LaTeX::Table

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Abstract

LATEX::TABLE is a Perl module that provides functionality for an intuitive and easy generation of LaTeX tables. It ships with some predefined good looking table styles. This module supports multipage tables via the xtab package and publication quality tables with the booktabs package. It also supports the tabularx package for nicer fixed-width tables. Furthermore, it supports the colortbl package for colored tables optimized for presentations.

1 Installation

You can install it with the cpan command.

```
$ cpan LaTeX::Table
```

Alternatively, download it from http://search.cpan.org/dist/LaTeX-Table/and install in manually:

```
$ tar xvfz LaTeX-Table-VERSION.tar.gz
$ perl Build.PL
$ ./Build test
$ ./Build install
```

2 Examples

2.1 Large Columns

The first basic example is a small table with two larger columns. LaTeX::Table automatically sets the column to $p\{5cm\}$ when a cell in a column has more than 30 characters. LaTeX generates the nice Table 1.

Character	Fullname	Voice
Homer Marge Bart Lisa Maggie	Homer Jay Simpson Marjorie Simpson (ne Bouvier) Bartholomew Jojo Simpson Elizabeth Marie Simpson Margaret Simpson	Dan Castellaneta Julie Kavner Nancy Cartwright Yeardley Smith Elizabeth Taylor, Nancy Cartwright, James Earl Jones, Yeardley Smith, Harry Shearer

Table 1: LaTeX paragraph column attribute.

Character	Fullname	Voice
Homer	Homer Jay Simpson	Dan Castellaneta
Marge	Marjorie Simpson (ne Bouvier)	Julie Kavner
Bart	Bartholomew Jojo Simpson	Nancy Cartwright
Lisa	Elizabeth Marie Simpson	Yeardley Smith
Maggie	Margaret Simpson	Elizabeth Taylor, Nancy
		Cartwright, James Earl
		Jones, Yeardley Smith,
		Harry Shearer

Table 2: tabularx X column attribute.

We can use the tabularx package to find better column widths than the default 5cm. See Table 2 for the results.

2.2 Table rotate

Table 3 demonstrates the table sideways feature. Requires the rotating package.

```
$table = LaTeX::Table->new(
                              \Rightarrow $header,
         header
         data
                              \Rightarrow $data,
         label
                              => 'rotate',
                              \Rightarrow '0.9\textwidth',
         width
         width_environment => 'tabularx',
         sideways
                              => 1,
         caption
                              => 'tabularx X column attribute.',
    }
);
```

2.3 Table resize

In Tables 4 and 5, the resizebox feature was used to get the desired width (and height in the second example). Requires the graphicx package.

2.4 Table width, tabular* environment

Table 6 demonstrates a fixed-width table in the tabular* environment. Here, the space between the columns is filled with spaces.

2.5 Callback functions

Callback functions are an easy way of formatting the cells. Note that the prices for Gnat are rounded in the following tables.

```
\begin{array}{lll} my \ \$header = [ & & \\ & [ & `Item: 2\,c\,'\,, & `, & ] \,, \end{array}
```

Character	Fullname	Voice
	Homer Jay Simpson	Dan Castellaneta
	Marjorie Simpson (ne Bouvier)	Julie Kavner
	Bartholomew Jojo Simpson	Nancy Cartwright
	Elizabeth Marie Simpson	Yeardley Smith
Maggie	Margaret Simpson	Elizabeth Taylor, Nancy Cartwright, James Earl
		Jones, Yeardley Smith, Harry Shearer

Table 3: tabularx X column attribute.

Character	Fullname	Voice
Homer	Homer Jay Simpson	Dan Castellaneta
Marge	Marjorie Simpson (ne Bou- vier)	Julie Kavner
Bart	Bartholomew Jojo Simpson	Nancy Cartwright
Lisa	Elizabeth Marie Simpson	Yeardley Smith
Maggie	Margaret Simpson	Elizabeth Taylor, Nancy Cartwright, James Earl Jones, Yeardley Smith, Harry Shearer

