

Macros

The bag of tricks

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Hello everyone.

Here is the second installment of the bag of tricks, ready-to-use macros without the bother of needing to understand them. (And contributions from the *TUGboat* readership for this column are still welcome.)

When you start fiddling around with boxes, pretty soon you run into the fact that a `\vbox` is almost immediately as wide as the whole page, even if there is only a single character in it: `\vbox{a}`. Attempts such as `\vbox{a\par}` are not much of an improvement. But suppose you want a box to be as wide 'as it really is', for instance

```
a\par b          a
c\par           b c
```

d gives d as output, then something else is needed. The input for this example was (I have set `\parindent` first to zero):

```
\snugbox{\begin{verbatim}a\par b
c\par
d\end{verbatim}}\quad
gives\quad
\snugbox{a\par b c \par d}\quad
as output,
```

Here is the source for the `\snugbox` macro, to be placed

between `\catcode'@=11` (or `\makeatletter`) and `\catcode'@=12` (or `\makeatother`):

```
\def\snugbox{\hbox\bgroup
  \setbox\z@\vbox\bgroup
  \leftskip\z@
  \bgroup\aftergroup\make@snug
  \let\next=}
\def\make@snug{\par\sn@gify\egroup
  \box\z@\egroup}
\def\sn@gify
  {\skip\z@=\lastskip \unskip
  \advance\skip\z@\lastskip \unskip
  \unpenalty
  \setbox\z@\lastbox
  \ifvoid\z@ \nointerlineskip
  \else {\sn@gify} \fi
  \hbox{\unhbox\z@}\nointerlineskip
  \vskip\skip\z@
}
```

This macro is not completely fool-proof, but it works in a lot of cases, for instance it contains a `\snugbox` to contain several paragraphs.

The example used above did not look very pretty. Wouldn't it be better if the input and output were centered vertically with respect to 'gives' and 'in the output'? Using `\vcenter` this would look like

```
$$\vcenter{\snugbox{ ... }}$\quad
gives $\vcenter ...
```

But typing all these dollars is a bit tiresome. Also you may know that you cannot write

```
\setbox\mybox\vcenter{...}
```

Both of these points are remedied by the following macro:

```
\def\textvcenter{\hbox\bgroup$
  \everyvbox{\everyvbox{}}%
  \aftergroup$%
  \aftergroup\egroup}
\vcenter}
```

And now you write

```
\textvcenter{\snugbox{
\begin{verbatim}a\par b
c\par
d\end{verbatim}}}\quad gives ...
```

```
for
a\par b
c\par gives ...
d
```

Simple, isn't it?

See you next time, and keep those braces balanced!

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