

# Indian T<sub>E</sub>X Users Group

URL: <http://www.river-valley.com/tug>



## On-line Tutorial on L<sup>A</sup>T<sub>E</sub>X

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# 7 Tables Continued

## 7.1. Longtable

The `tabular` and `tabularx` environments explained in the previous chapter provide a convenient way of making tables. These environments, however, fail if a table exceeds one page. One easy trick that might do the job would be to break the tables manually but the `longtable` package enables automatic page breaks by the  $\TeX$  compiler.

### 7.1.1. Constructing longtables

The `longtable` environment shares most of the features with the `tabular` environment. We begin with the following example that uses most of the features of the `longtable` environment.

Table 7.1: A long table

This part appears at the top of the table			
FIRST <sup>1</sup>	SECOND	*	THIRD
This table is only <i>slightly</i> different from the	one in the	*	1
This goes at the	bottom.	*	0.00

<sup>1</sup> You can also have a footnote in the table head by using `\footnotemark` and `\footnotetext`.

Table 7.1: (continued)

This part appears at the top of every other page			
First	Second	*	Third
guide to the <code>longtable</code>	package.	*	2
Columns 1 & 2 here have <b>fixed</b> widths.		*	3
<code>2.5in</code>	<code>1in</code>	*	
<code>longtable</code> columns are specified	in the	*	5
same way as in the <code>tabular</code>	environment.	*	6
<code> p{2.5in}   p{1in}@{*}c </code>	in this case.	*	7
Each line ends with a	<code>\</code> command.	*	8
The <code>\</code> command has an	optional	*	9
argument, just as	in the	*	10
<code>tabular</code>	environment.	*	11
See the effect of <code>\[10pt]</code> below:		*	12
The <code>\tabularnewline</code> command is an alternative to <code>\</code> for use in the scope of <code>\raggedleft</code> and similar commands that redefine <code>\</code> .		*	13
Notice <code>\tabularnewline[10pt]</code> below:		*	14
Some lines can be really long: This column is a “p” column so that this row of the table can take up several lines. But $\TeX$ will never break a page within such a row.	This is also a “p”* column.		This is not.
<code>\</code> * has the same effect as <code>\</code>	but it	*	16
disallows a page break after	the row.	*	17
	command in	*	18
<code>setlongtables</code> is an obsolete			
This goes at the	bottom.	*	0.00

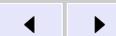
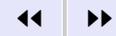


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Table 7.1: (continued)

This part appears at the top of every other page			
	<b>First</b>	<b>Second</b>	<b>Third</b>
	v4.09 of <code>longtable</code> and does	nothing.	* 19
	Center aligned text	◇	* 20
	These lines will in place of the at the end	appear	* 1.00
		usual foot	* 2.00
		of the table.	* 3.00

### 7.1.2. Optional arguments

The optional arguments to `\begin{longtable}` are:

- c** The table is set center aligned.
- l** The table is set flush left.
- r** The table is set flush right.

If no arguments are specified, the position of the table is set according to the values of `\LTleft` and `\LTright`.

### 7.1.3. Commands and parameters

This section contains a brief description of the commands and other parameters that may be used in the `longtable` environment.

**LTchunksize** This corresponds to the number of rows that  $\text{\TeX}$  has to keep in memory at one time. By default this value is set to 20, but it can be set by the user; for

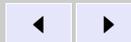


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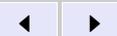
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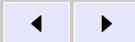
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instance, by `\setcounter{LTchunksize}{10}` or `\LTchunksize=10` to a value of 10. Changing the default does not affect page breaking. However,  $\TeX$  will run faster with a large `LTchunksize`, and, on the other hand, will require more memory. The minimum value of `LTchunksize` can be set equal to 1; however, it must be at least as large as the number of rows in each of the head or foot sections (if the table head and foot need to be set).