Table 4: scaled to 60% of the text width

Character	Fullname	Voice
Homer	Homer Jay Simpson	Dan Castellaneta
Marge	Marjorie Simpson (ne Bouvier)	Julie Kavner
Bart	Bartholomew Jojo Simpson	Nancy Cartwright
Lisa	Elizabeth Marie Simpson	Yeardley Smith
Maggie	Margaret Simpson	Elizabeth Taylor, Nancy
		Cartwright, James Earl
		Jones, Yeardley Smith,
		Harry Shearer

Table 5: scaled to a size of 300pt x 120pt

Animal	Description	Price
Gnat	per gram	13.651
	each	0.012
Gnu	$\operatorname{stuffed}$	92.59
Emu	$\operatorname{stuffed}$	33.33
Armadillo	frozen	8.99

Table 6: 0.7 of textwidth

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 7: Price List. Try our special offer today!

```
' \setminus cmidrule(r) \{1-2\}'],
       'Animal', 'Description', 'Price']
];
my   data = [
       ', Gnat', \\
                     'per gram',
                                  '13.651'
                     'each',
                                   ,0.012,
       'Gnu',
                     'stuffed'
                                  92.59
                     'stuffed',
       'Emu',
                                  '33.33'
       'Armadillo', 'frozen',
                                   '8.99'
];
my $table = LaTeX::Table->new(
                   => 'prices.tex',
       filename
       maincaption => 'Price List',
                   => 'Try our special offer today!',
       caption
       label
                   => 'table: prices',
       position
                   => 'htb',
       header
                   => $header,
       data
                   \Rightarrow $data,
       callback
                   => sub {
            my (srow, scol, svalue, sis_header) = @_;
            if ($col == 2 && $!is_header) {
                 $value = format_price($value, 2, '');
            return $value;
     },
});
```

2.6 Top Captions

Tables can be placed on top of the tables with caption_top => 1. See Table 8. Note that the standard LaTeX macros are optimized for bottom captions. Use something like

```
\usepackage[tableposition=top]{caption}
```

to fix the spacing. Alternatively, you could fix the spacing by yourself by providing your own command(s) (Table 9):

```
$table->set_caption_top(
   '\setlength{\abovecaptionskip}{0pt}'.
   '\setlength{\belowcaptionskip}{10pt}'.
   \caption'
);
```

Table 8: Try our special offer today!

ITEM		
ANIMAL	DESCRIPTION	PRICE
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 9: Try our special offer today!

ITEM		
ANIMAL	DESCRIPTION	PRICE
Gnat	per gram each	13.65 0.01
Gnu Emu Armadillo	stuffed stuffed frozen	92.59 33.33 8.99

2.7 Custom Themes

Table 10 displays our example table with the *NYC* theme, which is meant for presentations (with LaTeX Beamer for example). You can change the theme by copying it, changing it and then storing it in <code>custom_themes</code>. Admire the resulting Table 11. You can also add the theme to the predfined themes by creating a themes module. See <code>LaTeX::Table::Themes::ThemeI</code> how to do that.

2.8 Multicolumns

If you want tables with vertical lines (are you sure?) you should use our shortcut to generate multicolumns. These shortcuts are not only much less typing work,

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 10: Try our special offer today!

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 11: Try our special offer today!

but they also automatically add the vertical lines, see Table 12.

2.9 Headers

If you don't need headers, just leave them undefined (see Table 13). If you want that the first column looks like a header, you can define this with the columns_like_header Option (Table 14 and Table 15). You can also rotate the header columns by 90 degrees (Table 16) with header_sideways. If you do not want to rotate all header cells, use a callback function instead (Table 17).

```
$table = LaTeX::Table->new(
```

	A		
1	A		
A	$\parallel \mathbf{B}$	\mathbf{C}	
1	w	x	
2	(3	

Table 12: Multicolumns made easy . . .

Gnat	per gram	13.651
	each	0.012
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 13: Headers are not mandatory

Gnat	per gram	13.651
	each	0.012
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 14: We can format columns with the theme header definition

2.10 Automatic column definitions

We can easily provide regular expressions that define the alignment of columns. See Table 18.

