tablenotof`

It has a mandatory argument which is a comma separated list of tags. It displays, exactly as would appear in the table of contents, the entries from the `.toc` file which are *not* tagged:

```
\section*{Table of entries NOT tagged with weaponry NEITHER with hunting}
\tablenotof{weaponry,hunting}
```

There is a starred variant:

```
\section*{Table of entries NOT tagged with weaponry OR NOT tagged with hunting}
\tablenotof*{weaponry,hunting}
```

1.5 `\tofOpenTocFileForWrite`

The `.toc` file is read into memory (if it exists) by `tableof` at the `\usepackage`. But the creation of the `.toc` file is not dealt with by `tableof` itself: either this will be done by a standard `\tableofcontents` command somewhere in the document, or, one may use the package provided command `\tofOpenTocFileForWrite` which does not display anything and just does what its name indicates. This command can be used also in the preamble.¹

1.6 Compatibility with other packages

`tableof` checks if the package `hyperref` is loaded as it modifies the format of the `.toc` file lines. This check is done at the `\begin{document}` so the order of loading is not important.

`tableof` adds the tag data to the `.toc` file, but this data is defined to do nothing except when it is used by `tableof` itself.

1.7 TODO

Create a parser for arbitrary iterated boolean combinations of tags . . . but this kind of thing must have been done a zillion times already, as it belongs to the basics in computer science! . . . and it surely is no easy task in \TeX ! so I cautiously retreated from such an endeavor.

¹Note to people or packages wanting also to access the `.toc` file: as happens with the standard `\tableofcontents`, the `.toc` file becomes temporarily empty immediately after `\tofOpenTocFileForWrite`.

2 Generating the package file and the test file

Running latex (or pdflatex) on tableof.dtx generates:

(1) the package file tableof.sty (which should be moved to a suitable location within the T_EX installation), (2) tableof.ins for T_EX distributions expecting such a file, (3) tableoftest.tex which demonstrates the package features (one should run latex twice on it), and (4) the documentation itself (run pdflatex twice to get the bookmarks.)

3 Implementation

Writing-up source code comments is hopefully for a future release.

```

1 \ProvidesPackage{tableof}
2 [2012/12/06 v1.0 tables of tagged contents (jfb)]
3 \NeedsTeXFormat{LaTeX2e}
4 \DeclareOption*{\PackageWarning{tableof}{Option ‘\CurrentOption’ is unknown.}}
5 \ProcessOptions\relax

6 \newtoks\tof@toctoks

7 \def\tof@readtoc#1{%
8   \ifeof #1
9     \let\tof@nextread\@gobble
10    \global\tof@toctoks=\expandafter{\the\tof@toctoks}%
11  \else
12    \let\tof@nextread\tof@readtoc
13    \read #1 to \tof@buffer
14    \tof@toctoks=\expandafter\expandafter\expandafter
15      {\expandafter\the\expandafter\tof@toctoks\tof@buffer}%
16  \fi
17  \tof@nextread{#1}}

18 \IfFileExists{\jobname .toc}
19   {{\endlinechar=-1 \makeatletter
20     \newread\tof@tf
21     \openin\tof@tf\@filef@und
22     \tof@readtoc\tof@tf
23     \closein\tof@tf}}{}

24 \AtBeginDocument{
25 \ifpackageloaded{hyperref}
26   {\def\tof@gobblethree@orfour#1#2#3#4{}}%
27   \ifx\hyper@last\@undefined\tof@toctoks{}\fi}
28   {\def\tof@gobblethree@orfour#1#2#3{}}}

29 \def\tof@tags{}
30 \def\tof@tags@tmp{}
31 \def\tof@untags@tmp{}
32 \def\tof@true#1{\expandafter\let\csname if@tof#1.\endcsname\iftrue}
33 \def\tof@false#1{\expandafter\let\csname if@tof#1.\endcsname\iffalse}

