My bag of LaTeX tricks*

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My bag of tricks

Here is a collection of LaTeX tricks I learned over the years. These are not documented or described in any prominent way in the LaTeX literature. I learnt these, the hard way, but you do not have to struggle like me. [1]

*This is a hypelinked document. Texts given in winered colour are click-sensitive hyperlinks.

[1]You can ask the author for the LaTeX source of this article. Just send an email, mentioning the Ref. code and the Ver. code given above.

Trick No.	Title
1.	Automatic numbering of rows in an array
2.	Create your own customised numbering style
3.	Timestamping
4.	Removing indents
5.	Visible space-marker
6.	Typesetting queer characters
7.	Placing figures in a para using wrapfig
8.	A comment block
9.	Finding out predefined lengths
10.	Phantom
11.	Disable a command
12.	Strip out all LaTeX commands
13.	Page numbering in book document class
14.	Blank page
15.	Placing an image in a para
16.	Hyper-ref to Index page correctly
17.	Spacer/marker for dividing a page
18.	Fill a page with a grid of dots

The above tricks are described and demonstrated below. Try them, have fun.

Trick # 1 Automatic numbering of rows in an array.

This trick was used to generate the list above. The trick No. (or row numbers) in the first column, were created automatically as we add tricks (rows). Now, we can add (or delete) tricks easily. All row numbers will get automatically recomputed.

Trick # 2 Create your own cutomised style of list numbering

Use `\renewcommand{\labelenumi}{\textbf{Trick \# \theenumi}}` to create your own style of enumerated list numbering. This document uses this trick already.

This paper uses the `\renewcommand{\labelenumi}` , to create an enumerated list of LaTeX tricks, with a special label for the enumeration (Trick #). You can choose your own string in place of `‘‘Trick \#’’` .

Trick # 3 Display date and time

ISO style timestamp now is ::: 2019/09/03 IST 20:02

Trick # 4 Removing indents

This paper defines macros `\setlength{\parindent}` and

`\newcommand{\indentzero}` for removing indents from the Abstract and from new paras.

However, zero length paragraph indents will make it difficult to recognise new paras. You may have to take some unconventional steps to make each new para standout from the earlier paras. This article has defined a new macro `\parajump` , for this purpose.

Trick # 5 Visible space marker

Here is a visible space marker : a␣b

Trick # 6 Typesetting queer characters

Typesetting tilde, and backslash characters

The tilde, and backslash characters are tricky for typesetting in a text, since they are reserved characters for LaTeX. Using a \ to make LaTeX output them as they are, will not work. Use the `\textasciitilde` and `\textbackslash` to typeset them.

This is a tilde ~character made with `\textasciitilde` .

This is a backslash \character made with `\textbackslash`

This is a leftarrow < character made with `\textless`

This is a rightarrow > character made with `\textgreater`

This is a vertibar | character made with `\textbar`

The symbols $ # & are made by using the escape character `\$ or \# or \&`

For instance, the Dollar symbol $ is made by `\$`

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After: Matlab® , Labmat ©, Lablab ™

Afterafter: Matlab® , Labmat ©, Lablab ™

Trick # 7 Placing figures in paras using wrapfig

The wrapfig environment does not work inside an enumerate/itemize environment. It has therefore been placed at the end of this article.

Trick # 8 A comment block

LaTeX lets you comment out only one line at a time using the % marker. Sometimes you want to comment out a whole block of text spread over several lines. If you need to comment out a block of text, use the verbatim package. That provides the comment environment:

```
\begin{comment}
   .....
\end{comment}
```

Trick # 9 Finding predefined lengths

Every LaTeX document class defines a certain number of lengths in advance. To find out these predefined lengths in a LaTeX document, use `\usepackage{printlen}`

```
\verb!\textwidth! is \printlength{\textwidth}\\
 \verb!\parindent! is \printlength{\parindent}\\
 \verb!\rightmargin! is \printlength{\rightmargin}\\
 \verb!\leftmargin! is \printlength{\leftmargin}
```

Here's what you get ::

`\textwidth` is 418.25368pt
`\parindent` is 0.0pt
`\rightmargin` is 0.0pt
`\leftmargin` is 29.3747pt

and so on ....

Trick # 10 Phantom

The command `\phantom` is useful when you want to introduce a dummy character which is not visible (not even as a blank space).

Trick # 11 Undefining a command in LaTeX

This is a dummy reference to a dummy citation [1]. This is a dummy reference to another dummy citation [2].