A			
\mathbf{A}	В		
\mathbf{A}	В	\mathbf{C}	
Gnat	per gram	13.651	
	each	0.012	
Gnu	stuffed	92.59	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	

Table 15: We can format columns with the theme header definition

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9.00					
10.00					
11.00					
12.00					

Table 16: Header sideways

Time	Monday	Tuesday	Wednesday	Thursday	Friday
9.00					
10.00					
11.00					
12.00					

Table 17: Header sideways

2.11 Ctable Package

The ctable package makes it easy to add footnotes. See Table 19. \$table ->set_type('ctable');

2.12 Multicols

In a two column or multicols document, we use this starred version for Table 20:

Website	URL
Slashdot	http://www.slashdot.org
Perlmonks	http://www.perlmonks.org
Google	http://www.google.com

Table 18: Some websites

Website	URL
Slashdot ^a	http://www.slashdot.org
Perlmonks	http://www.perlmonks.org
Google	http://www.google.com

^a footnotes are placed under the table

Table 19: We can do this with the ctable package as well and can even add some footnotes...

$table \rightarrow set_star(1);$

Website	URL
Slashdot ^a	http://www.slashdot.org
Perlmonks	http://www.perlmonks.org
Google	http://www.google.com

 $^{^{}a}$ footnotes are placed under the table

Table 20: We can do this with the ctable package as well and can even add some footnotes...

3 Version

Generated with LaTeX::Table Version 0.9.8

I		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 21: Price List. Try our special offer today!

A Themes

For each theme, two example tables are shown, one of type std, the standard LaTeX table, and one of type stab. Note that the first and second column is left justified because these columns contain only strings, whereas the third column is a number column and therefore right justified.

A.1 Berlin Theme

Table 22: **Price List.** Try our special offer today!

gram fed fed en gram	Price 13.65 0.01 92.59 33.33 8.99 13.65
fed fed en	0.01 92.59 33.33 8.99 13.65
fed fed en	92.59 33.33 8.99 13.65
fed en	33.33 8.99 13.65
en	8.99 13.65
	13.65
gram	
1	0.01
fed	92.59
fed	33.33
en	8.99
gram	13.65
1	0.01
fed	92.59
fed	33.33
en	8.99
gram	13.65
	0.01
	n fed fed en gram nued on ne

Table 22: Continued from previous page

I		
Animal	Description	Price
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

I		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 23: Price List. Try our special offer today!

A.2 Dresden Theme

Table 24: **Price List.** Try our special offer today!

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Continued on next page		

Table 24: Continued from previous page

Item		
Animal	Description	Price
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 25: **Price List.** Try our special offer today!

A.3 Houston Theme

Table 26: Price List. Try our special offer today!

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Continued on next page		

Table 26: Continued from previous page

Item		
Animal	Description	Price
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 27: Price List. Try our special offer today!

A.4 Miami Theme

Table 28: Price List. Try our special offer today! Item

nem		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33

Continued on next page

Table 28: Continued from previous page

Item		
${f Animal}$	Description	Price
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

I	$\overline{ ext{tem}}$	
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 29: Price List. Try our special offer today!

A.5 NYC Theme

Table 30: Price List. Try our special offer today!

Item			
Animal	Description	Price	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.59	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.59	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.59	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.59	
Emu	stuffed	33.33	
Armadillo	frozen	8.99	
Gnat	per gram	13.65	
	each	0.01	
Gnu	stuffed	92.59	
C	Continued on ne	xt page	

Table 30: Continued from previous page

I	tem	
Animal	Description	Price
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 31: **Price List.** Try our special offer today!

A.6 Paris Theme

Table 32: **Price List.** Try our special offer today!

I	tem	
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
	Continued on ne	xt page

Table 32: Continued from previous page

I	$ ext{tem}$	
Animal	Description	Price
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 33: Price List. Try our special offer today!

A.7 Zurich Theme

Table 34: Price List. Try our special offer today!

I	tem	
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
C	Continued on ne	xt page

Table 34: Continued from previous page

I	tem	
Animal	Description	Price
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

It	em	
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99

Table 35: Price List. Try our special offer today!

A.8 plain Theme

Table 36: Price List. Try our special offer today!

It	em	
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Continued on next page		

Table 36: Continued from previous page

It	em	
Animal	Description	Price
Armadillo	frozen	8.99
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.59
Emu	stuffed	33.33
Armadillo	frozen	8.99