```

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```
34 \def\tof@secondiftrue#1{\csname if@tof#1.\endcsname
35     \let\tof@next\@secondoftwo\fi}
36 \def\tof@secondiffalse#1{\csname if@tof#1.\endcsname\else
37     \let\tof@next\@secondoftwo\fi}
38 \def\tof@setflags#1{%
39     \let\tof@next\@firstoftwo
40     \@for\@tempa:=#1\do{\tof@true{\@tempa}}%
41     \@for\@tempa:=\tof@tags\do{\tof@false{\@tempa}}%
42     \@for\@tempa:=\tof@tags@tmp\do{\tof@false{\@tempa}}%
43     \@for\@tempa:=\tof@untags@tmp\do{\tof@true{\@tempa}}%
44     \def\tof@tags@tmp{}\def\tof@untags@tmp{}}
45 \def\tof@and#1{%
46     \def\contentsline{%
47         \tof@setflags{#1}%
48         \@for\@tempa:=#1\do{\tof@secondiftrue{\@tempa}}%
49         \tof@next\tof@savetoc\tof@gobblethree@orfour}
50     \the\tof@toctoks
51     \endgroup}
52 \def\tof@or#1{%
53     \def\contentsline{%
54         \tof@setflags{#1}%
55         \@for\@tempa:=#1\do{\tof@secondiffalse{\@tempa}}%
56         \tof@next\tof@gobblethree@orfour\tof@savetoc\tof@gobblethree@orfour}
57     \the\tof@toctoks
58     \endgroup}
59 \def\tof@nor#1{%
60     \def\contentsline{%
61         \tof@setflags{#1}%
62         \@for\@tempa:=#1\do{\tof@secondiffalse{\@tempa}}%
63         \tof@next\tof@savetoc\tof@gobblethree@orfour}
64     \the\tof@toctoks
65     \endgroup}
66 \def\tof@nand#1{%
67     \def\contentsline{%
68         \tof@setflags{#1}%
69         \@for\@tempa:=#1\do{\tof@secondiftrue{\@tempa}}%
70         \tof@next\tof@gobblethree@orfour\tof@savetoc\tof@gobblethree@orfour}
71     \the\tof@toctoks
72     \endgroup}
73 \def\tof@filter#1#2{\ifx#1#2\else
74     \ifx\tof@tmptags\@empty\edef\tof@tmptags{#2}\else
75     \edef\tof@tmptags{\tof@tmptags,#2}\fi\fi}
76 \def\tof@@start#1{%
77     \ifx\tof@tags\@empty\edef\tof@tags{#1}\else
78     \edef\tof@tags{\tof@tags,#1}\fi}
79 \def\tof@@stop#1{%
80     \@for\@tempa:=#1\do{\def\tof@tmptags{#1}}}
```

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```
81      \@for\@tempb:=\tof@tags\do{\tof@filter\@tempa\@tempb}%
82      \edef\tof@tags{\tof@tmptags}}}}

83 \let\tof@start\@gobble
84 \let\tof@stop\@gobble
85 \let\tof@tagthis\@gobble
86 \let\tof@untagthis\@gobble
87 \def\tof@init{\begingroup
88   \let\tof@savetocline\tocline
89   \let\tof@start\tof@@start
90   \let\tof@stop\tof@@stop
91   \def\tof@tagthis##1{\def\tof@tags@tmp{##1}}%
92   \def\tof@untagthis##1{\def\tof@untags@tmp{##1}}
93 \newcommand\tableof{\tof@init\@ifstar{\tof@or}{\tof@and}}
94 \newcommand\tablenotof{\tof@init\@ifstar{\tof@nand}{\tof@nor}}

95 \newcommand*\toftagthis[1]{\addtocontents{toc}
96   {\string\tof@tagthis\string{#1\string}}}
97 \newcommand*\tofuntagthis[1]{\addtocontents{toc}
98   {\string\tof@untagthis\string{#1\string}}}
99 \newcommand*\toftagstart[1]{\addtocontents{toc}
100   {\string\tof@start\string{#1\string}}}
101 \newcommand*\toftagstop[1]{\addtocontents{toc}
102   {\string\tof@stop\string{#1\string}}}
103 \newcommand\tofOpenTocFileForWrite{%
104 \expandafter\newwrite \csname tf@toc\endcsname
105 \immediate \openout \csname tf@toc\endcsname \jobname .toc\relax}
106 \endinput
```