The `\cite{dummy}` command will get suppressed if you uncomment the line containing `\renewcommand\cite[2][]{}`. All the `\cite{dummy}` will get suppressed. Try this now. and recompile.

Trick # 12 Remove all commands from a LaTeX file

Strictly speaking, this is NOT a LaTeX trick.

Sometimes. you want to remove all LaTeX commands from a LaTeX file. Try using opendetex.
(http://code.google.com/p/opendetex/)

Detex is a well-known program for stripping Tex/LaTeX commands from documents. Unfortunately, the currently available version has some shortcomings and needs much improvement. Because Detex is available on a free license (NCSA license), it was possible to make a derivation of it. OpenDetex project is aimed at speeding up development of Detex, making use of Google Code project hosting and providing easier acces to program development.

opendetex is available both for windows and Linux

Download the program opendetex from here

http://opendetex.googlecode.com/files/opendetex-2.8.1.tar.bz2
http://code.google.com/p/opendetex/downloads/list

Usage: detex -n inputfile.tex > outputfile.txt

Trick # 13 Page numbering in document class book

By default, in the LaTeX document class "book" the page number positioning has the page numbers altering left and right on even and odd pages, and at the bottom of the first page of every chapter. You can change this, such that all pagpe numbering is uniformly at the bottom and at the centre of the page (or wherever you want).

```
 %\usepackage{fancyhdr}
%\pagestyle{fancy}
% Suppress horizontal line at the top of each page
\renewcommand{\headrulewidth}{0pt}
\fancyhead[LE]{}
\fancyhead[RO]{}
\fancyhead[RE]{}
\fancyhead[LO]{}
% all page numbering is at the bottom and at the centre of the page.
\cfoot{\thepage}
```

Trick # 14 Empty page

Next, we see an empty blank page. And. there is some more stuff after that.

Trick # 15 Placing an image inside a para

This trick is described after the enumerate environment.

Trick # 16 Hyper-referencing the Index page

In the Table of Contents, the hyper-link to the Index page usually goes to one section before the Index. The following small trick will make it behave correctly. Use a `\phantomsection` before the printindex and fool LaTeX into believing it is going back by one section.

```
\phantomsection
\printindex
```

Trick # 17 Spacer marker for dividing a page

You can put markers to divide a page horizontally or vertically. Use:

```
 x \hfill x\\

x \hfill x \hfill x \\

x \hfill x \hfill x \hfill x \\


x \hfill x \hfill x   \hfill x \hfill x\\

Now you can also divide a page vertically, into 1,2, or 3 parts. \\ \newpage

x \hfill x \vfill x  \hfill x \\ \newpage

x \hfill x \vfill x  \hfill x \vfill  x \hfill x \\ \newpage

x \hfill x \vfill x  \hfill x \vfill  x \hfill x    \vfill x \hfill x\\ \newpa
```

Trick # 18 Grid of dots

Sometimes you my need a working sheet with a grid of dots, for creating free-hand sketches. Here is how you do it:

```
 \begin{tikzpicture}[scale=.5]
\foreach \x in {0,...,41}
\foreach \y in {0,...,57}
{
\fill[gray!75] (\x,\y) circle (0.06cm);
}
```

****

Placing an image using wrapfig

This part is placed outside the enumerate environment given above, since the wrapfigure environment conflicts with the enumerate environment. The package wrapfig is useful for placing an image and wrapping text around it. You may have to do some tweaking, to get the figure placed correctly. The wrapfigure environment looks like this: `\begin{wrapfigure}[A]{B}{C}`

- To adjust the height of the box where the figure will be placed, use the optional parameter A (height in number of short lines)
- To place the figure to the left, centre, or right of the text, replace B by l, c, or r appropriately.
- To adjust the width of the box where the figure will be placed, use the parameter C (specifythe length units too)
- To shrink or swell the size of the figure, choose an apprpriate "scale=" in `\includegraphics`
- To raise or lower the figure inside the box, choose the value of `\vspace` before and after the `\includegraphics`

Now, try making the above adjustments in the LaTeX source of this article, and observe the effects you get. For your convenience, the original command is repeated as a commented line, one line above the command you are going to modify. Make the changes you want to try, recompile the LaTeX source and see the results. If you do not like what you see, restore the original command using the copy available one line above, and try again.

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Concluding remarks

There is so much and a lot more to discover in LaTeX . Watch this space !

Do you have any more ideas, to add to the above list ?

Just send a mail to : drpartha@gmail.com

References

[1] Dummy, Nothing to say here.

[2] Dummy, Nothing to say here still.

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