The **mboxfill** package[*]

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1 User Interface

\mboxfill   This package implements the command

$$\verb|\mboxfill[|\langle width\rangle\verb|][|\langle leader\text{-}type\rangle\verb|]{|\langle pattern\rangle\verb|}|$$

filling a free horizontal space with ⟨*pattern*⟩.

The ⟨*width*⟩ parameter specifies a width of box pattern to be used as leaders. If it is omitted, the pattern width is used. The `\width`, `\height`, `\depth`, and `\totalheight` macros can be used in this parameter. Length expressions are also allowed if the `calc` package is loaded.

The ⟨*leader-type*⟩ parameter specifies a type of leaders to be used: `c` means `\cleaders`, `x` means `\xleaders`, and empty value (default) means `\leaders`. Depending on type, an extra space is distributed between fill entries as follows: in `c` case, fill entries are centered, in `x` case, fill entries are uniformly distributed, and in other cases, fill entries are aligned to the multiple of their width counted from the left boundary of filled box.

When the specified ⟨*width*⟩ differs from the pattern width, the pattern is centered inside the box to fill with. As a consequence, when `x`-leaders are used, a bit of space will be left from both sides of fill area. To remove this space, use the special value of ⟨*leader-type*⟩ parameter, namely `s`.

Example:

```
\noindent\mboxfill{*}\mbox{}\\
\mbox{}\mboxfill[2\width]{+}\mbox{}\\
\mbox{}\mboxfill[2\width]{\hfill+}\mbox{}\\
\mbox{}\mboxfill[2\width]{+\hfill}\mbox{}\\
A text\mboxfill[1.5\width]{*}\mbox{}\\
\mbox{}\mboxfill[1.5\width]{*}\mbox{}\\
\mbox{}\mboxfill[1.5\width][c]{*}\mbox{}\\
\mbox{}\mboxfill[1.5\width][x]{*}\mbox{}\\
\mbox{}\mboxfill[1.5\width][s]{*}\mbox{}\\[-2ex]
\mbox{}\hrulefill
```

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It produces the following:

```
********************************************************************

  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +
   +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +
 +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +  +
A text * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
* * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
 * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
 * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
  * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
```

2   The Implementation

```
 1 ⟨∗package⟩
 2 \newcommand*\mboxfill[1][\width]{%
 3   \def\@tempa{\setlength\@tempdima{#1}}%
 4   \@ifnextchar[{\NCC@mboxfill}{\NCC@mboxfill[]}%
 5 }
 6 \def\NCC@mboxfill[#1]#2{%
 7   \@begin@tempboxa\hbox{#2}%
```

Set the required box width in `\@tempdima`:

```
 8     \@tempa
```

Test the case of **s**-leaders. They work like **x**-leaders, but a special kern is added to both sides of the fill area to compensate extra-space added in the box.

```
 9     \edef\@tempa{#1}\def\@tempb{s}%
10     \ifx\@tempa\@tempb
11       \@tempdimb\width
12       \advance\@tempdimb -\@tempdima
13       \let\@tempa\xleaders
14       \def\@tempb{\kern.5\@tempdimb}%
15     \else
```

Other cases: if leader-type is incorrect, we use `\leaders`.

```
16       \@ifundefined{#1leaders}{\let\@tempa\leaders}%
17       {\def\@tempa{\csname#1leaders\endcsname}}%
18       \let\@tempb\@empty
19     \fi
```

`\@tempa` contains required leaders, `\@tempb` is a kern or empty. Fill the space.

```
20     \leavevmode\@tempb\@tempa
21       \hb@xt@\@tempdima{\hss\unhbox\@tempboxa\hss}\hfill\@tempb
22   \@end@tempboxa
23 }
24 ⟨/package⟩
```