- `\LTleft`** The defaults in the `longtable` package are such that the tables are set flush left, but are indented by the usual paragraph indentation. `\LTleft` controls the amount of glue to the left of the table. By default this is set to `\parindent`, but can be changed according to the requirements; for instance, by `\setlength\LTleft{0pt}`.
- `\LTRight`** This parameter determines the glue to the right of the table. The default for this is `\fill`.
- `\LTpre`** Denotes the glue before the table. The default is set to `\bigskipamount`.
- `\LTpost`** Denotes the glue after the table. The default is again `\bigskipamount`.
- `\LTcapwidth`** This controls the width of the parbox containing the caption. The default width is set to `4in`, but can be changed, for instance, to a value of `2in` by using `\setlength\LTcapwidth{2in}`.
- `\endhead`** At the start of the table, one may specify the lines that are to appear at the top of every page. This command is used in place of the last `\`.
- `\endfirsthead`** If the head on the first page needs to be different than on the others, then one may specify the lines to appear in a normal way followed by `\endfirsthead` (in place of the last `\`).
- `\endfoot`** Specifies rows to appear at the bottom of every page.
- `\endfirstfoot`** Specifies rows to appear at the bottom of the last page. The commands `\endfirsthead` and `\endlastfoot` are useful when one wants to specify something that should logically appear in the table at the end of the `firsthead`, or at the beginning of the `lastfoot`.
- `\`** This is similar to the `tabular` environment and specifies the end of the row.



- `\[ <dim> ]` This is also similar as in the `tabular` environment and marks the end of the row, and then adds vertical space (as shown in Table (7.1)).
- `\|*` It is the same as `\|`, but disallows a page break after the row.
- `\tabularnewline` It is an alternative to `\|` for use in the scope of `\raggedright` and similar commands that redefine `\|`. It can also be used with an optional argument, `\tabularnewline[ <dim> ]`, so as to specify the end of the row, and then add a vertical space.
- `\kill` If a line is `\killed`, by using `\kill` rather than `\|` at the end of the line, it is used in calculating column widths, but removed from the final table.
- `\pagebreak` Forces a page break.
- `\pagebreak[ <val> ]`  
A ‘hint’ between 0 and 4 of the desirability of a page break. A high value indicates more desirability.
- `\nopagebreak` Prohibits a page break.
- `\nopagebreak[ <val> ]`  
A ‘hint’ between 0 and 4 of the undesirability of a page break.
- `\newpage` Forces a page break.
- `\caption{ <caption> }`  
Caption ‘Table ?: <caption>’, and a ‘<caption>’ entry in the list of tables.
- `\caption[ <lot> ] { <caption> }`  
Caption ‘Table ?: <caption>’, and a ‘<lot>’ entry in the list of tables.
- `\caption[ ] { <caption> }`  
Caption ‘Table ?: <caption>’, but no entry in the list of tables.
- `\caption* { <caption> }`  
Caption ‘<caption>’, but no entry in the list of tables.
- `\footnote` Used for having footnotes, but it cannot be used in the table head and foot.
- `\footnotemark` Footnotemark, can be used only in the table head and foot.
- `\footnotetext` Footnote text: for use in the table body after a `\footnotemark` has been set (should appear on the page on which the footnote is desired).



**\setlongtables** `setlongtables` is an obsolete command in v4.09 of `longtable` and does nothing.

**\multicolumn** The `\multicolumn` command works in the same way as in the `tabular` environment. Please refer to Chapter 6 for details about this.

## 7.2. Another example

We will show another simple example using the `longtable` environment.

Table 7.2: A simple example

Another long table example		
First two columns		Third column
p-type		
p column	another one	1
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
<b>Continued . . .</b>		

Table 7.2: (continued)

<b>Another long table example (continued)</b>		
First two columns		Third column
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
Lots of line like	this	2
<b>The End</b>		

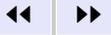


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## 7.2.1. Verbatim highlights from Table (7.2):

```
\begin{longtable} { |p{0.9in}|p{2in}|c| }
xxxxx & xxxxx & xxxxxxxxxxxxxxxx \kill
\caption{A simple example\label{simple}}\ \hline\hline
\multicolumn{3}{|c|}{\bf Another long table example}\ \hline\hline
\multicolumn{2}{|c|}{First two columns} & {Third column}\ \hline
\multicolumn{2}{|c|}{p-type} & \ \hline\hline
\endfirsthead
\caption[] {(continued)}\ \hline\hline
\multicolumn{3}{|c|}{\bf Another long table example (continued)}\ \
\hline\hline
\multicolumn{2}{|c|}{First two columns} & {Third column}\ \
\hline
\endhead
\hline
\multicolumn{3}{|c|}{\bf Continued $\ldots$}\ \
\hline
\endfoot
\hline
\multicolumn{3}{|c|}{\bf The End}\ \
\hline
\endlastfoot
p column & another one & 1 \ \
\hline
Lots of line like & this & 2 \ \
...
\end{longtable}
```

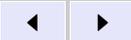


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## 7.3. Exercise

Try making Table (7.1); it seems to be quite strange, but it contains most of the features one would need in order to get thoroughly acquainted with the `longtable` environment. It should be *quite easy* if one actually reads the table itself. Look at the spaces *carefully*.



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